

# Credit & Securitization Overview

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1. Status Quo & New Issues with Back-Stop Auction
2. Bilateral Structure
3. Current Credit Quality of Potential Players
4. Bilateral Margining Example
5. RBA as a Financial Swap
6. Securitization

**The Reliability Back-Stop Auction introduces 15-year contractual durations, which current PJM credit rules were not designed to mitigate.**

PJM current credit policy is governed by Attachment Q of the OATT.

It is primarily built for short-term settlement cycle and one-year capacity obligations.

#### Creditworthiness Criteria:

Based on audited financial statements analysis, credit ratings and a minimum tangible net worth.

#### Unreasonable Credit Risk

Based on the likelihood that a market participant will default on a financial obligation arising from its participation in any of the PJM Markets.

#### Financial Security

Market Participants (LSE) provide collateral based upon their Peak Market Activity (PMA) and Unsecured Credit Allowance (if applicable).

#### Capacity Market Credit

Market Participants (planned resources) must post collateral for their sell offers in the BRA, but this is typically released once the cleared resource has commenced the Interconnection Service.



# 1. Current Credit Policy vs. Reliability Back-Stop Auction (RBA)

| Risk Factor                 | Current  | RBA   | Vulnerability   |
|-----------------------------|--|---|---|
|                             | Credit Policy (1-year)                           | RBA Challenge (15-Year)   | Credit deterioration, change in ownership   |
| <b>Exposure Duration</b>    | Short term (1–3 years horizon)                   | 1-15 Year exposure  | Abandonment or renegotiation of the contract  |
| <b>Exposure calculation</b> | Minimal exposure as prices are fix annually      | Price volatility<br>Undermines contract stability and may increase Buyer/Seller likelihood of non-performance | Liquidity squeeze - sizable collateral requirement- liquidly constraints, cost of capital |
| <b>Failure to perform</b>   | Penalties are limited to specific delivery years | Stranded Asset Risk. Default in year 3 of 15-year contract leaves 12 years uncovered capital cost.            | Current tariff does not calculate liquidated damages                                      |

# 1. Pre and Post Auction Collateral Requirement Scenarios - Applying Current Methodology for (1-year and 15 Years)

## Scenario 1- Seller – Back Stop Auction 1 year

|  |               |
|--|---------------|
| Generation Capacity (UCAP MW)                | 1000          |
| Capacity RBA Auction Clearing Price (\$/MWD) | \$400         |
| Pre Auction Credit Requirement (\$)          | \$44,165,000  |
| Post Auction Credit Requirement (\$)         | \$29,200,000  |
| Returnable collateral                        | -\$14,965,000 |

Assume the RBA clears at \$400

$1000MW \times \$242/MWD \text{ net cone UCAP} \times .5 \times 365 \text{ days}$

$1000MW \times \$400/MWD \text{ net cone UCAP} \times .2 \times 365 \text{ days}$

## Seller – Back Stop Auction Scenario – 15 years

|  |                |
|--|----------------|
| Generation Capacity (UCAP MW)                | 1000           |
| Capacity RBA Auction Clearing Price (\$/MWD) | \$400          |
| Pre Auction Credit Requirement (\$)          | \$662,475,000  |
| Post Auction Credit Requirement (\$)         | \$438,000,000  |
| Returnable collateral                        | -\$224,475,000 |

$1000MW \times \$242/MWD \text{ net cone UCAP} \times .5 \times 365 \text{ days} \times 15 \text{ years}$

$1000MW \times \$400/MWD \text{ net cone UCAP} \times .2 \times 365 \text{ days} \times 15 \text{ years}$

# Bilateral Structure



### 3. Generators & Load Serving Entities Credit Profile

|                            | Total | Investment Grade |     | Sub Investment Grade |     | TNW < \$1MM |     | TNW < \$5MM |     |
|----------------------------|-------|------------------|-----|----------------------|-----|-------------|-----|-------------|-----|
|                            |       | #                | %   | #                    | %   | #           | %   | #           | %   |
| <b>Generation Owner</b>    | 321   | 188              | 59% | 133                  | 41% | 44          | 14% | 53          | 17% |
| <b>Load Serving Entity</b> | 105   | 24               | 23% | 81                   | 77% | 31          | 30% | 48          | 46% |

*Tangible Net Worth – (Total Assets – Total Liability) metric to assess financial stability and liquidate value)*

#### Generators:

- Are predominantly investment grade (59%)
- Are stronger capitalization as only 17% fall below \$5MM TNW despite 41% being sub-investment grade
- While some generators are below investment grade, many still have meaningful balance sheet strength.

