

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

Docket No. E-2, Sub 1262

Docket No. E-7, Sub 1243

In the Matter of)	
Joint Petition of Duke Energy)	Direct Testimony of
Carolinas, LLC and Duke Energy)	PAUL SUTHERLAND, SENIOR
Progress, LLC Issuance of Storm)	ADVISOR – Saber Partners,
Recovery Financing Orders)	LLC

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Direct Testimony of

Paul Sutherland, Senior Advisor

Saber Partners, LLC

December 21, 2020

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TESTIMONY OF PAUL R. SUTHERLAND
DECEMBER 21, 2020

Introduction

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. Paul R. Sutherland, Saber Partners, LLC (Saber or Saber
3 Partners), 260 Madison Avenue, Suite 8019, New York, New York
4 10016.

5 **Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR**
6 **POSITION?**

7 A. I am with Saber Partners, LLC, and serve as a Senior Advisor.

8 **Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES**
9 **IN THAT POSITION.**

10 A. My responsibilities with Saber include work in data management,
11 financial modeling, financial analysis, issuance cost auditing, deal
12 structuring, pricing analysis with respect to relative value and
13 review of issuance advice letters, mostly on behalf of public utility
14 commission clients and generally related to utility sponsored
15 Ratepayer-Backed-Bond (RBB) financing. I have performed these
16 functions while advising the following regulatory bodies regarding
17 utility securitizations: Public Utility Commission of Texas, West
18 Virginia Public Service Commission, New Jersey Board of Public
19 Utilities, Florida Public Service Commission, and the Wisconsin

1 Public Service Commission. I have also provided testimony on
2 behalf of the California Community Choice Association.

3 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND**
4 **AND PROFESSIONAL EXPERIENCE.**

5 A. I have a bachelor's degree in electrical engineering from Cornell
6 University. I also have a master's degree in business
7 administration from the University of Chicago.

8 I began working with Florida Power & Light Company (FPL) in
9 1976 doing economic analysis of new energy technologies in the
10 Research and Development (R&D) Department. After several
11 years, I moved to the Finance Department as a Financial Analyst.
12 Over the next 20 years I held various positions, including
13 Coordinator of Financial Systems, Manager of Corporate Finance,
14 Manager of Financial Analysis and Forecasting, and Assistant
15 Treasurer of both the utility and FPL Group Capital. Before leaving
16 FPL in 1998, I was Director of Finance, Accounting & Systems for
17 the FPL Energy Marketing and Trading Division. During my time
18 with FPL, I testified as an expert witness on cost of capital and
19 financial integrity. I also taught classes on economic decision-
20 making and on quality improvement. It was during this time (1989)
21 that FPL became the first non-Japanese company to win the
22 Deming Prize for Total Quality Management.

1 In 2000, after a year as adjunct professor of mathematics at Palm
2 Beach Atlantic College, I joined Saber Partners, LLC, as a Senior
3 Managing Director. I have been associated with Saber Partners
4 since that time in various roles, including my current position as
5 Senior Advisor. I have taken part in 13 investor-owned utility
6 securitization financings that raised over \$9 billion in capital for
7 eight different utilities.

8 **Q. PLEASE PROVIDE SOME OF YOUR BACKGROUND AND**
9 **EXPERIENCE WITH UTILITY FINANCINGS WHILE YOU WERE**
10 **AT FPL.**

11 A. While at FPL, as Manager of Corporate Finance and Assistant
12 Treasurer, I helped FPL complete over \$2 billion of debt and equity
13 financings in the public capital markets. FPL executed both
14 competitive and negotiated securities offering transactions. FPL
15 was also among the first to issue long-term variable rate tax-
16 exempt debt that could be (and was) later converted to a fixed
17 rate. Part of my job, along with the Treasurer and Chief Financial
18 Officer, was to prepare and deliver rating agency presentations to
19 support the credit ratings from the three major rating agencies.

20 **List of Exhibits**

21 **Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS CASE?**

22 A. Yes, I am sponsoring:

1

2 Exhibit 1, List of Prior Utility Securitization Transactions with

3 Tranches and Weighted Average Lives (WALs)

4 Exhibit 2, 2001-2006 Texas vs Non-Texas Deals

5 Exhibit 3, Citigroup Analysis of Texas Interest Savings

6 Exhibit 4, 2001 to 2012 – Spreads to Swaps of 9-10 Year WAL

7 Tranches

8 Exhibit 5, Methodology for Relative Value Benchmarking

9 Exhibit 6, Standard Deviation of Spreads to Swaps vs. Spreads to

10 Agencies

11 Exhibit 7, Duke Energy Florida (DEF) Interest Savings

12 Exhibit 8, Atkins' Interest Rate Assumptions

13 Exhibit 9, How Much Does Size Matter?

14 Exhibit 10, AYE (Alleghany Energy Inc.) 2009 Interest Savings

15 Exhibit 11, Glossary

16 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS**

17 **PROCEEDING?**

18 A. I am testifying on behalf of the Public Staff of the North Carolina

19 Utilities Commission, which represents the interests of the

20 ratepayers of Duke Energy Carolinas, LLC (DEC), and Duke

1 Energy Progress, LLC (DEP) (together, "the Companies"), relating
2 to the utilities' proposed use of storm recovery bond (SRB)
3 financing. The Public Staff hired Saber Partners, LLC, as its
4 consultant in this proceeding.

5 **Purpose of Testimony**

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 A. The purpose of my testimony is to

- 8 • discuss and demonstrate how ratepayers benefit from RBB
9 financing, and more specifically, ways in which that benefit can be
10 measured and maximized through optimal structuring and
11 application of "best practices" by a Bond Team,
- 12 • explain how negotiated bond pricing can be evaluated under
13 market conditions leading up to, and at the time of pricing based
14 upon relative value with respect to comparable benchmark
15 securities,
- 16 • discuss reasons for and potential benefits of extending final
17 maturity beyond 15 years,
- 18 • point out several misleading or erroneous statements,
19 calculations, or assumptions in the testimony of the Companies'
20 witness Atkins, some of which carry over into the exhibits of the
21 Companies' witness Abernathy.

1 • suggest certain other changes to the proposed Financing Order.

2 Since some of the terms that I and other witnesses use may be
3 unfamiliar to those who have not previously been involved in this
4 type of utility securitization financing, I have included a glossary of
5 terms as Exhibit 11.

6 **Q. DO YOU KEEP TRACK OF ALL UTILITY SECURITIZATION**
7 **TRANSACTIONS?**

8 A. I do. Exhibit 1 shows a list of 67 distinct utility securitization
9 transactions that have occurred since 1997. I maintain this list as
10 part of Saber's database of documents and statistics from each of
11 the 67 prior deals. The exhibit includes principal amount by
12 tranche (sometimes also called "series" in the context of corporate
13 bonds) and the weighted average life (WAL), in years, for each
14 tranche.

15 **Q. DOES YOUR LIST AGREE WITH DEF WITNESS ATKINS'**
16 **EXHIBIT 3?**

17 A. Not exactly. Our list includes the \$482.9 million taxable portion of
18 the Long Island Power Authority (LIPA) 2013 securitization
19 transaction. Neither of our lists includes the tax-exempt portion of
20 the offering, since those bonds were priced and sold in the
21 municipal market. Because the interest for bonds issued into that
22 market is exempt from federal income taxes, the market for those

1 LIPA bonds is different from the market for all other investor-
2 owned utility transactions, as the tax advantage gives those LIPA
3 bonds an advantage in pricing over bonds without federal tax-
4 exempt interest. None of the SRB debt in this proceeding will be
5 tax-exempt municipal securities that have such a different investor
6 base.

7 Another difference is that the Atkins list misstates the pricing date
8 of the Hawaiian Electric transaction as 11/13/14 when, in fact it,
9 was 11/4/2014.

10 **Determinants of Savings and Role of Bond Team**

11 **Q. WHERE DO RATEPAYER SAVINGS COME FROM IN A**
12 **UTILITY SECURITIZATION?**

13 A. The biggest net present value (NPV) savings result from
14 the fact that rating agencies generally treat utility securitization
15 debt as off-balance sheet. This means that, unlike conventional
16 utility debt, securitization debt does not need to be offset with a
17 similar amount of common equity to maintain an acceptable
18 capital structure. The avoidance of the high cost of equity, together
19 with the associated state and federal income taxes, can account
20 for as much as two thirds of the total savings. Most of the rest of
21 the NPV savings comes from the fact that securitization payments
22 are usually levelized, as will be the case with this SRB financing,

1 whereas traditional utility financing has a structure with declining
2 revenue requirements. A relatively smaller contribution to savings
3 comes from the interest rate differential between AAA-rated
4 securitization debt and traditional, lower rated utility debt. To some
5 degree, these savings are going to be present, regardless of how
6 well the financing is executed.

7 **Q. WHAT ARE THE BIGGEST DETERMINANTS OF RATEPAYER**
8 **SAVINGS OVER WHICH THE BOND ISSUER HAS SOME**
9 **CONTROL IN AN SRB FINANCING?**

10 A. There are two major determinants in addition to various smaller
11 factors that affect ratepayer savings. The first is the interest rate
12 that the ratepayer has to pay on the bonds. The second is the
13 structure of the financing, which can include the time period over
14 which the ratepayer has to repay the principal amount that is being
15 financed or the size or number of the tranches (or series) that
16 make up the total financing, or even the legal framework used. In
17 each case, the final determination of each of the two factors is
18 limited by constraints that may or may not be beyond the control
19 of the issuer. In most cases the issuer has some control over both
20 the interest rate and the structure. Also, when I refer to the issuer
21 in this context, I am really talking about the entire Bond Team,
22 defined as a team comprised of the sponsoring utility, the Utilities
23 Commission, the Public Staff, their financial advisors, and others

1 who are all, presumably, working on behalf of the ratepayers,
2 since unlike conventional utility debt, with SRBs the ratepayer is
3 directly responsible for repayment of the bonds. In my opinion, this
4 is the strongest reason why the Public Staff and its advisors should
5 have equal say with the utilities in planning and execution of the
6 financing in question. The admittedly limited control that the issuer
7 has over interest rates and structure can nonetheless have major
8 impacts on the NPV savings over the life of the bonds.

9 **Q. IN YOUR VIEW, SHOULD THE COMMISSION GIVE THE**
10 **COMPANIES BROAD FLEXIBILITY TO ESTABLISH THE**
11 **FINAL TERMS AND CONDITIONS OF THE BONDS AS**
12 **SUGGESTED BY ITS WITNESSES ATKINS AND HEATH?**

13 A. No. Were these normal utility bonds subject to standard review
14 and approval by the Commission, the Commission could easily
15 grant that broad flexibility because it would have the authority for
16 an unlimited after-the-fact review. In this case, however, the
17 Commission does not have that opportunity, as described by other
18 witnesses. As such, the Commission's Order in this proceeding
19 should require that the final terms and conditions be determined
20 in a joint, collaborative process with the Commission, the Public
21 Staff, and/or its independent advisors participating actively, visibly,
22 and in real-time. The exhibits I am sponsoring, I believe, amply
23 demonstrate the benefits that accrue to ratepayers from

1 employing best practices, and in particular, from providing the
2 Public Staff and its advisors equal authority with other members
3 of a Bond Team to make major decisions involving structuring,
4 marketing, and pricing of the SRBs.

How Interest Rates Are Established

5 **Q. PLEASE EXPLAIN HOW THE INTEREST RATE ON RBB**
6 **FINANCING IS DETERMINED UNDER ANY PARTICULAR SET**
7 **OF MARKET CONDITIONS.**

8 A. RBBs, in this case SRBs, are normally priced by establishing a
9 spread between the yield or bond interest rate and a particular
10 benchmark security. Historically, most such bonds have been
11 priced based on a spread known as an interest rate swap security,
12 similar to how asset-backed securities customarily are priced.
13 However, as Public Staff witness Heller explains, securitization
14 debt is not really an asset-backed security, although it may have
15 some characteristics in common. Consequently, in the case of the
16 Duke Energy Florida (DEF) storm recovery financing in 2016, the
17 bonds were priced relative to U.S. Treasury bonds, which is the
18 benchmark typically used for corporate debt securities. Either way,
19 the market determines the yields on the pricing benchmark
20 securities, either swaps or U.S. Treasury bonds. Then, the issuer
21 negotiates a spread based on one or the other of the benchmarks
22 and that determines the actual interest rate on the bonds. As an

1 example, in the case of the DEF nuclear asset recovery bond sale
2 in 2016, the five-year series, that is to say the series with a WAL
3 of five years, was priced from the five-year U.S. Treasury bond
4 with a coupon of 1.375% which was yielding 1.131% at the time.
5 The Bond Team negotiated a spread of 60 basis points or 0.60%,
6 so the yield on the nuclear asset recovery bond five-year series
7 was set at 1.731%. Since market prices and yields change minute
8 to minute, it is impossible to say exactly what the final yield will be
9 until the moment of pricing. However, the issuer and investors can
10 agree on the 60-basis point spread in the minutes or hours
11 beforehand to avoid worry about last minute movements in the
12 market.

13 **Q. WHAT HAPPENS IF THERE IS NO PRICING BENCHMARK**
14 **SECURITY WITH EXACTLY THE SAME MATURITY AS THE**
15 **WAL OF THE SERIES BEING PRICED?**

16 A. In that case, the issuer and investors will look for pricing
17 benchmarks with maturities that are near to the WAL of the
18 securitization series. In such situations, some underwriters like to
19 negotiate a spread to the pricing benchmark that has the closest
20 maturity to the RBB WAL. For example, consider the 15.2-year
21 WAL series in the DEF deal. Underwriters might prefer to price the
22 series off of the 10-year U.S. Treasury bond. That bond had a
23 coupon of 1.625%, was due on 5/15/26, and yielded 1.608%. The

1 spread to such a pricing benchmark is known as the T-spread and
2 was 125 basis points at the time of pricing. However, it is difficult
3 for the issuer to judge the reasonableness of such pricing due to
4 the difference between the WALs of the two securities (10 years
5 versus 15.2 years).

