

Proposal for Initial Margining of Financial Transmission Rights

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Markets and Reliability Committee
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Calculate Monthly Historical and Adjusted Historical* Path Specific Requirement

Add Individual FTR Credit Requirement

Add Undiversified Adder, if applicable

Apply 10¢ per-MWh Minimum

Subtract ARR Credits in Account

Sum All Positive Monthly Subtotals

Add MTA, if applicable



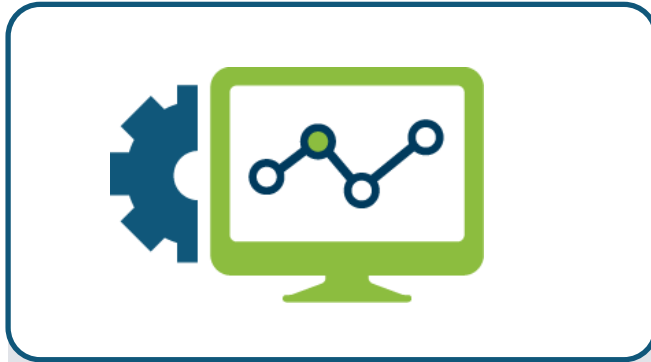
**Adjusted Historical includes modeling of future transmission upgrades*

Initial Margin:

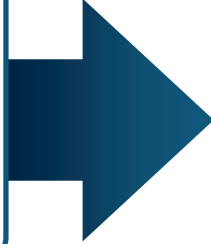
A collateral deposit, posted by a trading participant to protect against the financial consequences of default

Covers the time period between the last auction clearing and the expected unwinding of the portfolio in the event of default

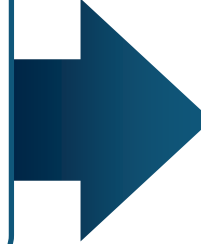
Is not a fixed quantity set at the position inception, but is computed and updated at the time of every auction



Simulate scenarios of price movements over the liquidation period for all paths in a portfolio using historical price data



Use price movement scenarios to generate the distribution of portfolio value changes



Calculate Initial Margin based on the selected confidence interval

Tenor Calculations

- **The IM for Balance of Planning Period (BOPP) positions** are evaluated by the methodology for each monthly contract; then the monthly IMs are aggregated to obtain one IM quantity for the portfolio

The aggregation method uses a weighted combination of straight sum and root sum of squares (30% straight sum, 70% root sum of squares at 95% confidence interval)

- **The IM for long-term positions** are evaluated by the methodology for each annual contract

Confidence Interval

- Range of values likely to include a population value with a certain degree of confidence
- Typically, the higher the confidence interval, the higher the IM result
- Analysis performed at 3 confidence levels (99%, 97% and 95%)

Liquidation Period

- Indicates the number of auctions by which a portfolio can be liquidated
- 2 auction periods means 2 months for BOPP portfolios and approximately 4 months for long-term portfolios
- A liquidation period of 2 has been recommended to stakeholders and aligns with the potential unwinding of defaulted positions

- Status quo had a failure rate* of 8% based on backtesting
- The 95% confidence interval is expected to converge to a 5% failure rate* over time

Confidence Interval	CLEARED REQUIREMENT			Failure Rate*	BID REQUIREMENT	
	Status Quo (\$B)	IM-H (\$B)	Change		Status Quo for Bids (\$B)	IM-H for Bids (\$B)
99%	\$1.345	\$1.534	14%	0.65%	\$1.604	\$1.806
97%	\$1.345	\$1.206	-10%	0.90%	\$1.604	\$1.439
95%	\$1.345	\$1.065	-21%	1.21%	\$1.604	\$1.281

*Failure rate represents the % of instances when collateral was insufficient to cover actual market moves during backtesting

Changing of Status Quo Components

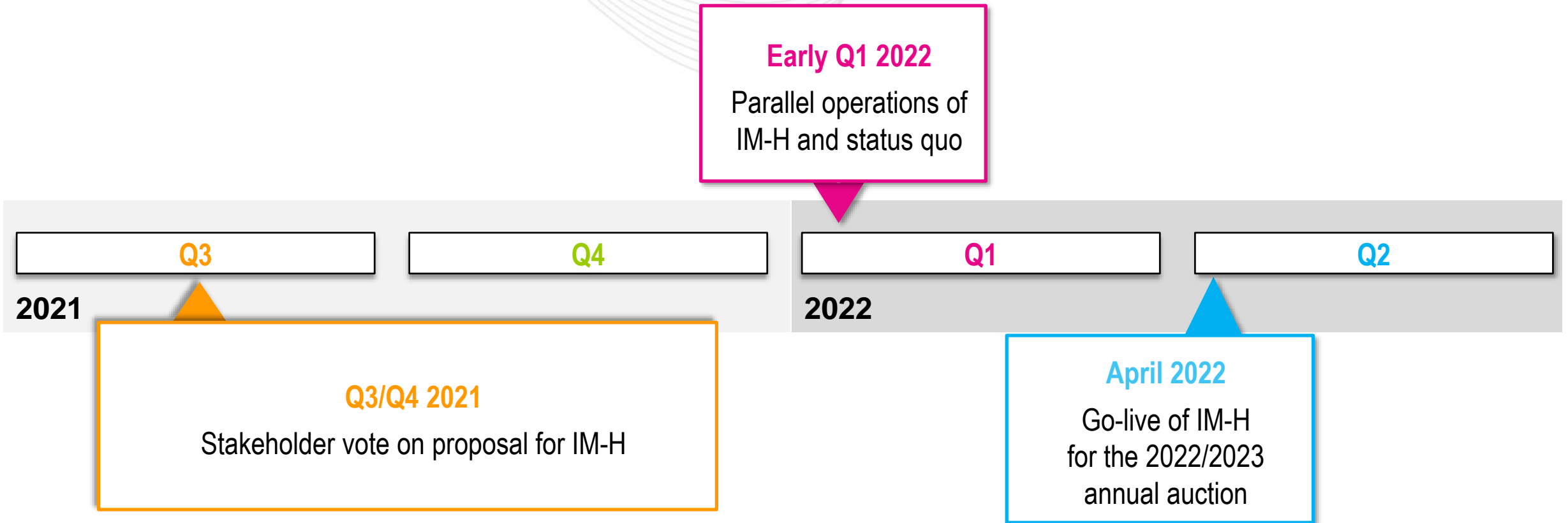
- No undiversified adder
- Consider both positive and negative MTA as part of the total FTR collateral equation
- IM-H calculation for all bids submitted
- Calculate IM-H while using ARR credits as an offset for all Market Participants with ARRs
- No use of adjusted historical values (based on modeled future transmission upgrades)



IM-H Specific Components

Select the confidence interval of 95%

Use a liquidation period of 2



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Member Hotline

(610) 666 – 8980

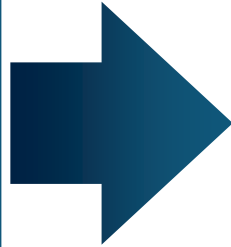
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Appendix



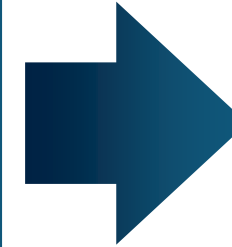
Simulate scenarios of price movements over the liquidation period for **all buy bids and previously cleared positions** in a portfolio using historical price data



Use price movement scenarios to generate the distribution of portfolio value changes by period and direction (prevailing flow/ counter flow)



Calculate Initial Margin based on the selected confidence interval by period and direction



Combine prevailing flow and counter flow positions by period using square root of the sum of squares