#### Load Serving Entities

- Are predominately sub-investment grade (77%)
- Show balance sheet weakness
  - as nearly 50% have TNW < \$5MM and 30% are below \$1MM
- This indicates limited financial flexibility
- 24 Investment grade LSEs, provided corporate guarantees .

**Based upon the 45 Data Centers Coalition’s member list, 80% are privately held.**

*None of the Data Center are Market Participants.*

| DCC Member*                 | External Rating | TA        | TNW        | PJM Member |
|-----------------------------|-----------------|-----------|------------|------------|
| Applied Digital Corporation | B+              | \$5.0Bn   | \$1.9Bn    | No         |
| CoreWeave, Inc.             | B+              | \$26.7Bn  | (\$2.3Bn)  | No         |
| Digital Realty Trust, Inc.  | BBB             | \$36.4Bn  | \$11.9Bn   | No         |
| Equinix, Inc.               | BBB+            | \$31.5Bn  | \$5.5Bn    | No         |
| Meta Platforms, Inc.        | AA-             | \$321.1Bn | \$172.3Bn  | No         |
| Microsoft Corporation       | AAA             | \$500.3Bn | \$225.9Bn  | No         |
| Oracle Corporation          | BBB             | \$139.0Bn | (\$35.5Bn) | No         |
| Prologis, Inc.              | A               | \$98.7Bn  | \$57.8Bn   | No         |
| Visa Inc.                   | AA-             | \$49.1Bn  | (\$12.6Bn) | No         |

*Source Data Center Coalition*

- Majority of Data Centers seek to transact with high-credit quality LSEs or EDCs
- Some EDCs shift the risk to POLR suppliers who may be unwilling to assume this risk
- EDCs are regulated, such agreements may necessitate state level involvement
- Data Center credit profile remains opaque due to lack of clarity regarding the specific contracting entity



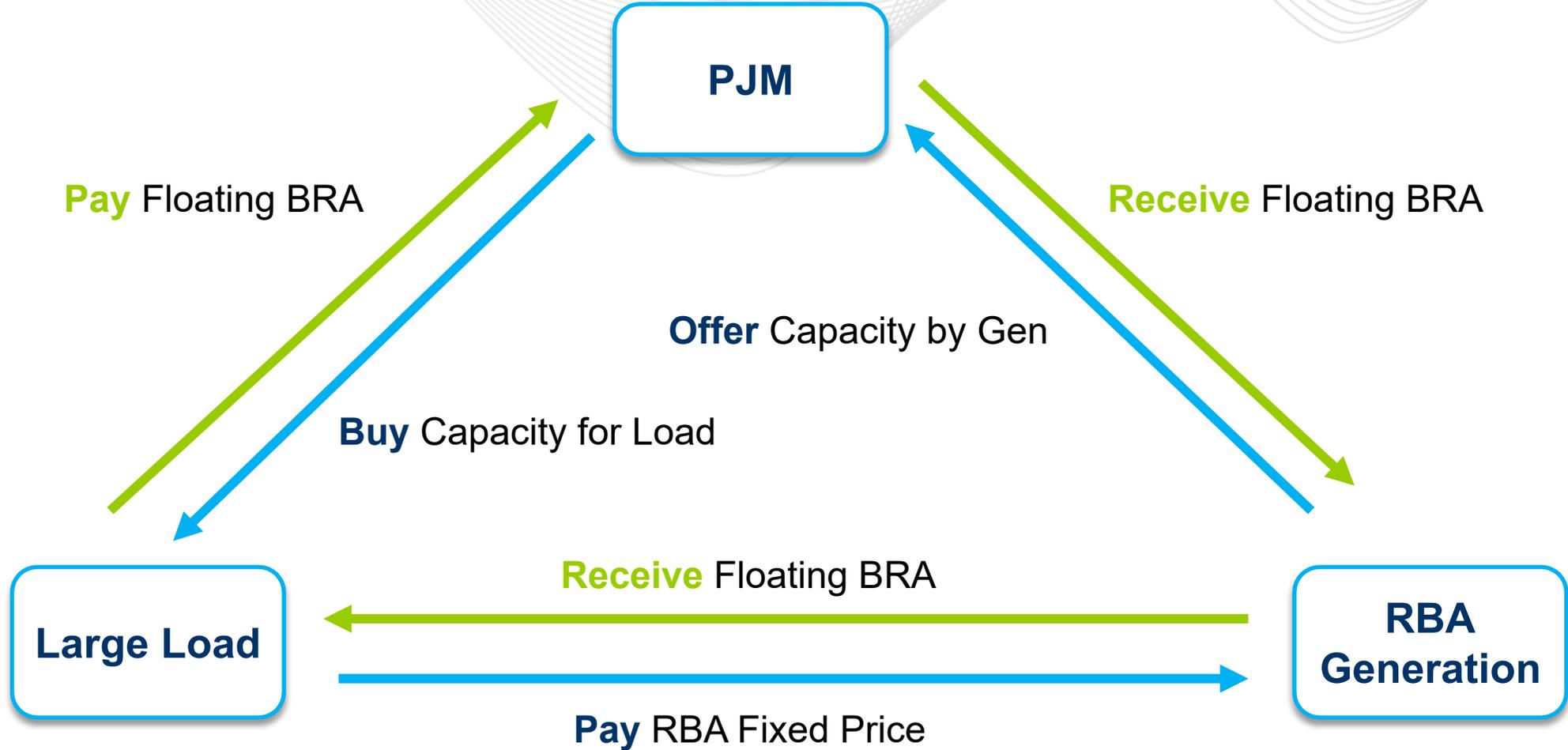
# 4. Bilateral Agreements: Margining Example