6 **Q. IS THERE A BETTER WAY TO PRICE SUCH BOND SERIES?**

7 A. A better way to price such series is to interpolate between the
8 closest pricing benchmark securities on either side of the WAL of
9 the series in question. Thus, in the case of the 15.2-year WAL
10 series, the issuer can interpolate between the 10-year U.S.
11 Treasury bond and the 30-year U.S. Treasury bond to get a rate
12 that corresponds to a theoretical 15.2-year Treasury rate. That
13 interpolated rate would be approximately 1.826%. The spread
14 between the interpolated U.S. Treasury bond rate and the rate on
15 the RBB being priced is known as the g-spread. In this case, the
16 g-spread was approximately 103 basis points, so the 15.2-year
17 series was priced a little more than 1.03% above the interpolated
18 U.S. Treasury bond rate of 1.826% to yield 2.858%. The g-spread,
19 although not generally favored by underwriters as a pricing
20 benchmark, is more often used by investors in deciding whether
21 or not to purchase bonds.

Power of the Issuer and Measuring Performance

1 **Q. HOW MUCH ABILITY DOES THE ISSUER HAVE TO**
2 **NEGOTIATE THE YIELD ON THE BONDS?**

3 A. While the issuer has no ability to negotiate the underlying pricing
4 benchmark rate, be it the swap rate or the U.S. Treasury bond
5 rate, the issuer can certainly negotiate the spread off of those
6 pricing benchmark rates. The presence or absence of certain best
7 practices as discussed by Public Staff witnesses Fichera,
8 Abramson, Maher, and Klein is a major factor in determining the
9 likely success of such negotiations. For example, the financial
10 advisor to the Commission or to the Public Staff most directly
11 represents the ratepayer and therefore has the greatest incentive
12 to negotiate the lowest interest rate consistent with market
13 conditions. If the advisor has the authority as a Bond Team
14 member to fully participate in the structuring, marketing, and
15 pricing of the bonds, there will be greater ability to negotiate the
16 tightest possible credit spreads and therefore the lowest possible
17 yields on the bonds.

18 **Q. WHAT EVIDENCE IS THERE THAT SUCH BEST PRACTICES**
19 **HAVE RESULTED IN LOWER INTEREST COSTS COMPARED**
20 **TO FINANCINGS THAT DID NOT EMPLOY BEST PRACTICES?**

21 A. One of the first regulatory authorities to employ the best practices
22 in question was the Public Utilities Commission of Texas (PUCT).

1 During the period from 2001 through 2006, there were six utility
2 securitizations completed in Texas with a total of 26 individual
3 tranches with WALs from 1.9 to 13 years. Each of those
4 transactions followed best practices as required by the PUCT.
5 During that same period, there were 18 transactions outside of
6 Texas which generally did not follow some or all of the best
7 practices required in Texas. Exhibit 2 shows how all of those
8 tranches were priced. The two regression lines demonstrate that,
9 on average, the Texas tranches priced significantly better (i.e.,
10 lower spreads to the swap benchmark and therefore lower interest
11 rates) compared to the non-Texas tranches.

12 **Q. IS THERE A WAY OF QUANTIFYING THE SAVINGS SHOWN**
13 **IN CHARTS SUCH AS EXHIBIT 2?**

14 A. Yes. Exhibit 3 is an analysis done by Citigroup in 2003 estimating
15 interest savings from the first three utility securitizations done
16 using best practices in Texas between 2001 and 2003 and
17 comparing them to all utility securitizations done between 1997
18 and 2003, graphically comparing securitization pricing spreads to
19 swaps, U.S. Treasury bonds, and credit card securitizations. The
20 study quantifies interest savings based on the swap spread pricing
21 difference between the Texas deals and all other deals. The study
22 calculates a total present value interest savings for the three
23 Texas deals of \$7,533,476. Subsequently, Citigroup reran its

1 analysis using a shorter time span, I believe it was 2001 to 2003,
2 and calculated NPV savings of about \$23 million for the same
3 three Texas deals. These were the three transactions which
4 witness Rebecca Klein oversaw as Chair of the PUCT, and Saber
5 Partners served as financial advisor to the PUCT for each of these
6 three transactions.

7 **Q. HOW CAN THE SAVINGS CALCULATION BE SO DIFFERENT**
8 **FOR THE SAME THREE TRANSACTIONS?**

9 A. The differences in the savings calculation result from the fact that
10 savings estimates are sensitive to the time period over which the
11 comparisons are made. Generally, the more stable interest rates
12 are over the comparison period, the more valid the comparisons
13 are, since spread relationships change over time, independent of
14 how well any particular pricing is executed. Exhibit 4 shows how
15 swap spreads changed dramatically during the financial crisis of
16 2008 and 2009.

17 **Q. IS THERE ANY OTHER WAY OF MEASURING PRICING**
18 **PERFORMANCE BESIDES COMPARING PRICING WITH**
19 **BENCHMARK SWAP SPREADS?**

20 A. Yes, there is, especially after the financial crisis of 2008 and 2009.
21 Exhibit 4 shows pricing spreads to swaps for tranches in the range
22 of nine- to 10-year WAL from 2001 to 2012. There are two
23 important points to note from this chart. First, from 2001 through

1 2007, transactions in which Saber Partners acted as financial
2 advisor following best practices led the march toward tightening
3 spreads, as every deal had tighter spreads than the preceding
4 deal. The second point is that with the financial crisis of 2008-2009
5 and its aftermath, pricing spreads to swaps widened dramatically,
6 and only partially recovered in the years after. It seems apparent
7 that, with spreads changing so substantially over short periods of
8 time, it would be misleading to try to compare performance of one
9 deal to others if the deals were more than a year or two apart. We
10 believe the solution is to do what is called relative value
11 benchmarking with types of securities that price closer to utility
12 RBBs than either U.S. Treasury bonds or swaps.

13 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY “RELATIVE VALUE**
14 **BENCHMARKING.”**

15 A. Exhibit 5 is a paper that I authored explaining in detail what we
16 mean by relative value benchmarking and how it works. Basically,
17 it involves looking at a range of types of securities that are, at least
18 in some way, comparable to utility RBBs. These might include
19 AAA-rated corporate bonds such as Johnson & Johnson (JNJ)
20 and Microsoft (MSFT). It could include AAA-rated credit card
21 securitizations, which are in fact asset-backed securities. It could,
22 and in fact should, include AAA-rated U.S. agency debt by such
23 issuers as Fannie Mae (FNMA), Federal Home Loan Bank

1 (FHLB), or the Tennessee Valley Authority (TVA). The basket of
2 comparables could even include some electric utility debt, even
3 though there are no AAA-rated utilities. By comparing yields on
4 these types of securities to the indicative rates provided by the
5 underwriters in the weeks and days leading up to pricing, the
6 issuer can get a good sense of the reasonableness of those
7 indicative rates. For example, if the indicative spreads on the
8 RBBs would result in a higher yield than on electric utility corporate
9 debt, then there is definitely something wrong with the price
10 indications given by the underwriters.

11 **Q. YOU HAVE EXPLAINED HOW RELATIVE VALUE**
12 **BENCHMARKING IS USED LEADING UP TO PRICING. HOW**
13 **CAN IT BE USED AFTER PRICING TO MEASURE THE**
14 **SUCCESS OR FAILURE OF PRICING RELATIVE TO OTHER**
15 **SECURITIZATION TRANSACTIONS?**

16 A. Each of the types of comparable securities listed in my previous
17 answer is imperfect in some way as a measure of pricing
18 performance; JNJ and MSFT because they are the only two
19 corporate AAAs; credit card securitizations because they do not
20 exist for longer maturities and because they carry prepayment risk
21 that utility securitization debt does not; U.S. agency securities
22 because it would be easy to cherry-pick the best debt issues

1 among them so as to make a particular utility securitization pricing
2 look good in retrospect.

3 **Q. WHAT IS THE SOLUTION TO THESE PROBLEMS?**

4 A. The solution is to use U.S. agency debt, but to let an unbiased
5 third party pick the particular debt issues among all the U.S.
6 agency debt securities outstanding. This avoids the possibility of
7 so-called cherry picking to make a particular pricing look good or
8 bad according to one's bias. In this case, the unbiased third party
9 is the Bloomberg Terminal, a computer software system that
10 provides financial information and data to financial professionals
11 in all major corporations. The data include both current and
12 historical prices and yields for a seemingly infinite variety of debt
13 and equity securities. In addition to publishing prices and yields on
14 individual debt issues, Bloomberg publishes a yield curve for U.S.
15 agency debt, for which it picks specific agency issues for various
16 maturities along the curve. These data can then be used to
17 calculate spreads at the time of pricing any particular utility
18 securitization. This yield curve is called the I-26 Agency Curve.
19 Securitization spreads can be calculated to interpolated agency
20 yields in the same way that they are calculated to interpolated U.S.
21 Treasury bond yields.

22 **Q. WHY IS IT BETTER TO USE SPREADS TO U.S. AGENCY DEBT**
23 **AS A MEASURE OF PERFORMANCE RATHER THAN**

**SPREADS TO SWAPS AS WAS DONE IN EXHIBITS 2, 3, AND
4?**

A. Before the financial crisis of 2008-2009, it would not have made much difference which benchmark was used. However, as Exhibit 4 shows, the crisis caused the relationship between swaps and utility securitization debt to change significantly. While the relationship between U.S. agency debt and securitization debt also changed, the effect was much smaller. The relative changes can be seen in Exhibit 6, which shows the securitization spreads to swaps and spreads to U.S. agency debt for all utility securitizations in the years before and after the financial crisis. The charts show the relative stability of the two relationships by comparing the standard deviations in each case. In the period before the financial crisis, the standard deviation for spreads to swaps (15.8 basis points (bps)) was almost the same as for spreads to U.S. agency debt (14.8 bps). However, after the crisis, the standard deviation for swaps increased dramatically to 25.6 bps, while for U.S. agency debt, it decreased slightly to 13.7 bps. When attempting to measure relative success of one utility securitization against others, it is necessary to compare transactions that occurred in particular time periods. Therefore, a good benchmark for this purpose is one that is more stable over time. Exhibit 6 supports the conclusion that the spreads to U.S.

1 agency debt as measured by interpolated yields from the
2 Bloomberg I-26 curve are more stable with less variability and
3 therefore a better measure than swap spreads.

4 **Q. BESIDES USING A DIFFERENT BENCHMARK SECURITY, DO**
5 **YOU GENERALLY FOLLOW THE METHODOLOGY USED IN**
6 **THE CITIGROUP ANALYSIS TO CALCULATE INTEREST**
7 **SAVINGS FROM FOLLOWING BEST PRACTICES?**

8 A. Generally, yes. We calculate both nominal and NPV savings after
9 each financing for which we act as advisor, comparing that pricing
10 of that transaction to securitizations that have priced in the
11 recently preceding years for which we did not act as advisors. We
12 focus on NPV savings since they are more relevant to the financial
13 interests of the ratepayer than nominal savings, taking into
14 account the time value of money. Unlike the Citigroup analysis, we
15 do the analysis for each transaction we complete individually so
16 that each deal has its own set of comparable deals. Citigroup, on
17 the other hand, used a single group of comparable deals to
18 evaluate all three Texas deals.

19 **Q. WHAT INTEREST RATE DO YOU USE TO DISCOUNT**
20 **INTEREST SAVINGS?**

21 A. We have come to the conclusion that the petitioning utility's overall
22 weighted average cost of capital (WACC) is the best proxy for the
23 ratepayers' cost of capital. That is, in my opinion, the theoretically

1 correct rate to use, since securitization debt is a direct obligation
2 of the ratepayers and not the utility. In the present case, DEC and
3 DEP are discounting at the after-tax WACC, which is below both
4 the pre-tax and the overall WACC. I don't believe it makes a
5 material difference in this proceeding which WACC is used. Many
6 utility commissions choose to use the RBB rate to discount interest
7 savings, which is much lower and which I believe likely overstates
8 interest savings from the ratepayers' perspective.

9 **Q. CAN YOU SHOW AN EXAMPLE OF THE APPLICATION OF**
10 **YOUR APPROACH TO CALCULATING INTEREST SAVINGS**
11 **IN A UTILITY SECURITIZATION POST FINANCIAL CRISIS?**

12 A. Yes. The DEF nuclear asset recovery issue priced on 6/15/2016.
13 Exhibit 7 shows how the five series priced relative to all other utility
14 securitizations from 2010 to 2016 in terms of spreads to the
15 Bloomberg I-26 U.S. agency bond yield curve. The chart shows
16 that the first three series, with WALs of two, five, and ten years,
17 respectively, priced almost exactly on the regression line for all
18 other transactions in that timeframe. However, the two longer
19 series, with WALs of 15.2 and 18.7 years, respectively, priced well
20 below the regression line. The difference between the regression
21 line, which you could consider as average pricing performance,
22 and the actual spread to U.S. agency bonds represents interest
23 savings to the ratepayers. Discounted at DEF's WACC at that time

1 of 8.12%, the NPV savings for ratepayers amounts to over \$6.8
2 million.

3 **Q. DOES THIS MEAN THAT IN THE FUTURE, WHEN YOU PRICE**
4 **THIS TYPE OF SECURITY, THE AGREED-UPON PRICE WITH**
5 **THE UNDERWRITERS WILL BE BASED ON A SPREAD TO**
6 **U.S. AGENCY BONDS RATHER THAN A SPREAD TO SWAPS**
7 **OR SPREAD TO U.S. TREASURY BONDS?**

8 A. No, it does not. When setting the final pricing of such securities,
9 we must follow the market convention, which dictates that the
10 pricing be stated either as a spread to swaps or a spread to
11 interpolated U.S. Treasury bonds. However, for negotiating prior
12 to that point as well as for evaluating performance after the deal is
13 done, in my judgment U.S. agency securities represent the best
14 relative value benchmark among all the comparable debt types.

