

Type Approval Guidelines for Automatic Reserves

1 Change management

- version 1.0 (5.5.2026)

2 Introduction

The purpose of this document is to clarify the practices related to the type approvals of the FCR, FFR and aFRR reserves and to provide practical examples of the application and submission of type approvals. As there are differences in the details of type approvals between reserve products, this document has been divided into reserve-product-specific subsections.

This document is supplementary guidance, and the general technical requirements and the required prequalification tests are defined in the following documents:

- *The technical requirements and the prequalification process of Fast Frequency Reserve (FFR)*
- *The technical requirements and the prequalification process of Frequency Containment Reserves (FCR)*
- *The technical requirements and the prequalification process of aFRR*
- *The technical requirements and the prequalification process for the mFRR*

The documents are available on Fingrid's website; see the appendices on the product-specific pages.

As the handling of type approvals is closely linked to the functionalities of the My Fingrid Reserve Markets service, this document will be updated as the service develops. Fingrid will, however, inform those parties who actively apply type approvals of any significant changes to operating practices by email.

2.1 Abbreviations and Definitions

Definitions:

Card: Reserve unit specific page on My Fingrid.

Providing Entity: An entity that fulfils the requirements for providing reserves. A unit or group providing reserve capacity. Providing entity may consist of a single or several providing units.

Providing Unit: An individual controllable reserve resource; a power plant, a consumption site or energy storage.

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Reserve Provider: Fingrid's contractual partner that offers, maintains and activates reserves.

Type Approval Group: A reserve providing entity or part of a reserve providing entity from the same type approval. The members of the group fall under the same type approval.

Type Approval Upper Limit: The product- and Type-Approval-Group-specific maximum reserve capacity within which the Reserve Provider may add reserve resources to the Type Approval Group.

3 FCR Type Approval Practices

The purpose of type approval is to enable an easier prequalification test process for small and aggregated reserve resources. Type approval may be applied to resources that are practically identical and for which the product-specific reserve capacity applied for is at most 100 kW.

After the type approval has been granted, the Reserve Provider may increase the number of resources belonging to the type approval group without a separate prequalification test. The Reserve Provider may increase the group size by either 25% of the previously approved capacity or 1 MW, depending on which of these is the more advantageous option for the provider. Below is a practical example of applying the rule in a situation where the provider wants to continuously increase the size of the type approval group:

1. The Reserve Provider applies for type approval for Reserve Resource A. After the approval is granted, the upper limit for the type approval is calculated as follows: the reserve capacity of resource A + 1 MW. If the provider has applied for type approval for several different FCR products, the upper limit is calculated separately for each reserve product.
2. The provider adds resources to the group until the upper limit of the type approval group is reached. The notification and approval practices related to this are discussed in more detail in Section 3.2.1.
3. After reaching the upper limit, the providing entity must perform a new type approval using the same resource type in order to raise the upper limit of the type approval group. In practice this means conducting a new prequalification test for the same resource type. The supplementary prequalification test must be performed using a physically different device than the one used in the prequalification tests required to establish the group.
4. After prequalification tests have been approved, the new upper limit is calculated as follows: the original reserve capacity of reserve resource A + 1 MW + 1 MW.

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5. A change to the process described in steps 2–4 occurs when raising the upper limit for the fifth time, because at this point 25% of the reserve capacity previously approved under the type approval is greater than 1 MW. Thus, after the prequalification test performed and approved to increase the type approval group for the fifth time, the provider's upper limit is calculated as follows: the original reserve capacity of reserve resource A + 4 MW + (the original reserve capacity of reserve resource A + 4 MW) * 0.25.
6. The rule presented in the previous step is applied during additions until 25% of the previously approved capacity is 3 MW or greater. After this, increasing the upper limit with a new prequalification test saturates at 3 MW.

3.1 Clarifications on the Interpretation and Application of Type Approval (FCR)

The list below does not cover all special cases related to type approval and may not necessarily be applicable in every case for every provider, providing entity or unit. Therefore, please contact Fingrid experts about the details of your implementation already before applying for type approval.

- The 100 kW limitation applies to the reserve capacity per providing unit, not to the nominal power of the unit. In practice, for example, type approval may be applied for a resource with a nominal power of 300 kW as long as the product-specific applied reserve capacity is at most 100 kW.
- Type approvals are reserve-product-specific; i.e., when testing e.g. the FCR-N and FCR-D products for a providing unit, separate type approval upper limits apply for each product.
- Type approvals are reserve-provider-specific. For example, if reserve provider A has applied for type approval for resource type X, another reserve provider B cannot use this same type approval to increase its own capacity.
- Increasing the type approval group upper limit through new prequalification tests does not change the expiration date of the type approval group's prequalification tests; it is determined based on the first type approval of the group.
- When the type approval group's prequalification tests expire, renewal does not require using the same physical resources as those used during the original prequalification tests that were used to build the type approval group.
- It is possible to "chain" type approvals already starting with the first type approval. In practice this means that the operator can perform e.g. 3 prequalification tests at once for the same resource type (physically different devices in the tests). As a

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result, the upper limit of the type approval group immediately becomes: the reserve capacity of the tested reserve resource + 3 MW.