## ASSUMPTIONS

|   | Price Fix each year, one at a time  | Price Fix each year and assumed to be for the next X years (i.e. balance of contract)                       |
|---|---|---|
| <b>RBA clearing price</b>                         | \$400   | \$400   |
| <b>Volume</b>                                     | 1000 MW   | 1000 MW   |
| <b>Fix Price increase</b>                         | Seller Post   | Seller Post   |
| <b>Fix Price decrease</b>                         | Buyer Post  | Buyer Post  |
| <b>Number Years</b>                               |   | Balance of contract -14   |
| <b>Price Increase Example</b><br>1 year fix price | \$450 Seller posts \$18,250,000 (\$50x1000x365)<br>\$550 Seller posts \$54,750,000 (\$150x1000x365) | \$450 Seller posts \$255,500,000 (\$50x1000x365x14)<br>\$550 Seller posts \$766,500,000 (\$150x1000x365x14) |
| <b>Price Decrease Example</b><br>1 year fix price | \$350 Buyer posts \$18,250,000 (\$50x1000x365)<br>\$250 Buyer posts \$54,750,000 (\$150x1000x365)   | \$350 Buyer posts \$255,500,000 (\$50x1000x365x14)<br>\$250 Buyer posts \$766,500,000 (\$150x1000x365x14)   |

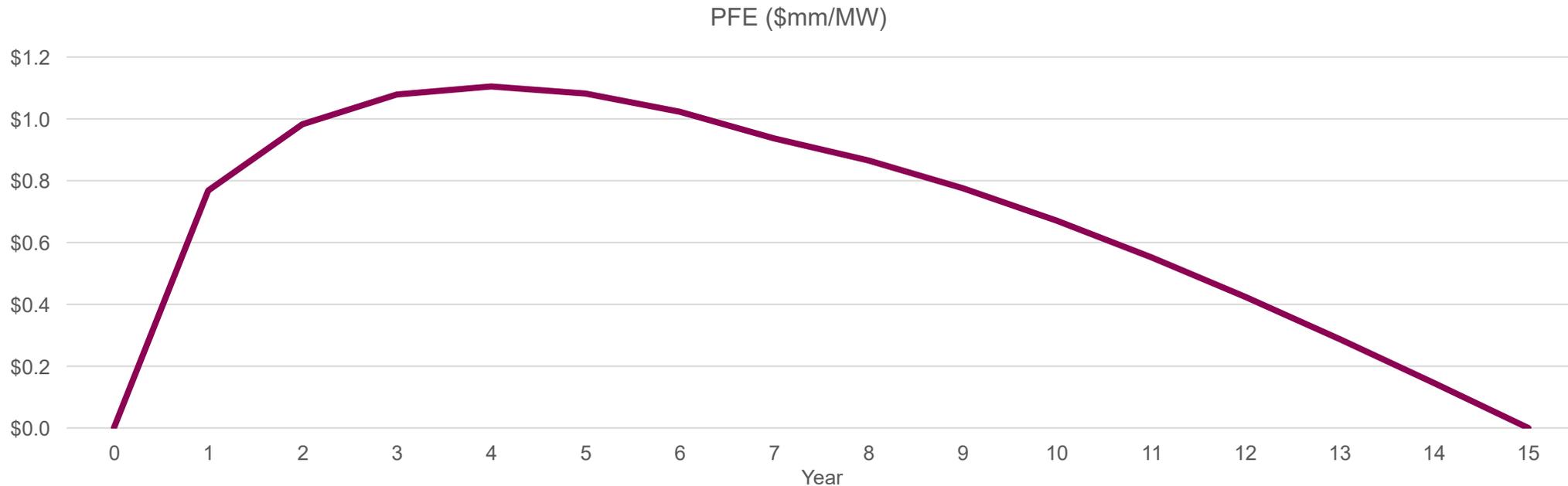
# RBA as a Financial Swap & ERCOT Securitization