Savings Through Structural Changes

15 **Q. YOU STATED PREVIOUSLY THAT THERE IS A SECOND**
16 **DETERMINANT THAT CAN HAVE A LARGE IMPACT ON**
17 **RATEPAYER SAVINGS, NAMELY THE STRUCTURE OF THE**
18 **SRB. PLEASE GIVE AN EXAMPLE OF HOW A STRUCTURAL**
19 **CHANGE MIGHT INCREASE SAVINGS.**

20 A. In the 2016 DEF securitization, as witness Heller relates in his
21 testimony, at the suggestion of the Florida Public Utilities

1 Commission's financial advisor, the planned four-tranche structure
2 was changed to a five-tranche structure about a week before final
3 pricing. The original 16.9-year 4th tranche of about \$525 million
4 was split into two smaller tranches. The A-4 tranche became a
5 15.2-year WAL, \$250 million tranche and the A-5 tranche was
6 created as an 18.7-year WAL, \$275 million tranche. The original
7 A-4 tranche was quoted by the bankers with a g-spread (spread
8 to US Treasuries) of 117 basis points (1.17%). The final pricing of
9 the two new tranches was a 103 basis point spread on the new A-
10 4 tranche and a 116 basis point spread on the new A-5 tranche.
11 This resulted in 14 basis point savings on \$250 million and one
12 basis point savings on \$275 million. This created an additional
13 NPV savings of over \$3 million by just one small structural change
14 that affected neither the total principal amount, nor the overall
15 WAL life of the transaction.

16 **Q. ARE THERE OTHER TYPES OF STRUCTURAL CHANGES**
17 **THAT MIGHT PRODUCE SIGNIFICANT INCREMENTAL NPV**
18 **SAVINGS FOR RATEPAYERS?**

19 A. Yes. In witness Heath's testimony, he suggests that the
20 Companies prefer a 15-year amortization period for the bonds
21 because it "strikes the right balance between the length of the
22 recovery period and the length and level of the recovery charge."
23 Witness Heath also states that this is consistent with the longest

1 recovery period proposed by Public Staff in the DEP storm deferral
2 docket (Docket No. E-2, Sub 1193). He says that DEC and DEP
3 also considered a 20-year final payment date, but presents no
4 data in his direct testimony to show the effect of extending the
5 scheduled final maturity from 15 to 20 years. In response to DR 5-
6 1, spreadsheets provided by witness Abernathy show that such an
7 extension would increase NPV savings to ratepayers by over \$63
8 million total between DEC and DEP.

Problems with Testimony of Abernathy and Atkins

9 **Q. WHAT DID YOUR REVIEW OF THE INTEREST RATE**
10 **ASSUMPTIONS USED IN WITNESS ABERNATHY'S**
11 **CALCULATION OF SAVINGS FOR THE 20-YEAR STRUCTURE**
12 **REVEAL?**

13 A. I found two significant but more or less off-setting errors in the
14 interest rates used in the calculation.

15 **Q. WHAT WAS THE FIRST ERROR?**

16 A. First, as with the savings calculation for the 15-year scheduled
17 final structure, Ms. Abernathy relied on an overall interest rate that
18 was weighting coupons of five tranches by principal amount but
19 ignoring the WAL of each tranche, thus significantly understating
20 the true overall rate. It is incorrect to weight the individual coupon
21 rates just by the principal amounts of the respective tranches.

1 They must also be weighted by their respective weighted average
2 lives, since obviously an interest rate on Atkins' 18.1-year tranche
3 has more impact overall than the same interest rate on a 1.7-year
4 tranche. It appears that she got her overall rate of 1.51% from a
5 spreadsheet, also attached to response to DR 5-1 but provided by
6 witness Atkins, which contains rates for the individual 5 tranches.
7 The correct weighted average interest rate using Atkins' individual
8 rates for the 5 tranches on the 20-year scheduled final structure
9 would be 1.83%.

10 **Q. WHAT IS THE SECOND ERROR?**

11 A. Witness Atkins obtained his rates for the individual tranches from
12 Guggenheim. I have taken the rates he used in his direct testimony
13 and in his responses to two data requests, PS DR 5-1 and PS DR
14 9-2, for both the 15-year and the 20-year final scheduled maturity
15 structure and plotted them in Exhibit 8. The graph shows that the
16 rates for all the tranches fall, more or less, along a trendline above
17 the yield curve for US Treasury bonds yields, with two obvious
18 exceptions. The biggest outlier from the PS DR 5-1 response is
19 the A-5 tranche in the 20-year scheduled final maturity structure
20 with a WAL of 18.1 years, to which he assigns a rate of 2.54%,
21 which is 101 basis points above the interest rate of the next closest
22 tranche at 14 year-WAL with a rate of just 1.53%. The A-5 tranche
23 appears to be overstated by at 50 to 75 basis points (0.50% to

1 .75%) when compared to the trendline of all other interest rates
2 provided by witness Atkins for the various tranches in his direct
3 testimony and in response to PS DR 5-1.

4 **Q. SUBSEQUENT TO RESPONDING TO PS DR 5-1, DID**
5 **GUGGENHEIM OR WITNESS ATKINS CHANGE THEIR**
6 **ESTIMATE OF THE A-5 TRANCHE INTEREST RATE?**

7 A. No. In PS DR 9-2.m, the following question was asked in hopes
8 that the error would be corrected: "In response to PS DR 5-1, there
9 is an attached excel spreadsheets showing witness Atkins'
10 assumed interest rates for a 20-year SRB structure in which the
11 A-4 14-year tranche has an interest rate of 1.53%, equating to a
12 g-spread of about 50 basis points, whereas the A-5 18.1-year
13 tranche has an interest rate of 2.54%, equating to a g-spread of
14 about 130 basis points. Please explain why the DEC/DEP believes
15 that the 4 additional years of weighted average life for that tranche
16 should cause such a large increase in credit spread given the
17 slope of the US Treasury benchmarks?" However, rather than
18 reduce the rate for the A-5 tranche, the answer given by Witness
19 Atkins was to raise the rate for the A-4 tranche, in the following
20 response: "The exhibit to the response to PS DR 5-1 contained a
21 clerical error in the estimated spreads as of October 9, 2020 that
22 affected the spread and the yield of the A-4 tranche. The corrected
23 estimated spreads that were intended to be provided are in the

1 attachment provided with this response.” The rate for A-4 shown
2 in the excel attachment was 1.88%, up from 1.53%. As shown in
3 my Exhibit 8, now both the A-4 and the A-5 rates in Atkins’ 20-yr.
4 scheduled final maturity structure are significantly above the
5 trendline established by his rates for the 15-year scheduled final
6 maturity structure as well as the first three tranches of his 20-year
7 scheduled final maturity structure.

8 **Q. TO WHAT WOULD YOU ATTRIBUTE THE CAUSE FOR SUCH**
9 **OUTLIER RATES?**

10 A. I believe they are either a result of a carelessness or possibly an
11 indication of underwriters’ natural inclination to favor shorter
12 maturities because they are easier to sell. In either case, it would
13 appear that witness Atkins did not seriously consider the 20-year
14 scheduled final maturity structure as an alternative to the
15 Companies’ preferred 15-year scheduled final maturity structure.

16 **Q. ARE THERE, IN YOUR OPINION, ANY FINANCIAL OR NON-**
17 **FINANCIAL REASONS FOR OR AGAINST EXTENDING THE**
18 **SCHEDULED FINAL MATURITY BEYOND 15 YEARS?**

19 A. Yes, for both. The argument against extending could be based on
20 a belief that major storms were going to begin to occur much more
21 frequently and a desire to avoid “pancaking” capitalized O&M, one
22 storm after another, i.e., accumulating charges from multiple new
23 storms before the charges for old storms are completely paid.

1 However, there are several arguments for extending the maturity.
2 First, in the traditional case presented by witness Abernathy, she
3 assumes that capitalized O&M is financed over 15 years but the
4 storm-related capital piece is depreciated over 40 years. If we
5 were to take the weighted average of those two maturities based
6 on the principal amounts financed with SRBs, the maturity would
7 be slightly less than 18 years. Increasing the securitization final
8 scheduled maturity by just three years increases NPV savings by
9 about \$40 million for DEC and DEP combined, assuming the
10 principal amount financed in Atkins Exhibit 4.

11 The second argument supporting a longer maturity with SRBs is
12 simply that interest rates are within half a percent of the lowest
13 they have been in the last century or more. Consequently, it is in
14 both the ratepayers' and the utilities' interest to take full advantage
15 of such low rates for as long as reasonably possible. After all, there
16 are very few ratepayers who could borrow funds for less than 2%,
17 as they would effectively be doing with SRBs.

18 **Q. WHAT OTHER KINDS OF STRUCTURAL CHANGES MIGHT**
19 **HAVE SIGNIFICANT FINANCIAL IMPACTS?**

20 A. Witness Atkins suggests that employing a grantor trust structure
21 to combine the DEC and DEP bonds into a single bond offering
22 would avoid what, in his opinion, might be a financial penalty for
23 the smaller deal size of the DEC bond offering.

1 **Q. DID WITNESS ATKINS OFFER ANY EVIDENCE THAT SUCH A**
2 **PENALTY ACTUALLY EXISTS FOR SMALLER OFFERINGS?**

3 A. In his response to a data request, PS DR 2-8, he pointed to two
4 paired securitization offerings, one in 2010 and the other in 2014,
5 in which in each case a smaller offering was sold at the same time
6 as a larger offering by different but related sponsoring utilities. He
7 stated that in both cases, the smaller offering was priced with a
8 higher interest rate than the larger. However, my review of his
9 quantitative analysis indicates that it was not done correctly, and
10 thus does not support his contention.

11 **Q. PLEASE EXPLAIN THE NATURE AND CONSEQUENCES OF**
12 **THIS ERROR.**

13 A. In his PS DR 2-8 Supplemental attachment, Witness Atkins
14 compares a \$468.9 million Louisiana ELL (Entergy Louisiana,
15 LLC) deal with a \$244.1 million Louisiana EGSL (Entergy Gulf
16 States Louisiana, LLC) deal, both priced on 7/15/2010 with the
17 same WAL of 6.6 years. He calculates overall interest rates of
18 2.795% for the larger ELL deal and 2.819% for the smaller EGSL
19 deal for a difference of 2.4 basis points per annum or .024%
20 penalty per annum for the smaller deal. However, it is incorrect to
21 weight the individual coupon rates only by the principal amounts
22 of the respective tranches. They must also be weighted by their
23 respective WALs, since obviously an interest rate on a 10-year

1 WAL tranche has greater impact overall than the same interest
2 rate on a two-year WAL tranche. When the interest rates are
3 weighted correctly by principal and WAL, the “penalty” for the
4 smaller deal is just 1.57 basis points or .0157%, as shown in
5 Exhibit 9. That difference costs the smaller \$244 million deal just
6 \$253,000 in additional interest.

7 The consequence of witness Atkins’ error is greater in the 2014
8 deals. There, he compares a \$243.85 million Louisiana ELL deal
9 to a \$73 million Louisiana EGSL deal, both priced on 7/29/2014
10 with a WAL of 6.7 years. His attachment shows an overall rate of
11 2.646% for the larger deal compared to 2.860% for the smaller
12 deal for an apparent size penalty of 21.4 basis points or .214%.
13 However, in this case, when the correct rates weighted by both
14 principal and WAL are used, the larger deal has an overall interest
15 rate of 2.9732%, also shown in Exhibit 9, which is 11 basis points
16 or .11% more expensive than the smaller deal, contradicting
17 Atkins’ hypotheses that smaller transactions tend to suffer pricing
18 penalties. That means that the smaller \$71 million deal saved over
19 half a million dollars in interest by pricing lower than the larger
20 deal.

21 This result seems to impeach Witness Atkins’ rationale for using
22 the more complex and more expensive grantor trust structure to
23 sell the DEC and DEP bonds under a single structure.

1 **Q. WAS THERE A DATA REQUEST TO WITNESS ATKINS**
2 **QUESTIONING THE WAY HE CALCULATED WEIGHTED**
3 **AVERAGE INTEREST RATES?**

4 A. Yes. PS DR 8-3 asked, "Please provide the weighted average
5 interest rate for each of the four (4) transactions, weighted by
6 principal amount and weighted average life of the tranches in the
7 respective 4 transactions. If witness Atkins did not base his
8 conclusion that 'the smaller transaction priced wider' upon such
9 weighted average rates, then please explain what it was based on
10 and provide supporting data". The response stated "Please see
11 the Companies' original and supplemental responses to PS DR 2-
12 8". The original response to PS DR 2-8.a stated "Please see the
13 attached spread and coupon information for those transactions
14 included as an attachment to PS Data Request 2-8", again
15 referring to the four Louisiana transactions. However, there was
16 no such attachment. Subsequently, witness Atkins submitted PS
17 DR 2-8 Supplemental, which had an attachment containing the
18 weighted average interest rates, weighted by principal but not by
19 WAL. He did not explain why he thought that was appropriate to
20 not consider WAL.

21 **Q. ARE THERE OTHER UTILITY SECURITIZATIONS THAT**
22 **MIGHT TEND TO DISPROVE ATKINS' CONTENTION?**

1 A. Yes. In 2007 and again in 2009, Allegheny Power priced a pair of
2 securitizations for each of two subsidiaries, Monongahela Power
3 (MP Environmental Funding) and Potomac Edison (PE
4 Environmental Funding). In each case, the two issuers priced with
5 the same spreads even though the PE deal was about 1/3 the size
6 of the MP deal. Exhibit 10 shows the 2009 deals priced better than
7 expected when compared to two other utility securitizations in the
8 same time frame.

9 **Q. ARE THERE ANY OTHER INSTANCES WHERE WITNESS**
10 **ATKINS' MISCALCULATION OF THE WEIGHTED AVERAGE**
11 **INTEREST RATE MAY BE CAUSING ERRONEOUS OR**
12 **MISLEADING RESULTS?**

13 A. Yes. In Exhibit 4 to Witness Atkins' direct testimony, he presents
14 preliminary structures for the DEC and DEP transactions showing
15 five tranches with five interest rates with a resulting overall interest
16 rate of 1.15%. If he were to calculate the weighted average rate
17 correctly, it would be about 1.38% or 23 basis points higher. Since
18 Witness Abernathy is using Mr. Atkins' overall rate in her savings
19 calculation, she consequently overstates the savings.