- When opening a type approval group, it is possible to test several resources belonging to the same type approval at once. For example, when applying for type approval for 50 kW FCR-N capacity, the operator may perform the tests using a group of four batteries seeking the same type approval. Although the type approval is still granted for 50 kW reserve capacity in this way, the upper limit of the opened type approval group is calculated as follows: $4 * 50 \text{ kW} + 1 \text{ MW}$.
- If the type approval group grows extremely large, it is recommended to open a new type approval group for the same resource type in order to stagger renewals of prequalification tests. For example, if the group included resources in total of 20 MW, then when the prequalification tests expire this would in practice mean performing 12 prequalification tests within a short period in order to extend the validity of the group's prequalification tests.
- In the case of batteries, several sizes of the same inverter model can be included in the same type approval group, provided that during the prequalification tests the largest and the smallest power variants among these options are tested. Because the prequalification tests are performed twice in this case, the upper limit is also determined based on two prequalification tests. In practice this means that if the operator tested inverter sizes X and Y of battery A, then the type approval upper limit for battery A would be: the reserve capacity enabled by the larger inverter model + 2 MW. **However, this and other special arrangements related to the similarity of resources must be approved separately by Fingrid.**

3.2 Clarifications to the use of My Fingrid service (FCR)

The purpose of this subsection is to clarify the practices related to applying for and using type approvals in the My Fingrid Reserve Markets service. The section will be updated regularly in connection with changes to the service. If you nevertheless notice that the instructions are not up to date or problems arise in using them, please contact Fingrid.

3.2.1 Adding Resources Within the Type Approval Group Upper Limit (FCR)

Monitoring compliance with the type approval upper limit is the reserve provider's responsibility. However, in the following cases the reserve provider must notify Fingrid of additions:

1. Under an FCR-N type approval, new resources are added from balance responsible parties (BRPs) for which no resources have previously been approved in that type approval group.

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- Adding new balance responsible parties requires system work on Fingrid’s side so that energy corrections arising from FCR-N activations can be carried out correctly.
 - In addition to the notification, the provider must obtain **separate approval from Fingrid** before starting to trade with the new resources.
2. The type approval group becomes full or is very close to being full.
- This condition ensures regular updating and monitoring of the My Fingrid information.

If Fingrid’s monitoring indicates that the reserve provider has not complied with the type approval upper limit in its reserve bids, the capacity exceeding the type approval is considered untested by prequalification tests. Consequently, according to Section 13.2 of Annex 1 of the FCR Market Agreement, the reserve provider must reimburse to Fingrid the compensations Fingrid has paid to the extent that they were based on a reserve capacity greater than the actual one.

Notification of adding new reserve providing units and the approval of units is carried out in the My Fingrid Reserve Markets service as follows:

1. Go to the “Prequalification” tab of the type approval group in My Fingrid (Reserve units of Reserve Markets service).
2. Copy the formatting of the “Resources by balance responsible party” table into the spreadsheet program you use by selecting the table and copying its contents.
3. Edit the table values to reflect the resource additions and changes in balance responsible parties. Finally, highlight the edited or added cells in yellow. If the type approval group includes only FCR-D resources, the “Balance Responsible Party” cell may be left empty. After the edits, the table should look like this (borders added to the cells for clarity):

Balance responsible party	No. of resources	FCR-N (MW)	aFRR up (MW)	aFRR do (MW)	FCR-D up (MW)	FCR-D do (MW)
BRP1	4	0.4			0.2	
BRP2	2	0.2			0.2	
BRP3	2	0.2			0.2	
In total	8	0.8			0.6	

4. Next, return the edited table on the “Document” tab of the type approval group to the same box where you would return the application form.
5. Notify the approver of the type approval group’s prequalification tests by email of your submission. You can find the correct email address for this notification on the “Prequalification” tab of the type approval group. Include in the email information about which type approval group the additions concern. You may

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notify in the same email about changes in several different type approval groups at once.

6. After this, a Fingrid expert reviews the addition and, if needed, gives approval in a separate email.
7. Finally, Fingrid updates the capacity information on the “General” tab of the type approval group to correspond to the latest addition (Reserve units of Reserve Markets service).

3.2.2 Establishing and Increasing a Type Approval Group (FCR)

When establishing new type approval groups, the normal My Fingrid process is followed: a new reserve project is created and the process defined within it is followed.

When applying to increase a type approval group upper limit, new prequalification test results and a completed application form are submitted for the group in the My Fingrid Reserve Markets service on the “Reserve Projects” side.

- These files are submitted to the same place as during the original type approval project, but now the file name must indicate that it concerns an increase of the type approval.
- The provider must also change the status shown in the process description on the “Prequalification” tab from “All delivered” to “All delivered (change in project)”. This ensures that the increase of the type approval group upper limit moves into Fingrid’s review queue. Below is an example of the correct status information in the process diagram after returning the files.

