

CRR Credit Exposure Calculation

CFSG May 2025

Disclaimers

DC Energy is not soliciting commodity pool business or investors or providing any advice via these materials or the related presentation. These materials and the related presentation are not an advertisement for investors or prospective investors or to the public generally. These materials are only for general information and discussion. The information included in these materials is not investment, trading or financial product advice.

The presentation may contain forward looking statements or statements of opinion. No representation or warranty is made regarding the accuracy, completeness or reliability of the forward looking statements or opinion, or the assumptions on which either is based. All such information is, by its nature, subject to significant uncertainties outside of the control of the presenter and DC Energy and also may become quickly outdated. These materials and the related presentation are not intended to be, and should not be, relied upon by the recipient in making decisions of a commercial, investment or other nature with respect to the issues discussed herein or by the presenter. To the maximum extent permitted by law, DC Energy and its officers, owners, affiliates and representatives do not accept any liability for any loss arising from the use of the information contained in these materials.



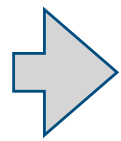
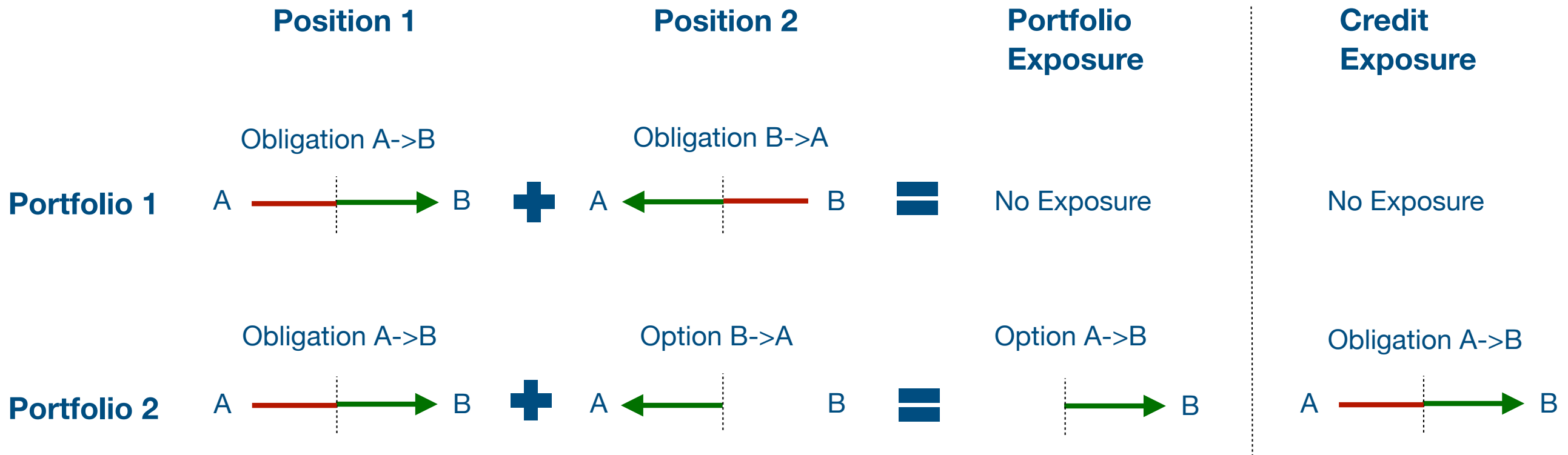
Executive Summary

- **Current CRR Credit Policy makes conservative assumptions that do not align with actual portfolio risk**
 - Option holdings that provide downside protection for an existing Obligation Portfolio are ignored
 - Current credit policy assumes no temporal diversification. This overcollateralizes portfolios that extend over multiple months
- **DC Energy recommends that ERCOT Credit staff perform a gap analysis on CRR Obligation collateral**



Forward Exposure Example

- Illustrative Example of Risk Reducing Transactions -



Credit policy treats Portfolio 2 as still having a liability despite elimination of downside risk. This inequality is due to obligation and option portfolios having separate Portfolio Weighted Adder (PWA) calculations that are added together



Impact of Temporal Diversification Assumption

- Current Credit Policy Requirement is the linear sum of the worst cases for each month
 - This assumes 100% correlation of congestion across months. This differs from empirical observations
 - Congestion is generally uncorrelated temporally as outage months and peak load months observe different congestion patterns

Portfolio Size. \$1MM Risk Case In Each Month*	Current Credit Policy Requirement (Assumes 100% correlation across months)	Hypothetical Credit Policy Requirement (Assumes 0% correlation across months)
1 Month	\$1 Million Odds: 1 in 100	\$1 Million
12 Months	\$12 Million Odds: 1 in one Septillion	\$3.5 Million
34 Months	\$34 Million Odds: 1 in one hundred Unviginitillion	\$5.8 Million

*Note: Assumes static portfolio across months

Source:

DC Energy's Recommendations

- **Calculate one Portfolio Weighted Adder (PWA) where obligations and options are considered together**
 - This would reflect the risk reducing value of the option product and the actual risk of the portfolio
- **Incorporate temporal diversification in portfolios that extend over multiple months**
 - PJM utilizes a weighting between a linear sum and a root sum of squares. This recognizes an observed temporal correlation that falls between 0 and 100%



Next Steps and Benefits

- **DC Energy recommends ERCOT Credit Team to perform a 'gap analysis' on CRR obligation collateral**
 - Is CRR obligation collateral requirement able to cover future losses from obligation portfolio at that point in time?
 - Lookback period should cover volatile periods such as Uri
 - Evaluate size and number of instances of negative and positive gaps
- **Goal is to further align collateral obligations with portfolio risk**
 - Greater CRR obligation usage by the market (as compared to options) would have a positive impact on CRR auction solve times which are currently an issue being discussed at the CMWG