20 **Other Changes to the Proposed Financing Order**

21 **Q. ARE THERE ANY OTHER CHANGES TO THE COMPANIES'**
22 **PROPOSED FINANCING ORDER THAT YOU WOULD**

**SUGGEST THAT WOULD RESULT IN MATERIAL
RATEPAYER SAVINGS?**

A. There are several, which involve charges during the life of the bonds and also collections after the bonds mature. At least four utility commissions in eight RBB transactions between 2005 and 2014 have limited earnings of the sponsoring utility on the capital subaccount to actual investment returns on the account, rather than requiring ratepayers to provide a return equal to the rate on the longest tranche, as stated in the Companies' proposed Financing Order. This change from the proposed Financing Order would save the Companies' ratepayers, taken together, nominally about \$1.2 million over 15 years and on an NPV basis, about \$500,000. The funds are in a AAA subsidiary primarily for tax purposes and if used at any point, it is trued up immediately through the storm recovery charge on ratepayers on a constant basis. It also is returned to the Companies upon the final maturity of the bonds. The Companies' capital is not at risk, and thus there is no justification in this instance for a higher return to the Company, charged to the ratepayers, than actually earned on the account itself. The Companies should be allowed to collect no more than the actual investment return on the capital subaccount, which is in addition to the other considerable benefits that they will receive from doing this securitization.

1 **Q. WHAT BENEFITS, SPECIFICALLY, ARE YOU REFERRING**
2 **TO?**

3 A. Under traditional ratemaking as practiced by this Commission,
4 there is usually a gap between the date of the storms and the next
5 general rate case. In those instances, the amortization and the
6 carrying costs are typically presumed to be recovered in existing
7 rates during the interim period of time. Under the securitization
8 statute, that is not the case; amortization does not begin until the
9 bonds are issued, and the Company gets to accrue carrying costs
10 up to that date. So, use of securitization under these
11 circumstances ultimately increases the revenue collected by the
12 Company from the ratepayers by deferring for future collection
13 many millions of dollars from at least a year's worth of "gap period"
14 amortization and carrying costs.

15 **Q. Will the Companies and their SPEs continue to collect storm**
16 **recovery charge revenues after all the storm recovery bonds**
17 **have been repaid?**

18 A. Yes. Customers will no longer be obligated to pay the storm
19 recovery charge in respect of electricity consumed after all the
20 storm recovery bonds have been repaid. But customers still will be
21 obligated to pay storm recovery charges in respect of electricity
22 consumed through the date on which all storm recovery bonds

1 have been repaid. We sometimes refer to these amounts as “tail-
2 end collections.”

3 **Q. Can you estimate the amount of tail-end collections in**
4 **connection with the proposed storm recovery bonds?**

5 A. Yes. Based on assumptions used in the model embedded in the
6 testimony of witness Byrd’s Exhibit 1 and the Companies’
7 collection curves provided in response to PS DR 3-2.b, the
8 Companies and their SPEs would receive approximately \$20
9 million of tail-end collections. In one way or another, these excess
10 collections should be credited back to ratepayers.

11 **Q. The proposed form of Financing Order attached as Appendix**
12 **C to the Joint Petition calls for (i) servicing fees and**
13 **administration fees collected by the Companies to be**
14 **included in the Companies’ cost of service, (ii) the**
15 **Companies to credit back all periodic servicing fees in excess**
16 **of the Companies’ incremental costs of performing servicing**
17 **and administrative functions, and the expenses incurred by**
18 **the Companies to perform obligations under the Servicing**
19 **Agreement or Administration Agreement not otherwise**
20 **recovered through the storm recovery charge to be included**
21 **in the Companies’ cost of service “in the next rate case.” Why**
22 **is this crediting necessary?**

1 A. In the absence of crediting future rates or some other use of these
2 fees received by the Companies in excess of their costs incurred
3 in providing these services, the Companies would recover the
4 same costs twice from customers. Using witness Heath's
5 estimated cost of serving fees of .05 percent of the original
6 principal amount per year, that amounts to \$489,400 per year or
7 in excess of \$7 million over 15 years for the Companies combined.

8 **Q. Does the proposed form of Financing Order also call for "tail-**
9 **end collections" of storm recovery charges to be credited**
10 **back to customers in the Companies "next rate case"?**

11 A. Yes. Page 41 states: "Upon the maturity of the Storm Recovery
12 Bonds and upon the discharge of all obligations with respect to
13 such bonds, amounts remaining in each Collection Account will be
14 released to the appropriate SPE and will be available for
15 distribution by the SPE to DEP. As noted in this Financing Order,
16 equivalent amounts, less the amount of any Capital Subaccount,
17 will be booked to a regulatory liability and credited back to
18 customers in the Company's next rate case following the maturity
19 of the Storm Recovery Bonds."

20 **Q. Have commissions in other states devised other mechanisms**
21 **to provide greater protection for customers against such**
22 **overcollections of securitization charges?**

1 A. Yes. In 2006, FPL applied to the FPSC for a Financing Order
2 authorizing securitized storm recovery bonds to be issued for FPL.
3 Much of the proceeds of those storm recovery bonds were to be
4 used to fund additions to an existing Storm and Property
5 Insurance Reserve Fund (Reserve) which had been established
6 in 1993 to implement a self-insurance approach to storm costs
7 through annual contributions from base rate revenues. In the
8 Financing Order authorizing the issuance of storm recovery bonds
9 for FPL, the FPSC found that:

10 • FPL had not justified that the annual fees for servicing and
11 administration services was necessary to cover any incremental
12 costs to be incurred by FPL in performing those services.
13 Consequently, the FPSC “ORDERED that FPL shall apply to the
14 Reserve all amounts it will receive under the Servicing Agreement
15 for ongoing services and that FPL shall apply to the Reserve all
16 amounts it will receive under the Administration Agreement for its
17 services.” and

18 • “Upon the maturity of the storm-recovery bonds and upon
19 discharge of all obligations in respect thereof, remaining amounts
20 in the Collection Account will be released to the SPE and will be
21 available for distribution by the SPE to FPL. Equivalent amounts,
22 less the amount of the Capital Subaccount and earnings thereon,
23 will be credited by FPL to current customers’ bills in the same

1 manner that the charges were collected, or through a credit to the
2 Reserve or the capacity cost recovery clause if the Commission
3 determines at the time of retirement that a direct credit to
4 customers' bills is not cost-effective. FPL shall similarly credit
5 customers an aggregate amount equal to any Storm Bond
6 Repayment Charges subsequently received by the SPE or its
7 successor in interest to the Bondable Storm Recovery Property."

8 **Q. Does providing these rate credits to customers "in the next**
9 **rate case" provide adequate and appropriate protection for**
10 **customers against overcollections by the Companies?**

11 A. As Public Staff witnesses Maness and Boswell state in their
12 testimony in this proceeding, the Companies historically have not
13 filed rate cases every year, and many years might pass before the
14 next rate case. For this reason, witnesses Maness and Boswell
15 recommend that the Commission's Financing Order (i) direct each
16 Company to establish two deferred accounts with respect to the
17 proposed storm recovery bonds: a "storm recovery bond excess
18 fees account" and a "storm recovery bond excess collections
19 account," (ii) provide that the positive or negative balance in each
20 of these deferred accounts, adjusted if appropriate for income
21 taxes and accrued carrying costs at the Companies' respective
22 net-of-tax weighted average cost of capital, and (iii) direct that the
23 balances in these deferred accounts be credited to customers in

1 an appropriate fashion in the next general rate case, without
2 regard to the historical base year used for that next rate case. The
3 recovery of the deferred credit may or may not be accompanied
4 by an ongoing credit to reflect continuing expected excess fees
5 and collections, subject to further true-up. I believe the approach
6 recommended by witnesses Maness and Boswell would provide
7 adequate and appropriate protection for customers against
8 overcollections by the Companies.

Summary and Recommendations

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY.**

10 A. The market for utility securitization financing is not a 100% efficient
11 market and therefore it is important that the Commission or Public
12 Staff have an experienced representative with co-equal authority
13 with DEC and DEP following established best practices to act on
14 behalf of ratepayers in the structuring and pricing of the proposed
15 SRB financing. Without such expert representation, it is unlikely
16 that the bonds will meet the statutory requirement of lowest storm
17 recovery charge at the time the bonds are priced.

18 **Q. PLEASE LIST YOUR RECOMMENDATIONS FOR THE**
19 **COMMISSION.**

20 A. In general, the Commission should modify the proposed Financing
21 Order to allow for the Best Practices identified in my testimony as

1 well as that of witnesses Abramson, Maher and Klein, and
2 summarized by witness Fichera. Most importantly, the Financing
3 Order should provide that the Companies and the Public Staff,
4 together with its independent financial advisor, have equal
5 authority with respect to major decisions involving structuring,
6 marketing, and pricing of the proposed SRBs and selection of
7 underwriters and other transaction participants. Second, the
8 Financing Order should allow for a final scheduled maturity of up
9 to 20 years. Third, the Financing Order should contain provisions
10 that prevent excess charges, where possible or return excess
11 charges to the ratepayer in a timely fashion, if not. Finally, the
12 Commission should carefully evaluate the value of including the
13 grantor trust structure as an option in the Financing Order, given
14 its increased complexity and the lack of any evidence supporting
15 the value of such an option.

16 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

17 A. Yes, it does

Sutherland Exhibit 1
DOCKET NO. E-2, Sub 1262
DOCKET NO. E-7, Sub 1243

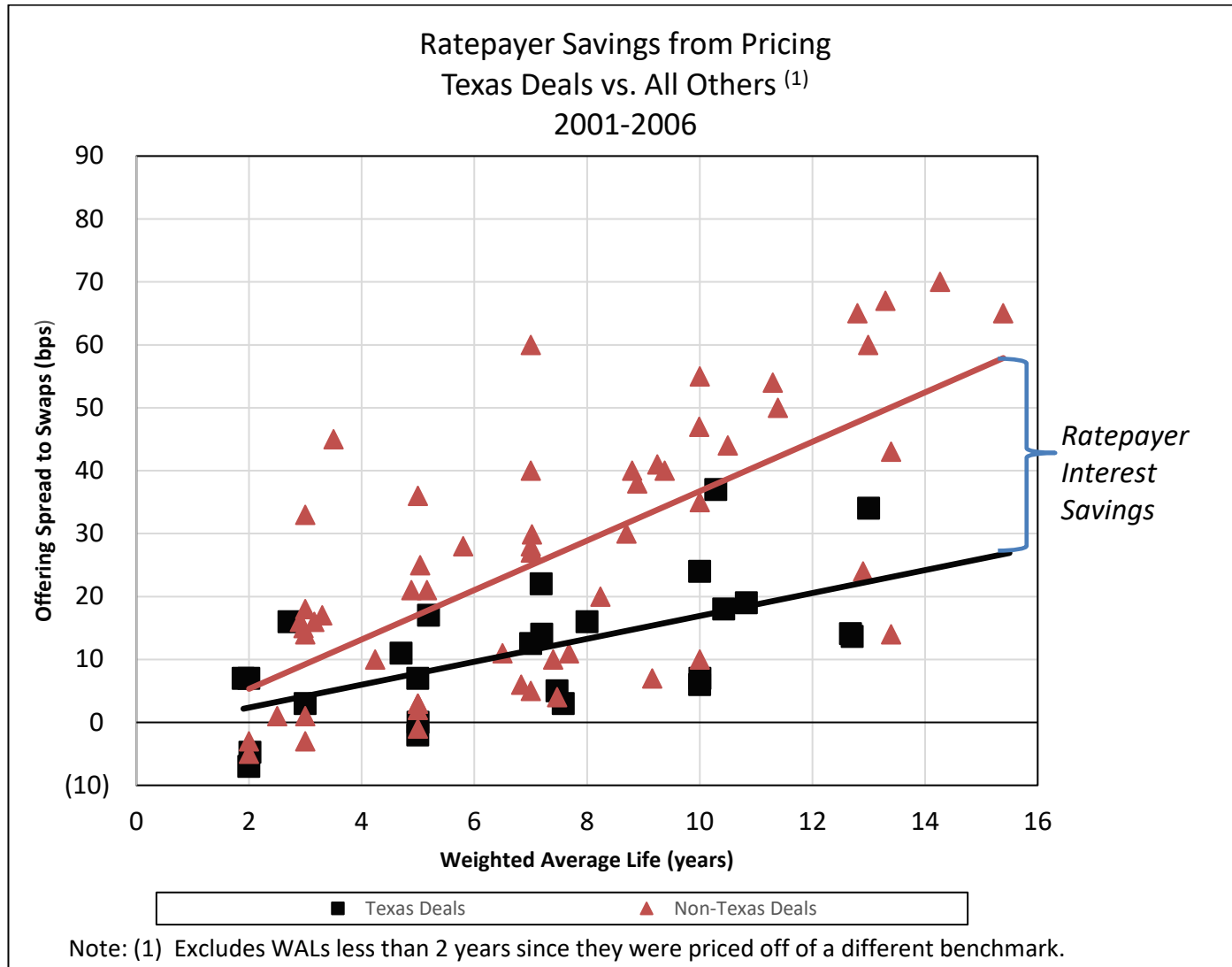
Deal #	Deal Name and Pricing Date	Tranche	Amount (\$)	Wtd. Avg. Life (yrs.)
67	AEP Texas Restoration Funding (9/11/2019)	A-1	117,641,000	3.05
		A-2	117,641,000	7.87
		Total	235,282,000	5.46
66	PSNH Funding LLC 3 (5/01/2018)	A-1	235,900,000	3.02
		A-2	111,600,000	7.02
		A-3	288,163,200	11.64
		Total	635,663,200	7.63
65	Duke Energy Florida Project Finance LLC (6/15/2016)	A-1	183,000,000	2.00
		A-2	150,000,000	5.00
		A-3	436,000,000	10.00
		A-4	250,000,000	15.20
		A-5	275,290,000	18.70
		Total	1,294,290,000	11.14
64	Entergy New Orleans Storm Recovery Funding I (7/14/15)	A-1	98,730,000	4.98
63	Dept of Business, Econ Devel. & Tourism (Hawaii) (11/04/2014)	A-1	50,000,000	3.05
		A-2	100,000,000	10.21
		Total	150,000,000	7.82
62	Louisiana Local Government System Restoration/ELL (7/29/2014) [taxable munis]	A-1	91,700,000	3.00
		A-2	152,150,000	8.90
		Total	243,850,000	
61	Louisiana Local Government System Restoration/EGSL (7/29/2014) (Taxable munis)	A-1	71,000,000	6.72
60	Consumers 2014 Securitization Funding LLC (7/14/2014)	A-1	124,500,000	3.00
		A-2	139,000,000	8.00
		A-3	114,500,000	12.26
		Total	378,000,000	7.64
59	Utility Debt Securitization Authority [LIPA] (12/12/2013) N.B. Total includes taxable debt only. An additional \$1.5B of tax exempt debt was issued	T-1	100,000,000	4.91
		T-2	100,000,000	5.92
		T-3	100,000,000	6.70
		T-4	182,934,000	8.77
		Total	482,934,000	6.95
58	Appalachian Consumer Rate Relief Funding LLC (11/6/2013)	A-1	215,800,000	5.00
		A-2	164,500,000	12.24
		Total	380,300,000	8.13
57	Ohio Phase-In-Recovery Funding LLC (7/23/2013)	A-1	164,900,000	2.25
		A-2	102,508,000	5.08
		Total	267,408,000	3.33
56	FirstEnergy Ohio PIRB Special Purpose Trust (6/12/2013) (Issued as pass-through certificates, backed by bonds issued by CEI, OE and TE)	A-1	111,971,000	1.60
		A-2	70,468,000	5.07
		A-3	262,483,000	13.70
		Total	444,922,000	9.29
55	AEP Texas Central Funding III (3/7/2012)	A-1	307,900,000	3.00
		A-2	180,200,000	7.00
		A-3	311,900,000	10.76
		Total	800,000,000	6.93
54	Centerpoint Energy Transmission Bond Co. IV (1/11/2012)	A-1	606,222,000	3.00
		A-2	407,516,000	7.00
		A-3	681,262,000	10.82
		Total	1,695,000,000	7.10
53	Entergy Louisiana Investment Recovery Funding I, LLC (9/15/2011)	A-1	207,156,000	5.27
		Total	207,156,000	5.27
52	Entergy Arkansas Energy Restoration Funding LLC (8/11/2010)	A-1	124,100,000	5.44
		Total	124,100,000	5.44
51	Louisiana Utilities Restoration Corporation Project/ELL (7/15/2010) [taxable munis]	A-1	112,000,000	2.00
		A-2	111,000,000	5.00
		A-3	121,000,000	8.00
		A-4	124,900,000	10.90
		Total	468,900,000	6.63