# 5. Modeling RBA as a Financial Swap



# 5. Modeling Backstop Auction as a Fixed-for-Float Swap

**Potential Future Exposure (PFE):** At a future time point, with some confidence level, e.g. 95%, the maximum exposure of economic value to a counterparty



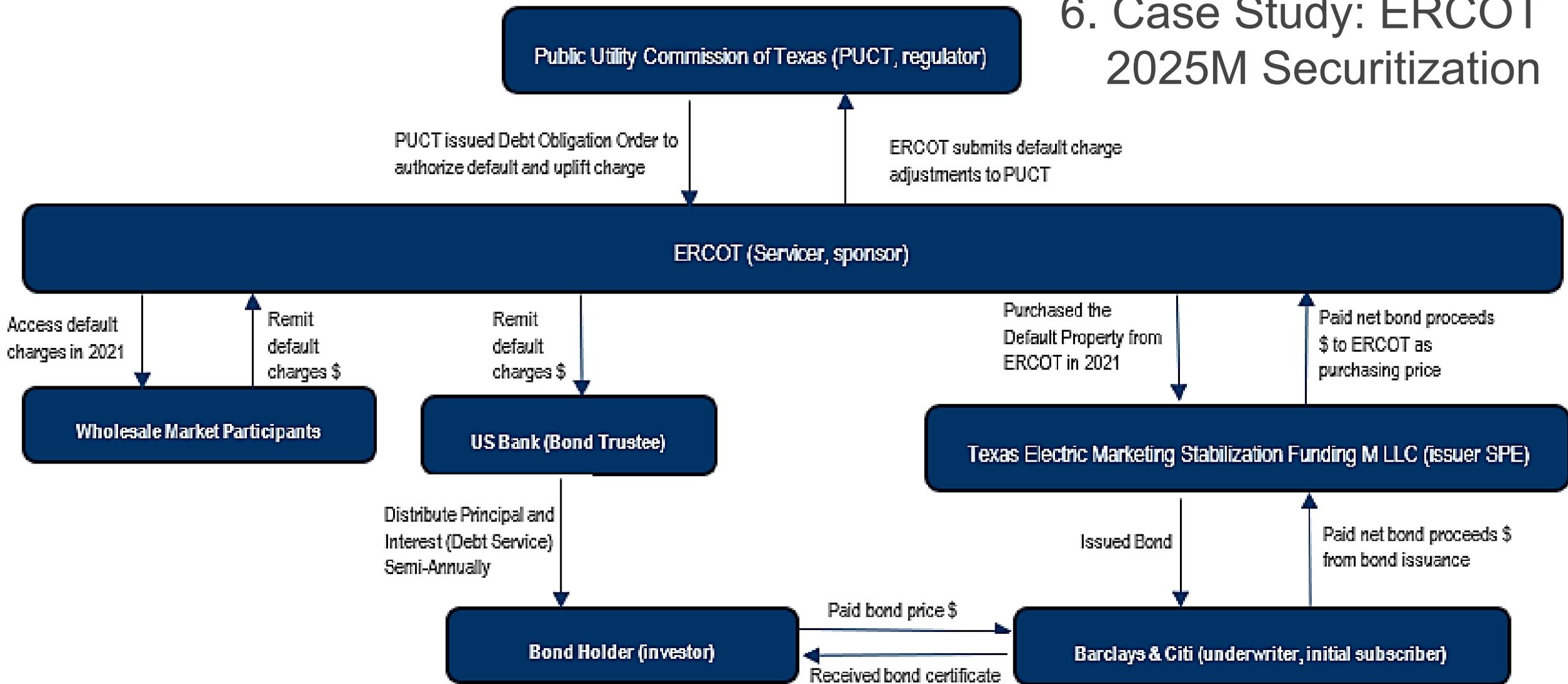
The value uncertainty goes higher deeper into the future, while quantity exposure decreases as time goes by. This makes PFE peaks at 1/3 of life.