Prequalification

✔ Complete (Reserve provider) ▾

<small>Prequalification test data (Reserve provider)</small> ✔ All delivered (change in project) ▾ <small>23.03.2026</small>	<small>Fingrid inspection (Fingrid)</small> ○ Not inspected ▾ 	<small>Prequalification test approval (Fingrid)</small> ○ Not approved ▾
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If the type approval group does not have an earlier card on the “Reserve Projects” side of the Reserve Markets service, but the group already has its own card on the “Reserve Units” side, then when increasing the type approval group upper limit proceed as follows:

1. The Reserve Provider creates a new reserve project for increasing the type approval group upper limit. The process is carried through on the project side normally according to the My Fingrid process.

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2. When the reserve project has been completed in full, a duplicate card of the previously established type approval group is created on the “Reserve Units” side.
3. Fingrid then merges the information of the old and new cards and deletes the previously created card on the “Reserve Units” side. As an end result, one card containing all essential information remains on the “Reserve Units” side, and the type approval group upper limit is determined in accordance with the original tests and the tests conducted for the increase.

4 FFR Type Approval Practices

In the case of FFR, the purpose of type approval is to enable an easier prequalification test process for small and aggregated reserve providing entities. Type approval may be applied to resources that are practically identical and for which the applied reserve capacity is at most 100 kW.

After the type approval has been granted, the reserve provider may increase the number of resources in the type approval group without a separate prequalification test. In the case of FFR, no separate upper limit is defined for the type approval group.

However, adding resources to the type approval group must be reported to Fingrid. In practice, the notification is made by email to the approver of the type approval group’s prequalification tests. The notification must always be made when the aggregated reserve capacity of the resources in the group increases by 1 MW compared to the previous notification, and it must include the following information:

- The name of the type approval group as it is written in the My Fingrid Reserve Markets service.
- The number of providing units included in the type approval group.
- The total reserve capacity of the providing units included in the type approval group.

The reserve provider may include the added resources in FFR trading immediately after submitting the notification and without separate acknowledgement from Fingrid. The purpose of regular notifications is primarily to ensure that Fingrid’s bookkeeping is up to date and to monitor total capacities (in the case of FFR, the reserve capacity lost due to a single fault may be at most 50 MW).

4.1 Clarifications on the Interpretation and Application of Type Approval (FFR)

The clarifications of FCR type approvals described in Section 3.1 apply, where applicable, also to FFR type approvals (excluding the upper limit and the practices related to increasing it).

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4.2 Clarifications to the use of My Fingrid service (FFR)

When establishing new type approval groups, the normal My Fingrid process is followed: a new reserve project is created and the process defined within it is followed.

If resources are added to an existing type approval group, Fingrid updates the capacity information on the “General” tab of the type approval group to correspond to the reserve provider’s latest notification (Reserve units of Reserve Markets service).

5 aFRR Type Approval Practices

Type approval may also be applied in aFRR to practically identical reserve providing units. No maximum limit has been set for the reserve capacity of an individual unit eligible for type approval.

After the type approval has been granted, the reserve provider may increase the number of providing units in the type approval group without a separate prequalification test until the group upper limit is reached. The group upper limit is calculated by adding 5 MW to the approved aFRR capacity of the providing unit. Below is a practical example of applying the rule in a situation where the provider wants to continuously increase the size of the type approval group:

1. The provider applies for type approval for Reserve Resource A. After the approval is granted, the upper limit for the type approval is calculated as follows: the reserve capacity of resource A + 5 MW.
2. The operator adds resources to the group until the upper limit of the type approval group is reached. The notification and approval practices related to this are discussed in more detail in Section 3.2.1 (FCR and aFRR have the same notification and approval practicalities).
3. After reaching the upper limit, the operator must perform a new type approval using the same resource type in order to raise the upper limit of the type approval group. In practice this means conducting a new prequalification test for the same resource type. The supplementary prequalification test must be performed using a physically different device than the one used in the prequalification tests required to establish the group.
4. After the prequalification tests, for increasing the upper limit, are carried out and approved, the new upper limit is calculated as follows: the reserve capacity of reserve resource A approved through prequalification + 5 MW + the reserve capacity of reserve resource B approved through prequalification + 5 MW. In this example, the prequalification of reserve resource B is a supplementary prequalification related to the type approval group.
5. Increasing the type approval upper limit may be continued as instructed above.

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5.1 Clarifications on the Interpretation and Application of Type Approval (aFRR)

The clarifications of FCR type approvals described in Section 3.1 apply, where applicable, also to aFRR type approvals, excluding clarifications related to different inverter sizes. In aFRR, several different sizes of the same inverter model can, as a rule, be included in the same type approval group by testing the resources of only one inverter size.

However, this and other special arrangements related to the similarity of resources must be approved separately by Fingrid.

5.2 Clarifications on Operations in My Fingrid (aFRR)

For the My Fingrid process of aFRR type approval, the practices in Section 3.2 are followed where applicable, excluding direct references to FCR reserves.