Deal #	Deal Name and Pricing Date	Tranche	Amount (\$)	Wtd. Avg. Life (yrs.)
50	Louisiana Utilities Restoration Corporation Project/EGSL 7/15/2010 [taxable munis]	A-1	97,000,000	3.00
		A-2	60,000,000	7.00
		A-3	87,100,000	10.40
		Total	244,100,000	6.62
49	MP Environmental Funding LLC (12/16/2009)	A-1	64,380,000	19.02
		Total	64,380,000	19.02
48	PE Environmental Funding LLC (12/16/2009)	A-1	21,510,000	19.02
		Total	21,510,000	19.02
47	CenterPoint Energy Restoration Bond (11/18/2009)	A-1	224,788,000	3.00
		A-2	160,152,000	7.00
		A-3	279,919,000	10.82
		Total	664,859,000	7.26
46	Entergy Texas Restoration Funding (10/29/09)	A-1	182,500,000	3.00
		A-2	144,800,000	7.00
		A-3	218,600,000	10.86
		Total	545,900,000	7.21
45	Louisiana Public Facilities Authority (8/20/2008)	A-1	103,000,000	2.66
		A-2	90,000,000	6.24
		A-3	85,400,000	8.97
		Total	278,400,000	5.75
44	Louisiana Public Facilities Authority (7/22/2008)	A-1	160,000,000	1.99
		A-2	367,000,000	5.97
		A-3	160,700,000	9.32
		Total	687,700,000	5.83
43	Cleco Katrina/Rita Hurricane Recovery Funding LLC 2 (2/28/2008)	A-1	113,000,000	5.00
		A-2	67,600,000	10.58
		Total	180,600,000	7.09
42	CenterPoint Energy Transition Bond Company III (1/29/2008)	A-1	301,427,000	5.00
		A-2	187,045,000	10.52
		Total	488,472,000	7.11
41	Entergy Gulf States Reconstruction Funding I, LLC (6/22/2007) [N/B. These securities were sold with variable pricing]	A-1	93,500,000	2.99
		A-2	121,600,000	7.99
		A-3	114,400,000	12.24
		Total	329,500,000	8.05
40	RSB BondCo LLC (BG&E sponsor) (6/22/2007)	A-1	284,000,000	2.99
		A-2	220,000,000	6.99
		A-3	119,200,000	9.27
		Total	623,200,000	5.60
39	FPL Recovery Funding LLC (5/15/07)	A1	124,000,000	1.97
		A2	140,000,000	4.98
		A3	100,000,000	7.31
		A4	288,000,000	10.38
		Total	652,000,000	7.15
38	MP Environmental Funding LLC (4/3/2007)	A-1	86,200,000	4.00
		A-2	76,000,000	10.00
		A-3	153,250,000	16.00
		A-4	29,025,000	20.00
		Total	344,475,000	12.01
37	PE Environmental Funding, LLC (4/3/2007)	A-1	28,450,000	4.00
		A-2	25,700,000	10.00
		A-3	50,700,000	16.10
		A-4	9,975,000	19.94
		Total	114,825,000	12.07
36	AEP Texas Central Transition Funding II (10/4/2006)	A-1	217,000,000	2.00
		A-2	341,000,000	5.00
		A-3	250,000,000	7.58
		A-4	437,000,000	10.00
		A-5	494,700,000	12.68
		Total	1,739,700,000	8.44
35	JCP&L Transition Funding II (8/4/2006)	A-1	56,348,000	3.00
		A-2	25,693,000	7.00
		A-3	49,220,000	10.00
		A-4	51,139,000	13.40
		Total	182,400,000	8.37

Deal #	Deal Name and Pricing Date	Tranche	Amount (\$)	Wtd. Avg. Life (yrs.)
34	Centerpoint Energy Series A (12/9/2005)	A-1	250,000,000	2.02
		A-2	368,000,000	5.00
		A-3	252,000,000	7.47
		A-4	519,000,000	10.01
		A-5	462,000,000	12.71
		Total	1,851,000,000	8.26
33	PG&E Energy Recovery Funding LLC Series 2005-2 (11/3/2005)	A-1	351,000,000	2.00
		A-2	372,000,000	5.00
		A-3	121,461,000	6.83
		Total	844,461,000	4.02
32	West Penn Power (9/22/2005)	A-1	115,000,000	4.24
		Total	115,000,000	4.24
31	PSE&G 2005-1 (9/9/2005)	A-1	25,200,000	2.00
		A-2	35,000,000	5.00
		A-3	20,000,000	7.47
		A-4	22,500,000	9.16
		Total	102,700,000	5.66
30	Massachusetts RRB Special Purpose Trust 2005-1 (BEC Funding II, LLC \$265.5M and CEC Funding, LLC 2/15/2005 (Nstar (FKA Boston Edison)))	A-1	109,200,000	1.00
		A-2	154,000,000	2.50
		A-3	266,500,000	5.00
		A-4	144,800,000	7.40
		Total	674,500,000	4.30
29	PG&E Energy Recovery Funding LLC Series 2005-1 (2/3/2005)	A-1	268,000,000	1.00
		A-2	647,000,000	3.00
		A-3	320,000,000	5.00
		A-4	468,000,000	6.50
		A-5	184,864,000	7.68
		Total	1,887,864,000	4.38
28	Rockland Electric Company (7/28/04)	A-1	46,300,000	8.70
		Total	46,300,000	8.70
27	Oncor (TXU) 2004-1 (5/28/2004)	A-1	279,000,000	3.00
		A-2	221,000,000	7.00
		A-3	289,777,000	10.43
		Total	789,777,000	6.85
26	Atlantic City Electric (12/18/2003)	A-1	46,000,000	2.97
		A-2	52,000,000	8.24
		A-3	54,000,000	12.90
		Total	152,000,000	8.30
25	Oncor 2003-1 (8/14/2003)	A-1	103,000,000	2.00
		A-2	122,000,000	5.00
		A-3	130,000,000	8.00
		A-4	145,000,000	10.83
		Total	500,000,000	6.85
24	Atlantic City Electric (12/11/2002)	A-1	109,000,000	3.00
		A-2	66,000,000	7.00
		A-3	118,000,000	10.50
		A-4	147,000,000	15.39
		Total	440,000,000	9.75
23	JCP&L Transition Funding LLC (6/4/2002)	A-1	91,111,000	3.00
		A-2	52,297,000	7.00
		A-3	77,075,000	10.00
		A-4	99,517,000	13.40
		Total	320,000,000	8.57
22	CPL Transition Funding LLC (1/31/2002)	A-1	128,950,233	1.90
		A-2	154,506,810	4.70
		A-3	107,094,258	7.20
		A-4	214,926,738	10.00
		A-5	191,856,858	13.00
		Total	797,334,897	8.01

Deal #	Deal Name and Pricing Date	Tranche	Amount (\$)	Wtd. Avg. Life (yrs.)
21	PSNH Funding LLC 2 (1/16/2002)	A-1	50,000,000	3.50
		Total	50,000,000	3.50
20	Consumers Funding LLC (10/31/2001)	A-1	26,000,000	1.00
		A-2	84,000,000	3.00
		A-3	31,000,000	5.00
		A-4	95,000,000	7.00
		A-5	117,000,000	10.00
		A-6	115,592,000	12.80
		Total	468,592,000	8.00
19	Reliant Energy 2001-1 (10/17/2001)	A-1	115,000,000	2.71
		A-2	118,000,000	5.19
		A-3	130,000,000	7.19
		A-4	385,987,000	10.29
		Total	748,987,000	7.78
18	Western Mass Electric (5/14/2001)	A-1	155,000,000	7.00
		Total	155,000,000	7.00
17	PSNH Funding LLC (4/20/2001)	A-1	75,211,483	1.09
		A-2	214,649,395	5.04
		A-3	235,139,122	9.99
		Total	525,000,000	6.69
16	CL&P Funding LLC (3/27/2001)	A-1	224,858,822	1.18
		A-2	255,056,333	3.16
		A-3	292,381,624	5.16
		A-4	287,907,878	7.02
		A-5	378,195,343	8.89
		Total	1,438,400,000	5.54
15	Detroit Edison 2001-1 (3/2/2001)	A-1	124,540,305	1.50
		A-2	179,037,815	3.30
		A-3	322,791,421	5.80
		A-4	406,722,416	8.80
		A-5	326,236,780	11.30
		A-6	390,671,263	13.30
		Total	1,750,000,000	8.64
14	PECO 2001-A (2/15/2001)	A-1	805,500,000	9.25
		Total	805,500,000	9.25
13	PSE&G 2001-A (1/25/2001)	A-1	105,249,914	1.00
		A-2	368,980,380	2.90
		A-3	182,621,909	4.88
		A-4	496,606,425	7.02
		A-5	328,032,965	9.38
		A-6	453,559,632	11.39
		A-7	219,688,870	12.99
		A-8	370,259,905	14.27
		Total	2,525,000,000	8.69
12	PECO 2000-A (4/27/2000)	A-1	110,000,000	1.11
		A-2	140,000,000	2.08
		A-3	398,900,000	8.74
		A-4	351,100,000	9.33
		Total	1,000,000,000	7.18
11	West Penn Power (11/3/1999)	A-1	74,000,000	1.00
		A-2	172,000,000	3.00
		A-3	198,000,000	5.50
		A-4	156,000,000	7.80
		Total	600,000,000	4.83
10	Pennsylvania Power & Light (7/29/1999)	A-1	293,000,000	1.00
		A-2	178,000,000	2.00
		A-3	303,000,000	3.00
		A-4	201,000,000	4.00
		A-5	313,000,000	5.00
		A-6	223,000,000	6.00
		A-7	455,000,000	7.22
		A-8	454,000,000	8.75
		Total	2,420,000,000	5.17

Deal #	Deal Name and Pricing Date	Tranche	Amount (\$)	Wtd. Avg. Life (yrs.)
9	Boston Edison (7/27/1999)	A-1	108,500,000	1.09
		A-2	170,600,000	3.13
		A-3	103,400,000	5.13
		A-4	170,900,000	7.13
		A-5	<u>171,600,000</u>	9.63
		Total	725,000,000	5.59
8	Sierra Pacific Power (4/8/1999)	A-1	<u>24,000,000</u>	
		Total	24,000,000	
7	PECO Energy (3/18/1999)	A-1	244,500,000	1.30
		A-2	275,400,000	3.27
		A-3	667,000,000	4.04
		A-4	458,500,000	5.38
		A-5	464,600,000	6.29
		A-6	993,400,000	7.28
		A-7	<u>896,700,000</u>	8.92
		Total	4,000,100,000	6.13
6	Montana Power (12/22/1998)	A-1	<u>64,000,000</u>	
		Total	64,000,000	
5	Illinois Power (12/10/1998)	A-1	110,000,000	0.79
		A-2	100,000,000	1.79
		A-3	80,000,000	2.93
		A-4	85,000,000	3.93
		A-5	175,000,000	5.17
		A-6	175,000,000	7.40
		A-7	<u>139,000,000</u>	9.54
		Total	864,000,000	5.05
4	Commonwealth Edison (12/7/1998)	A-1	426,600,000	0.88
		A-2	423,400,000	2.04
		A-3	259,300,000	3.04
		A-4	420,700,000	4.04
		A-5	598,700,000	5.54
		A-6	761,300,000	7.54
		A-7	<u>510,000,000</u>	9.41
		Total	3,400,000,000	5.17
3	San Diego Gas & Electric (12/4/1997)	A-1	65,800,000	0.77
		A-2	82,600,000	1.78
		A-3	66,200,000	2.92
		A-4	65,700,000	3.92
		A-5	96,500,000	5.15
		A-6	197,600,000	7.29
		A-7	<u>83,500,000</u>	9.52
		Total	657,900,000	5.14
2	Southern California Edison (12/4/1997)	A-1	246,000,000	0.79
		A-2	307,000,000	1.79
		A-3	248,000,000	2.93
		A-4	246,000,000	3.93
		A-5	361,000,000	5.17
		A-6	740,000,000	7.40
		A-7	<u>315,000,000</u>	9.54
		Total	2,463,000,000	5.19
1	Pacific Gas & Electric (11/25/1997)	A-1	125,000,000	0.56
		A-2	265,000,000	1.09
		A-3	280,000,000	1.99
		A-4	300,000,000	3.01
		A-5	290,000,000	4.02
		A-6	375,000,000	5.17
		A-7	866,000,000	7.31
		A-8	<u>400,000,000</u>	9.48
		Total	2,901,000,000	5.19
Total All RRB Deals			<u>51,245,972,097</u>	