## 6. Case Study: ERCOT Securitization Journey

| Series / Year   | Underwriters / Initial Purchasers           | Verification Links  |
|---|---|---|
| <b>2021 M Bonds (Initial Subchapter M Default Securitization)</b> | Texas Treasury Safekeeping Trust Company    | Bond Purchase Agreement (PUCT filing; TTSTC named):<br><a href="https://interchange.puc.texas.gov/Documents/52709_77_1506112.PDF">https://interchange.puc.texas.gov/Documents/52709_77_1506112.PDF</a><br><br>ERCOT Subchapter M page:<br><a href="https://www.ercot.com/about/hb4492securitization/subchapterm">https://www.ercot.com/about/hb4492securitization/subchapterm</a>                                       |
| <b>2022 N Bonds (Subchapter N – Uplift Securitization)</b>        | NA  | 2022 Offering Memorandum:<br><a href="https://www.ercot.com/files/docs/2022/06/17/Offering%20Memorandum.pdf">https://www.ercot.com/files/docs/2022/06/17/Offering%20Memorandum.pdf</a><br><br>Subchapter N program page:<br><a href="https://www.ercot.com/about/hb4492securitization/subchaptern">https://www.ercot.com/about/hb4492securitization/subchaptern</a>   |
| <b>2025 M Bonds (Refinancing 2021)</b>                            | Citigroup Global Markets & Barclays Capital | 2025 Offering Memorandum (underwriter section):<br><a href="https://www.ercot.com/files/docs/2025/09/10/Final-Offering-Memorandum.pdf">https://www.ercot.com/files/docs/2025/09/10/Final-Offering-Memorandum.pdf</a><br><br>Pricing Term Sheet (Trustee filing):<br><a href="https://www.ercot.com/files/docs/2025/09/10/Pricing-Term-Sheet.pdf">https://www.ercot.com/files/docs/2025/09/10/Pricing-Term-Sheet.pdf</a> |

# 6. Case Study: ERCOT 2025M Securitization



Revised based on <https://www.ercot.com/files/docs/2025/09/10/Final-Offering-Memorandum.pdf>

| Risk Category        | Root Cause of Risk              | Description   | Sell/Buy side |
|----------------------|---------------------------------|---|---------------|
| <b>Systematic</b>    | <b>Data Center Growth</b>       | Computational efficiency, New AI innovation, growth rate could be [15%-50%] | Buy           |
|                      | <b>Resource Policy</b>          | Federal policy on renewable, fossil fuel, carbon and nuke                   | Sell          |
|                      | <b>Geopolitical</b>             |   | Both          |
|                      | <b>Model Risk</b>               | ELCC/Load forecast uncertainty  | Both          |
|                      | <b>Large scale catastrophe</b>  | Extreme events due to weather, and other force majeure                      | Both          |
|                      | <b>Counterparty Risk</b>        |   | Both          |
| <b>Idiosyncratic</b> | <b>Equipment</b>                |   | Both          |
|                      | <b>Interconnection</b>          |   | Sell          |
|                      | <b>Permitting</b>               | Local level   | Sell          |
|                      | <b>Construction</b>             |   | Both          |
|                      | <b>Capacity Payment Default</b> |   | Buy           |
|                      | <b>Capacity performance</b>     |   | Sell          |
|                      | <b>Market Operation</b>         | In DA/RT market   | Both          |
|                      | <b>Counterparty Risk</b>        | Risk Pooling can manage this risk   | Both          |

Risk pooling can diversify idiosyncratic risks but cannot manage systematic risk.

