

# Procurement and pricing of reserves

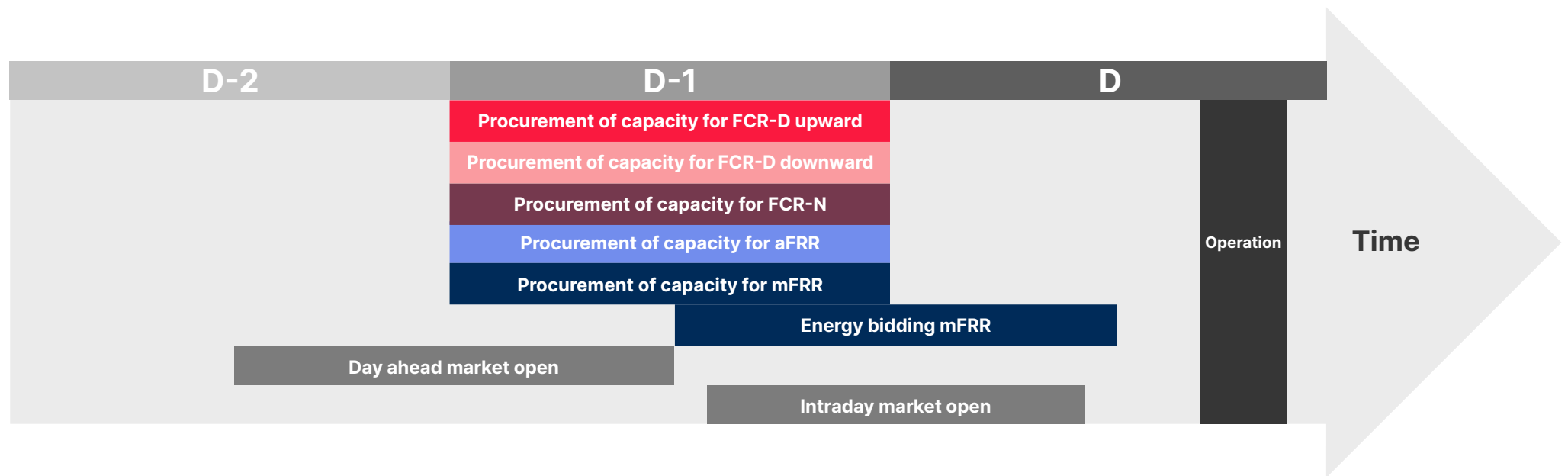
Updated February 1st 2024

Remedial action	Frequency containment reserves			Frequency restoration reserves	
FFR	FCR-D upward	FCR-D downward	FCR-N	aFRR	mFRR
Fast Frequency Reserve (Snabb frekvensreserv)	Upward Frequency Containment Reserve - Disturbance (Frekvenshållningsreserv -Störning uppreglering)	Downward Frequency Containment Reserve - Disturbance (Frekvenshållningsreserv -Störning nedreglering)	Frequency Containment Reserve - Normal (Frekvenshållningsreserv -Normaldrift)	Automatic Frequency Restoration Reserve (Automatisk Frekvens-återställningsreserv)	Manual Frequency Restoration Reserve (Manuell Frekvens-återställningsreserv)
Upward regulation	Upward regulation	Downward regulation	Symmetrical upward and downward regulation	Upward and/or downward regulation	Upward and/or downward regulation
<b>Procurement</b> Bids on capacity market	<b>Procurement</b> Bids on capacity market	<b>Procurement</b> Bids on capacity market	<b>Procurement</b> Bids on capacity market	<b>Procurement</b> Bids on capacity market	<b>Procurement</b> Bids on capacity market and energy activation market
<b>Capacity remuneration</b> Pay as cleared. Cleared volumes and prices are published weekly on <a href="#">Aktörsportalen</a> . More information is available in Swedish in the document <a href="#">FFR marknadslösning 2023</a> .	<b>Capacity remuneration</b> Pay as cleared. Prices per MW are published on <a href="#">Mimer</a> .	<b>Capacity remuneration</b> Pay as cleared. Prices per MW are published on <a href="#">Mimer</a> .	<b>Capacity remuneration</b> Pay as cleared. Prices per MW are published on <a href="#">Mimer</a> .	<b>Capacity remuneration</b> Pay as cleared. Prices per MW are published on <a href="#">Mimer</a> .	<b>Capacity remuneration</b> Pay as cleared. Prices per MW are published on <a href="#">Mimer</a> .
<b>Energy remuneration</b> No energy remuneration.	<b>Energy remuneration</b> No energy remuneration.	<b>Energy remuneration</b> No energy remuneration.	<b>Energy remuneration</b> According to up or down regulating prices. Prices are published on <a href="#">Mimer</a> .	<b>Energy remuneration</b> According to up or down regulating prices. Prices are published on <a href="#">Mimer</a> .	<b>Energy remuneration</b> Pay as cleared. Remuneration according to up or down regulating prices. Prices are published on <a href="#">Mimer</a> .

More detailed information on the requirements is available in Swedish in the balance responsibility agreement and associated regulatory documents. They are available for download on Svenska kraftnät's webpage: [www.svk.se/aktorsportalen/balansansvarig/balansansvarsavtalet/](http://www.svk.se/aktorsportalen/balansansvarig/balansansvarsavtalet/).

Gate closure for different reserves is presented in Figure 1. The reserves FCR-N, FCR-D upward and FCR-D downward are procured during two complementary auctions one day (D-1) ahead. The majority of the capacity for FCR is procured in the first auction, the rest is procured in the second auction. The reserve aFRR is procured D-1.

The procurement of mFRR takes place on the capacity market and on the energy market. Capacity from the capacity market is procured during one day (D-1) ahead. Energy bids for mFRR are cleared during the operating hour if needed. Bids for mFRR shall be submitted no later than 45 minutes before the operating hour. A called bid on the capacity market implies a commitment to submit a bid on the energy market. The reserve FFR, which is not included in Figure 1, is procured on a yearly basis. FFR is cleared two times per week (Monday and Friday).



**Figure 1.** Procurement and pricing of reserves. The reserve FFR is not included in the figure as it is procured on a yearly basis.

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