Presentation to:



TEXAS TRANSITION BOND ANALYSIS

September 12, 2003

Regression Analysis of Texas Transition Bond Spreads

SPREAD TO SWAPS REGRESSION LINE (USED IN SAVINGS ANALYSIS): $Y = 2.9021X + 5.7598$

Reliant Energy 2001-1

	A-1	A-2	A-3	A-4
Size (in millions)	\$115.0	\$118.0	\$130.0	\$385.9
WAL	2.71	5.29	7.19	10.29
Implied Y Value	14	21	27	36
Actual Pricing	16	17	22	37
Difference in bps	(2)	4	5	(1)

Central Power and Light 2002-1

	A-1	A-2	A-3	A-4	A-5
Size	\$129.0	\$154.5	\$107.1	\$214.9	\$191.9
WAL	1.90	4.70	7.30	10.00	13.00
Implied Y Value	11	19	27	35	43
Actual Pricing	7	11	14	24	34
Difference in bps	4	8	13	11	9

Oncor Electric Delivery Transition Bond 2003-1

	A-1	A-2	A-3	A-4
Size	\$104.0	\$122.0	\$130.0	\$144.0
WAL	2.00	5.00	8.00	10.83
Implied Y Value	12	20	29	37
Actual Pricing	7	7	16	19
Difference in bps	5	13	13	18

Economic Savings Captured by Texas Transition Bonds

Reliant Energy 2001-1

Tranche	Size	WAL	Coupon	Bp Difference	Implied Coupon
A-1	115.0	2.71	3.84%	(2)	3.82%
A-2	118.0	5.29	4.76%	4	4.80%
A-3	130.0	7.19	5.16%	5	5.21%
A-4	385.9	10.29	5.63%	(1)	5.62%
	\$748.9	7.78			

► Savings: **\$213,045**

► Bps: 0.37/year

Central Power and Light 2002-1

Tranche	Size	WAL	Coupon	Bps Difference	Implied Coupon
A-1	129.0	1.90	3.54%	4	3.58%
A-2	154.5	4.70	5.01%	8	5.10%
A-3	107.1	7.30	5.56%	13	5.69%
A-4	214.9	10.00	5.96%	11	6.07%
A-5	191.9	13.00	6.25%	9	6.34%
	\$797.3	8.02			

► Savings: **\$3,949,077**

► Bps: 6.18/year

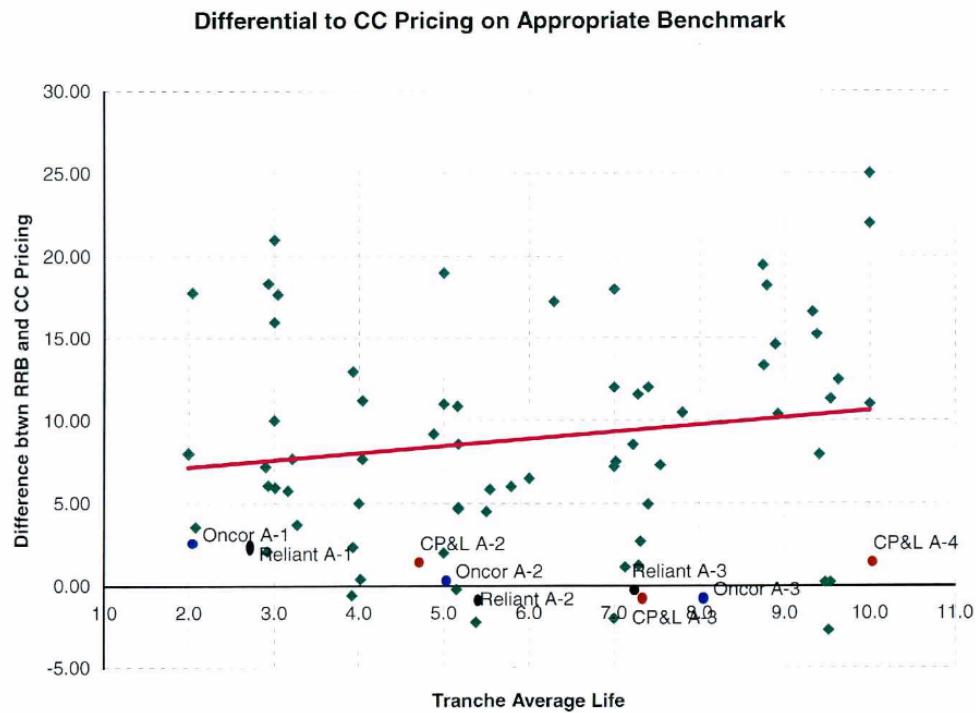
Oncor Electric Delivery Transition Bond 2003-1

Tranche	Size	WAL	Coupon	Bps Difference	Implied Coupon
A-1	104.0	2.00	2.26%	5	2.31%
A-2	122.0	5.00	4.03%	13	4.16%
A-3	130.0	8.00	4.95%	13	5.08%
A-4	144.0	10.83	5.42%	18	5.60%
	\$500.0	6.85			

► Savings: **\$3,371,354**

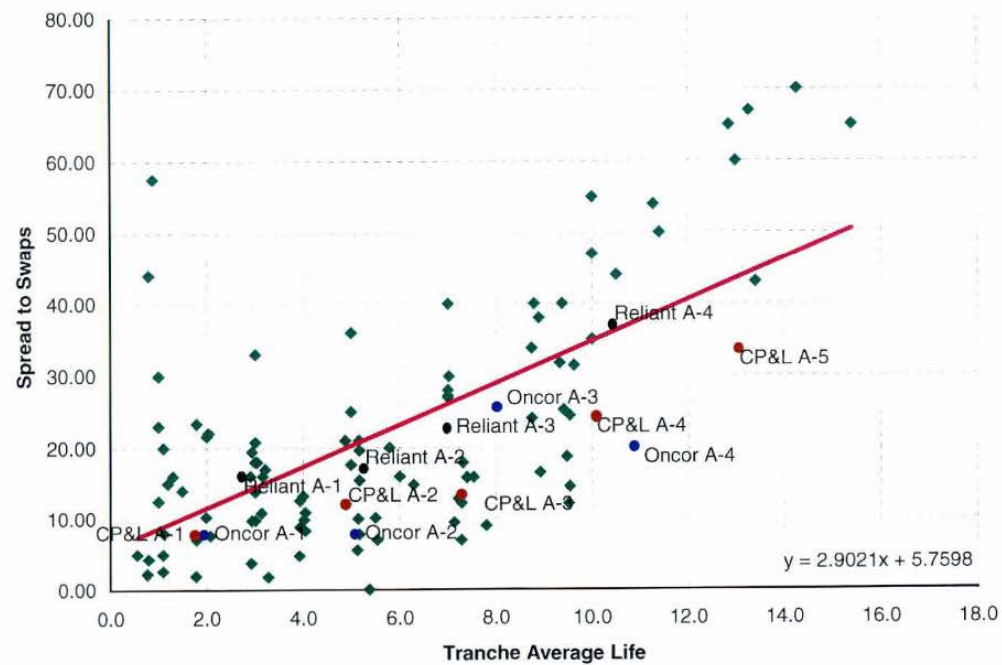
► Bps: 9.84/year

Pricing Differential to Credit Card Spreads: Texas Advantage

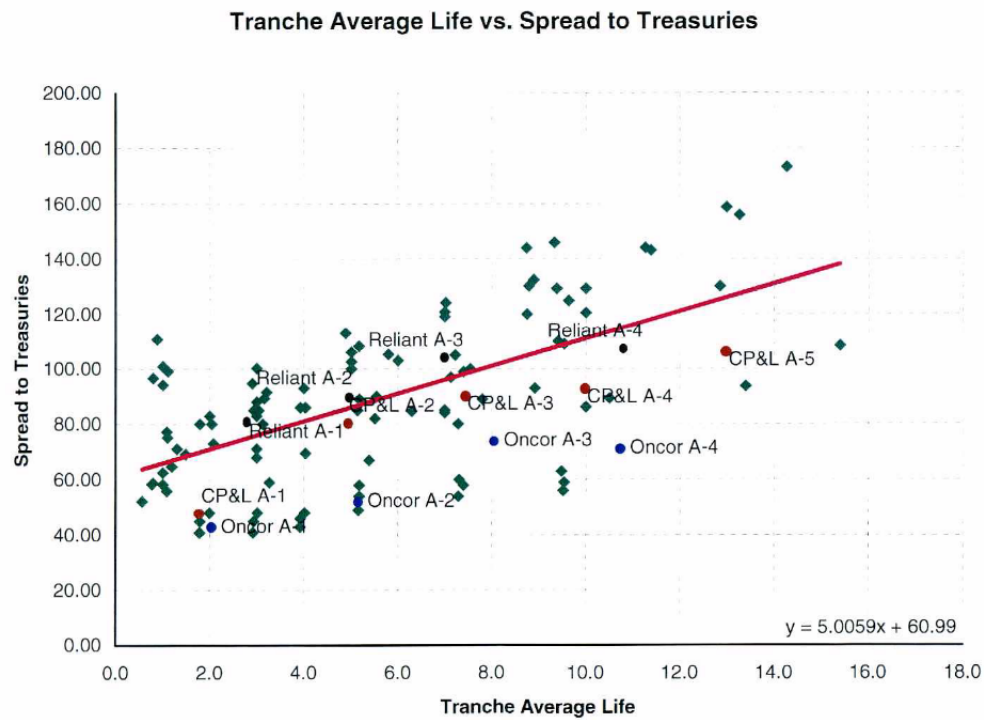


Regression Analysis: Spread to Swaps

Tranche Average Life vs. Spread to Swaps



Regression Analysis: Spread to Treasuries



Methodology

SPREAD TO SWAPS (USED IN SAVINGS ANALYSIS)

- ▶ Includes stranded cost transactions completed from November 1997 to year-to-date.
- ▶ Transactions priced against Treasuries (prior to April 2000) were converted to spreads to Swaps using the following formula:

$$\text{Spread to Swaps} = \text{Spread to Treasury} + \text{Treasury Yield} - \text{Swap Rate}$$

- ▶ For all transactions, except for Texas RRB transactions, swap pricing was plotted on Y-axis against average life (X-axis) by tranche.
- ▶ Regression line generated calculates a representative spread at a given average life.
- ▶ Texas transactions are specifically identified to underscore whether they fall below the regression line.

SPREAD TO TREASURIES

- ▶ Includes stranded cost transactions completed from November 1997 to year-to-date.
- ▶ Transactions priced against Swaps (post April 2000) were converted to spreads to Treasuries using the following formula:

$$\text{Spread to Treasury} = \text{Spread to Swaps} + \text{Swap Rate} - \text{Treasury Yield}$$

- ▶ For all transactions, except for Texas RRB transactions, treasury pricing was plotted on Y-axis against average life (X-axis) by tranche.
- ▶ Regression line generated calculates a representative spread at a given average life.
- ▶ Texas transactions are specifically identified to underscore whether they fall below the regression line.

Methodology *(Continued)*

DIFFERENTIAL TO GENERIC CREDIT CARD SPREADS

- ▶ Includes stranded cost transactions completed from November 1997 to year-to-date. Transactions priced to Treasuries were compared to generic credit card spreads also priced to Treasuries. Transactions priced to Swaps were compared to generic credit card spreads also priced to Swaps.
- ▶ Plotted the differential between credit card spreads and stranded cost transaction spreads (other than Texas RRB transactions) on the Y-axis against the average life (X-axis) by tranche.
- ▶ Tranches with average life less than 2 years and over 10 years were not used in this analysis due to the lack of reliable credit card spreads for those tails.
- ▶ Regression line generated calculates a representative spread differential at a given average life.

SAVINGS CALCULATIONS

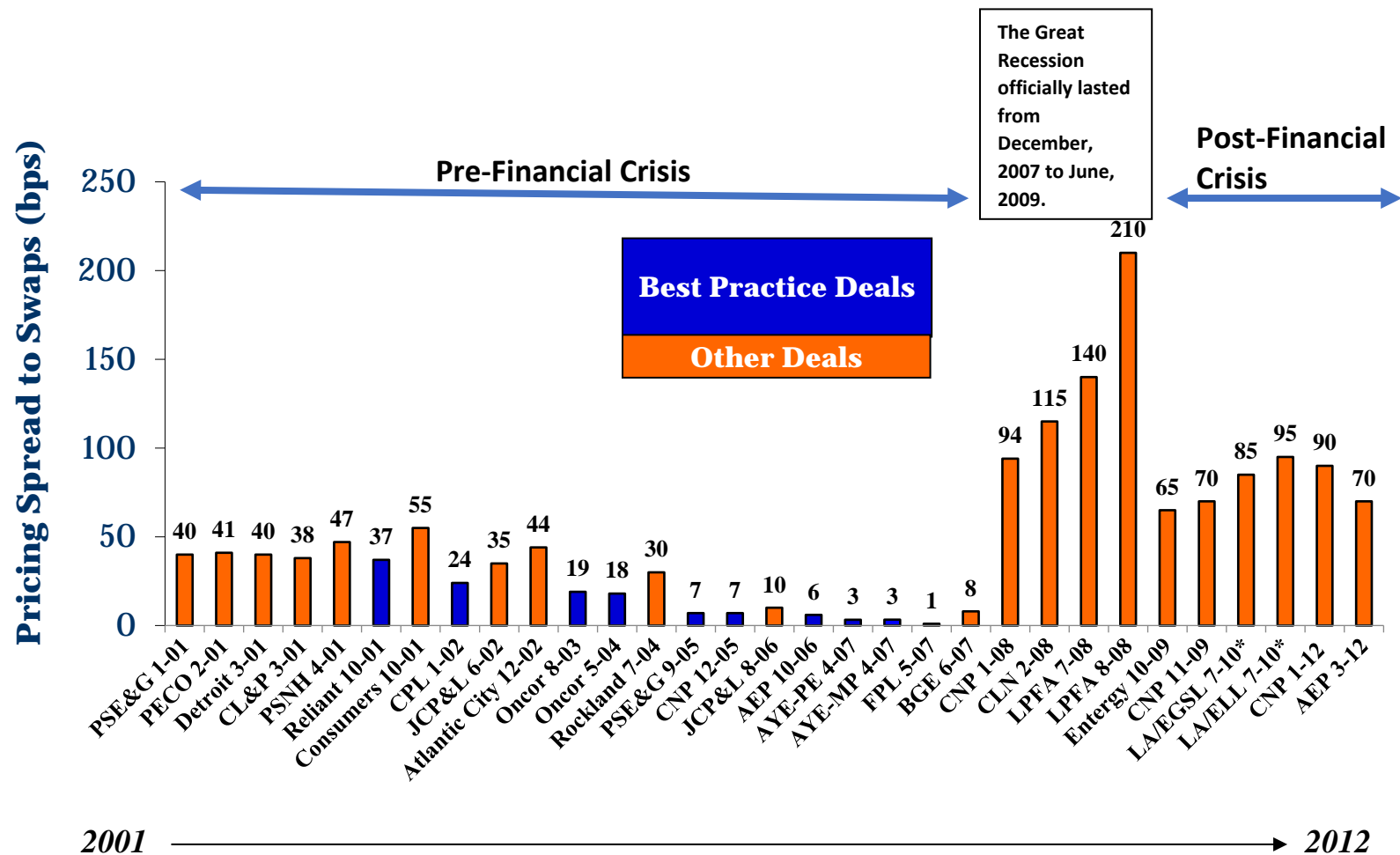
- ▶ By generating spread to Swaps regressions lines, we were able to find a representative spread at a given average life.
- ▶ By using such spread, we calculated implied coupon (by tranche) for Texas transactions.
- ▶ Savings were calculated by subtracting PV of actual cash flows from PV of cash flows built based on implied coupons.

PV actual = PV (actual weighted average yield, actual cash flows)

PV implied = PV (actual weighted average yield, implied cash flows)

- ▶ Savings in bps per annum were calculated by dividing savings by deal size by weighted average life.

New Issue Pricing Spreads to the Benchmark Swap Rate Utility AAA Securitization Deals - 2001 to 2012 9-10 Year Average Life



Source: SEC Prospectus, Bloomberg

* Taxable

Methodology for Relative Value Benchmarking:

**Using US Government Agency Debt as Comparables
To Evaluate Pricing of Investor-Owned Utility
Securitizations Over Time**

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Introduction

When pricing corporate debt securities, it is useful to compare indicative utility securitization or ratepayer-backed bonds¹ (RBB) pricing to recent new issues of comparable benchmark securities. This is especially important for securities that are less liquid and/or not frequently issued and/or traded on the open secondary market.

Moreover, after a pricing is complete, it is useful to perform such comparisons to evaluate the success (i.e. the quality) of the actual final pricing relative to other RBB pricings in the same time frame. This methodology helps finance managers determine the success in achieving the bond's "relative value" in the marketplace under market conditions at the time of pricing.²

In the past, such RBB comparable securities have included:

- 1) AAA-rated corporate debt issues by issuers like Johnson & Johnson (JNJ) or Microsoft;
- 2) US agencies debt issues by the likes of Fannie Mae (FNMA), Federal Home Loan Bank (FHLB), or Tennessee Valley Authority (TVA); or
- 3) AAA-rated credit card securitizations.

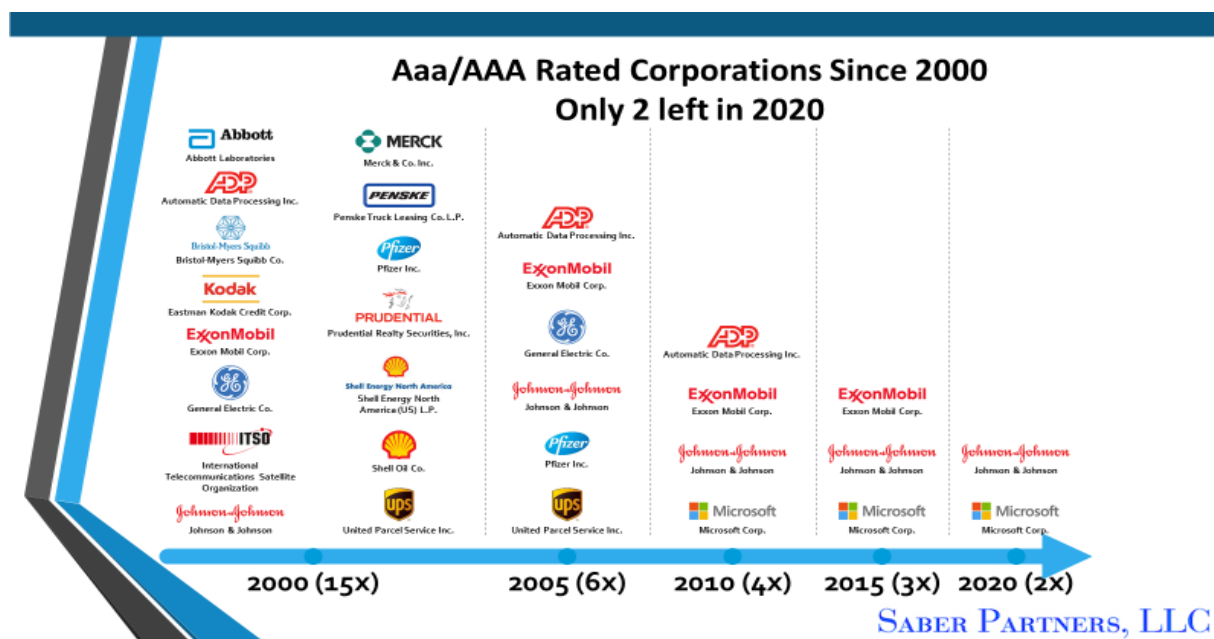
Credit card comparisons have been used for maturities of up to 10 years. However, since the financial crisis, there has been a lack of longer-term issues. So, they are only really useful for 2 and 5-year maturities.

Corporate issue comparables are limited because there are only two corporate issuers, JNJ and Microsoft (MSFT), rated AAA by both major rating agencies, Moody's and Standard & Poor's. While issuers such as Exxon and Apple may be rated AAA by one rating agency, they are not AAA-rated by both of the two major rating agencies.

¹ Also referred to as "ratepayer obligation charge," "rate reduction," or "stranded cost" bonds in general or for specific uses such as storm cost securitization or nuclear asset recovery bonds among others.

² See Saber Partners, LLC, "*Pricing Utility Securitizations/Ratepayer-Backed Bonds: How to Evaluate Success in the Capital Markets*" © Copyright 2018

Figure 1 Aaa/AAA (Moody's and S&P) Rated Corporations Over Time



All Benchmarks Are Not Alike in Quality or Purpose

Underwriters use one type of debt benchmark when they make an offer to buy a new issue of debt security from an issuer for resale to investors. Both during the bond's pre-marketing period – where only “indication of interest” can be solicited – and in the final marketing and sale when investor orders can be taken, underwriters do not offer to buy the securities at a specific bond yield.³ Rather, they offer to buy at a specific spread (in basis points) over the yield of a specific, highly liquid and high-quality benchmark security (Pricing Benchmark).

For conventional corporate debt, that benchmark security is usually United States Treasury (UST) notes and bonds. For structured products like asset-backed securities (ABS), the benchmark is usually the LIBOR fixed interest swap rate.

Utility securitization debt is most often priced like ABS securities as a “spread to swaps.” However, some RBBs have been priced off the UST curve and are structured and priced like conventional corporate debt. Examples of this includes the 2016 Duke Energy Florida Project Finance, LLC⁴ transaction, as well as the PE and MP Environmental Funding bonds offered in 2007 and 2009. (Saber Partners was advisor to the Florida Public Service Commission and the West Virginia Public Service Commission respectively for those transactions.)

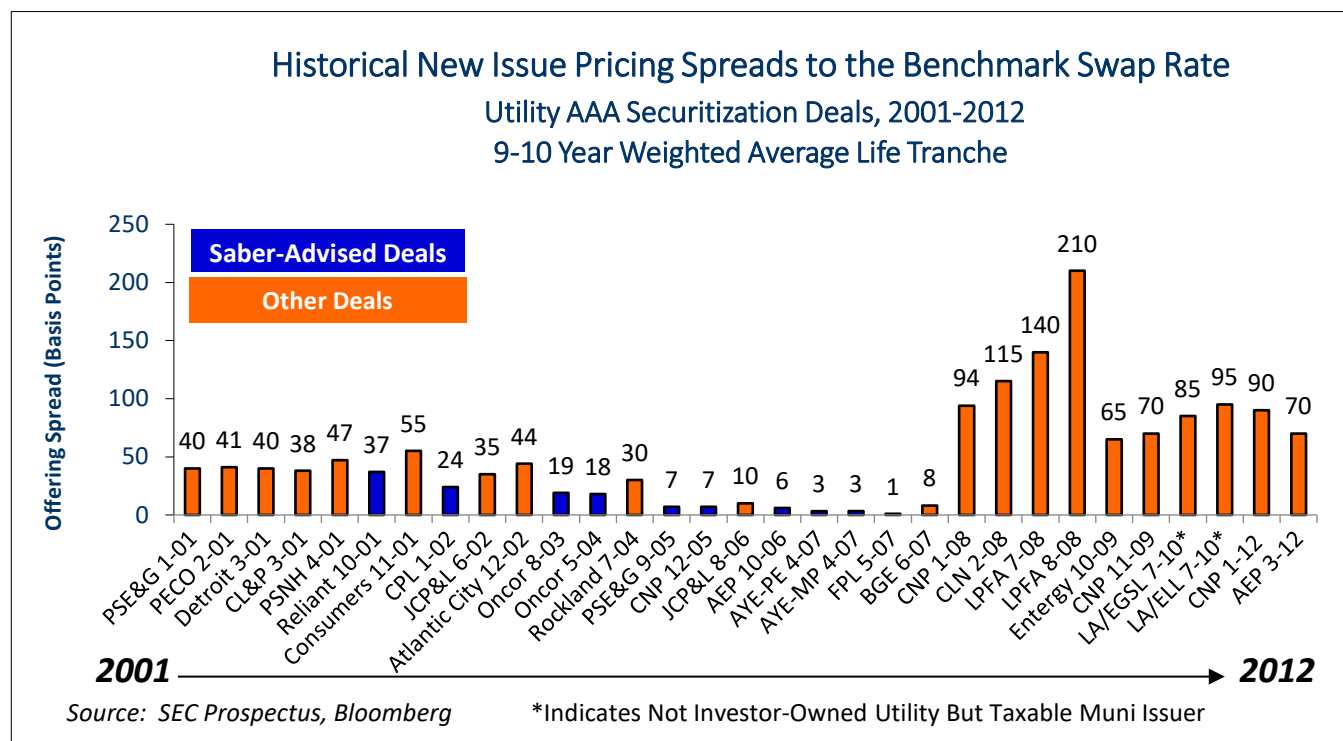
From the issuer's perspective, it is difficult to judge relative value and the attractiveness of the underwriter's offer based solely on the spread to a Pricing Benchmark. This is, in part, because credit spreads to Pricing Benchmarks can change dramatically over time, depending on economic and other conditions that are independent of the issuers and their credit worthiness. A spread that might seem good today might be bad a year from now and vice versa.

Figure 2, below, shows how new issue pricing of RBBs to swaps was dramatically affected by the Great Recession in 2008-2009 as investors reconsidered the pricing of credit and liquidity risk.

³ These are the rules for publicly offered securities that are registered with the US Securities and Exchange Commission (SEC).

⁴ See Duke Energy Florida Project Finance, LLC SEC filings: [DEF Term Sheet](#), [Prospectus](#) and [Final Pricing Advice and Issuance Advice Letter](#) filed with the Florida Public Service Commission

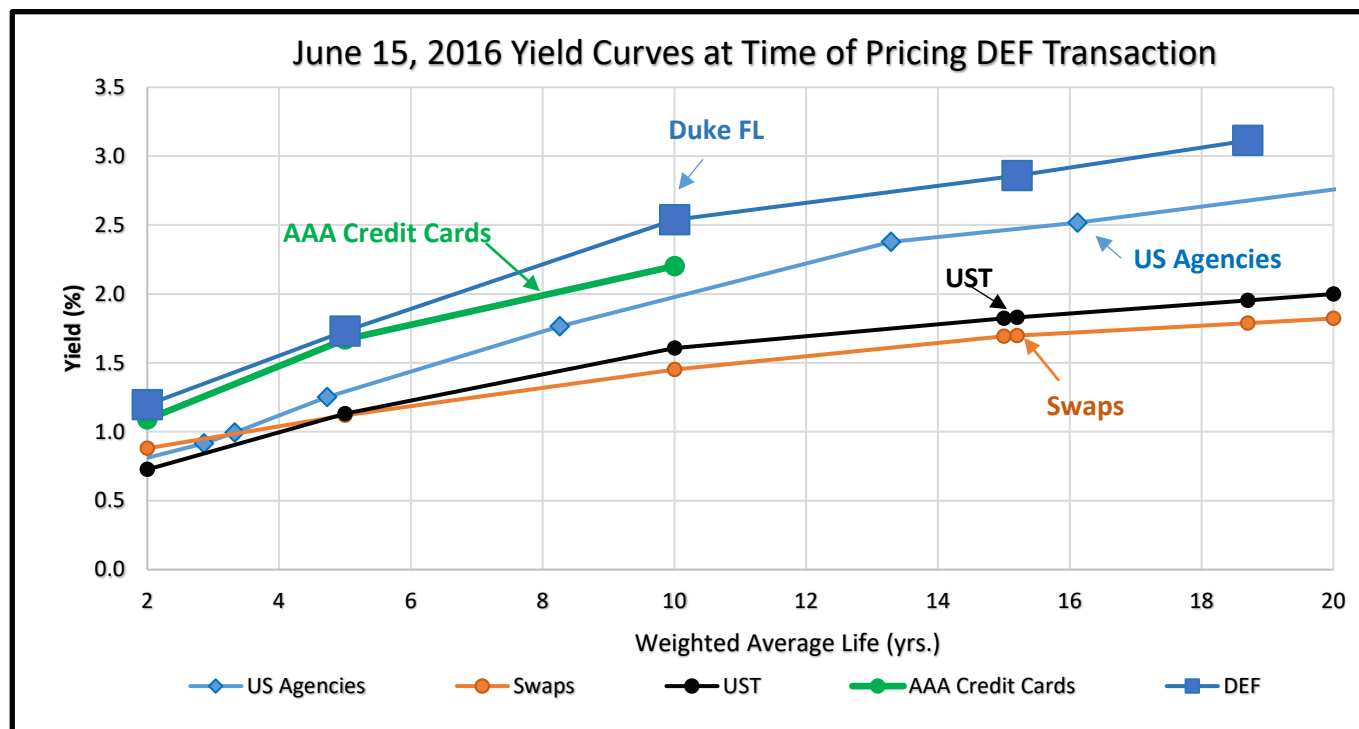
Figure 2 Historical New Issue Pricing Spreads to Benchmark Swaps



Because of this variability in investor evaluations of credit and liquidity risk, issuers need to look for alternative “relative value” benchmarks. By doing so, issuers will be better able to judge the fairness and efficiency of any new issue pricing offer from underwriters. This will also allow issuers to evaluate how well a deal was priced relative to other similar RBB issuances and different maturities (weighted average life) over time.

Ideally, such benchmark securities would be as similar to RBB securities as possible over a wide range of maturities or weighted average lives (WALs).

Figure 3, below, shows yield curves for 4 different possible relative value benchmarks compared to the actual pricing of 5 series of Duke Energy Florida RBBs on June 15, 2016.

Figure 3 June 15, 2015 Yield Curves

As can be seen from Figure 3, both of the Pricing Benchmarks commonly used by underwriters (UST and swaps) have rather wide spreads to the DEF issue, especially as WALs increase. Credit card securitizations seem to price very close to RBBs, but there are no such issues beyond 10 years and there are very few even at 10 years. US Agency securities such as the FHLMC and FNMA, on the other hand, are AAA rated due to implicit government guarantees and price relatively close to the RBBs across the range of WALs.

Consequently, Saber uses US Agency securities as a relative value benchmark. We do this both to evaluate underwriter pricing offers and to judge how we have done relative to other RBBs issued over time. While US Agency securities are Saber's primary relative value benchmark, it is still useful to examine other types of debt such as highly rated corporate debt (e.g. AAA-rated JNJ and Microsoft) and even electric utility first mortgage bonds, none of which are rated higher than AA. Electric utility debt may be relevant due to it being in the same industry and could be used to establish an absolute upper bound on any spread being contemplated for RBBs at pricing.

Calculation of Credit Spreads to US Agencies

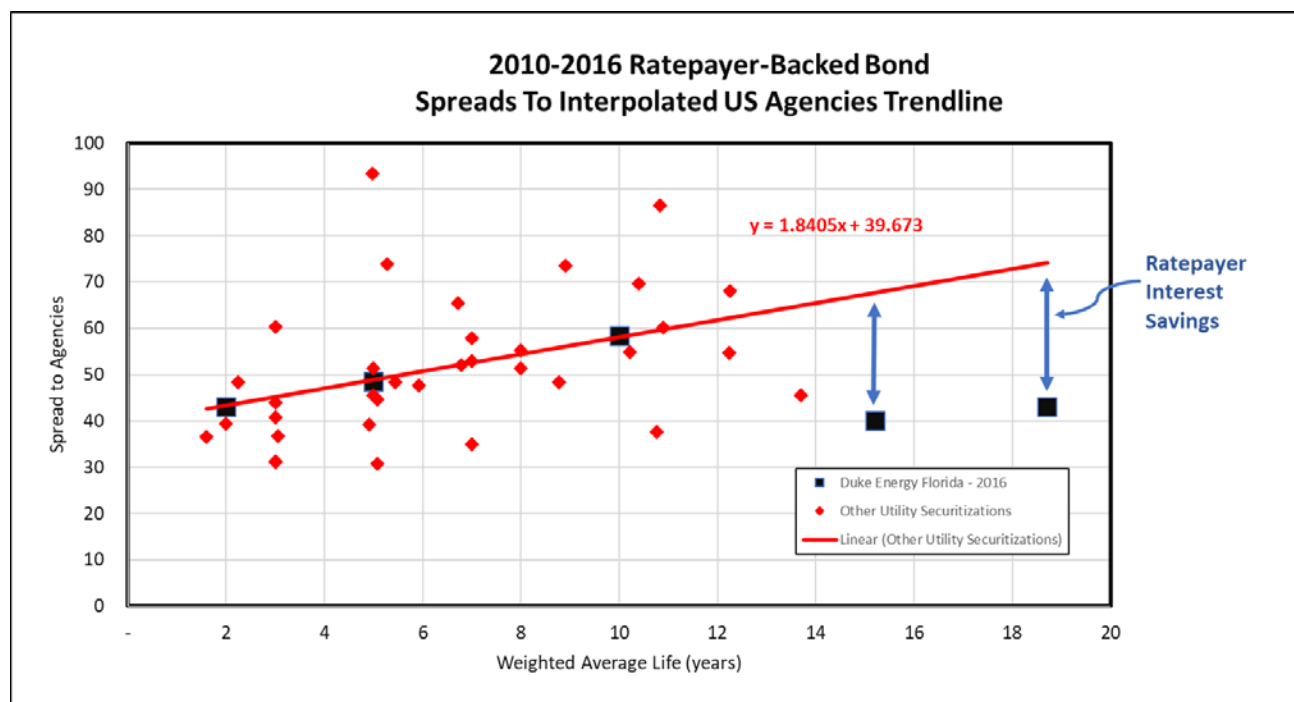
Following is a description of how such benchmarking can be done, using Saber's 2016 pricing of the Duke Energy Florida (DEF) Project Finance⁵ transaction as an example. Below is a graphical

⁵ See <http://www.floridapsc.com/library/filings/2016/03735-2016/03735-2016.pdf>

representation⁶ of the result showing the DEF pricing to the Agency benchmark compared to all other (non-Saber) RBBs over the period from 2010 through 2016.

⁶ From Saber Partners, LLC “Savings Sensitivity Analysis Model V7 – Final Pricing”; Saber Partners, LLC Webinar November 30, 2017, slide #21”, and Duke Energy Florida Pricing Book, June 20, 2016

Figure 4 2010-2016 Ratepayer-backed Bond Spreads to Interpolated US Agencies Curve



The Duke Florida transaction was priced against *interpolated* US Treasuries, i.e., known as the “Treasury G Curve” in 5 series (i.e., in 5 weighted average life maturities), as follows:⁷

Table 1 – Duke Energy Florida Project Finance Pricing

Tranche/Series	Principal Amount (\$)	Weighted Average Life (Years)	Yield (%)	Spread to G-curve - Interpolated UST (Basis Points (bps))	Spread to swaps (bps)
A-1/Series A 2018	\$183,000,000	2	1.20%	G + 47	Libor+31.6
A-2/Series A 2021	150,000,000	5	1.73%	G + 60	Libor+61.1
A-3/Series A 2026	436,000,000	10	2.54%	G + 93	Libor+108.6
A-4/Series A 2032	250,000,000	15.2	2.86%	G + 103	Libor+116.1
A-5/Series A 2035	275,290,000	18.7	3.11%	G + 116	Libor+132.5
Total	\$1,294,290,000		2.72%		

As stated previously, one should not just compare Treasury spreads or swap spreads for different RBB transactions to judge which ones were the best and worst executed, as those spreads vary due to many externalities which are not necessarily a function of how well the deal was executed.

As shown in Figure 2, during the Great Recession that began in 2008, RBB pricing spreads widened out substantially. Therefore, it is necessary to find benchmarks that price much closer to RBBs to provide

⁷ For comparison purposes, the corresponding swaps or Libor spreads are also included.

valid comparative results, especially in the current volatile economic environment. US Agency debt instruments meet that criteria.

Another potential problem, once it is decided to use US Agency debt as a benchmark, is to avoid “cherry-picking” i.e., selectively choosing data by selecting only those securities that justify/support one’s point while ignoring other data. This is because, unlike UST and swaps, no two Agency issues are exactly alike, even if they have the exact same WAL and same AAA bond rating.

To resolve this problem, we use those US Agency issues from the “Bloomberg I26 Agency Yield Curve”

Below is an example of an I26 US Agency curve from Bloomberg.⁸

Figure 5 – Bloomberg I26 US Agency Yield Curve



To ensure the spreads to agencies is a valid comparison, it is important to determine that the US Agency debt yields are reported with their actual WAL rather than just associated with the closest round number of years (e.g. 2, 5, 10) shown on the graph. Then we must interpolate to match any odd WALs of the securitization in question, such as the A-4 and A-5 series in the DEF deal (15.2 and 18.7 years, respectively).

⁸ Bloomberg is a financial and news database subscription service widely used by capital markets participants.

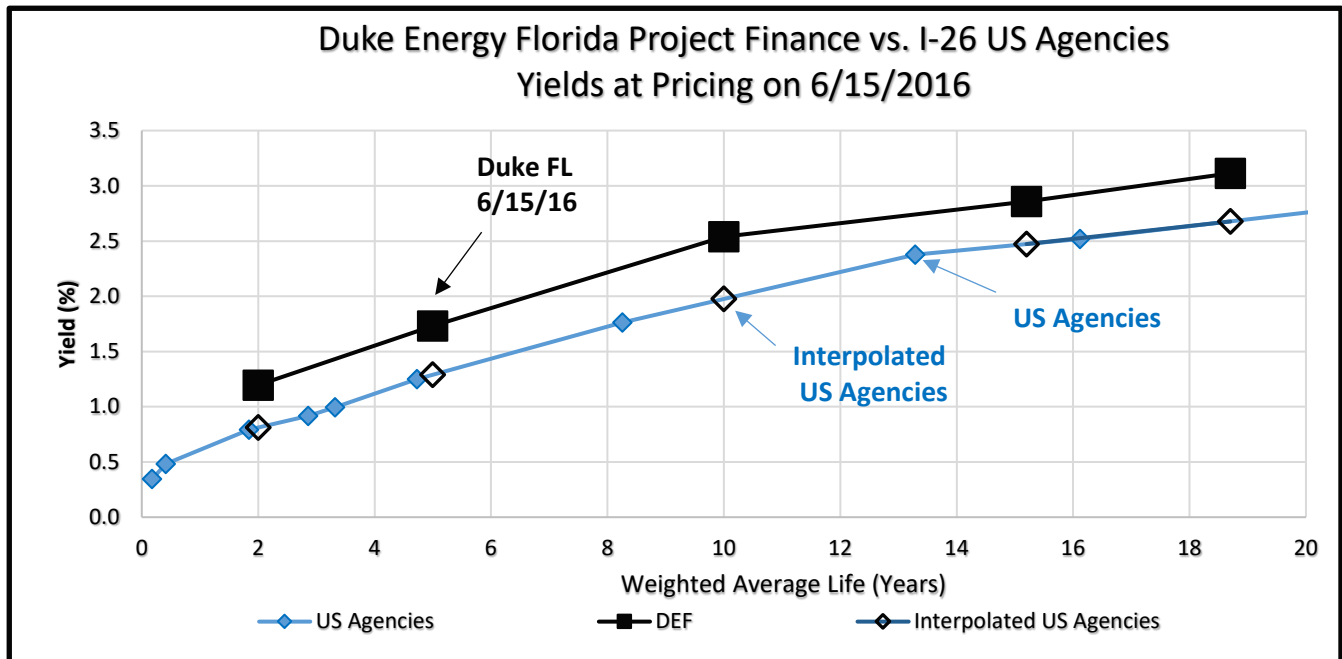
Below is a table showing the US Agency debt issues and their respective values for comparison with the DEF pricing.

Table 2 – US Agency Yields

Tenor (years)	I26 US Agencies Curve	Maturity	Weighted Average Life (years)	I26 US Agencies Curve 06/15/16 Mid Price (%)	I26 US Agencies Curve 06/15/16 Yield (%)
0.25	FNMDN 0 08/10/16 Corp	8/10/16	0.20	0.359	0.345
0.50	FREDN 0 11/04/16 Corp	11/4/16	0.40	0.468	0.483
2.00	FHLMC 0 ¾ 04/09/18 Corp	4/9/18	1.80	100.002	0.749
3.00	FHLMC 1 ¼ 04/15/19 Corp	4/15/19	2.90	100.734	0.862
4.00	FHLMC 1 ½ 10/02/19Corp	10/2/19	3.30	100.997	0.948
5.00	FNMA 1 ¾ 02/26/21 Corp	2/26/21	4.70	100.801	1.199
7.00	FNMA 2 ¾ 09/06/24 Corp	9/6/24	8.30	106.851	1.727
10.00	FHLMC 6 ¾ 09/15/29 Corp	9/15/29	13.30	149.435	2.377
20.00	FHLMC 6 ¼ 07/15/32 Corp	7/15/32	16.10	149.456	2.497
25.00	FHLB 5 ½ 07/15/36 Corp	7/15/36	20.10	141.726	2.775

The Figure 6 graph below shows the yields for US Agency issues from the Bloomberg I26 yield curve on the day of pricing (6/15/2016) in relation to the actual DEF yields for the five series.

Figure 6 Duke Energy Florida Project Finance vs. I-26 US Agencies



From this information, the following table can be constructed with the spreads between each of the 5 DEF series and the interpolated US Agency yield curve.

Table 3 - DEF Spreads to Agencies

DEF Series	WAL (Years)	DEF Yield (%)	Interpolated Agency Yields (%)	Spread to Agencies (bps)
A-1/Series A 2018	2.0	1.196	0.766	+43
A-2/Series A 2021	5.0	1.731	1.245	+49
A-3/Series A 2026	10.0	2.538	1.954	+58
A-4/Series A 2032	15.2	2.858	2.458	+40
A-5/Series A 2035	18.7	3.112	2.681	+43
Overall		2.720		

These are the spreads to US Agency debt shown in Figure 3. In a similar way, spreads to US Agency debt for prior securitization deals were calculated for all deals priced between 2010 and 2016 and shown in Figure 4.

Calculating Customer/ Ratepayer Savings from Active Management

The graph in Figure 4 shows two linear regression lines, one generated by the five DEF pricing points and the other generated by all the pricing points from other securitizations between 2010 and 2016 (all of which were non-Saber deals).

The difference between each DEF pricing point and the non-Saber regression line at each of the five WALs can be considered a measure of Saber's "Active Management" savings, in basis points. When multiplied by the dollar principal amount of each series, a total dollar savings amount from effective and efficient pricing can be estimated.

The following table shows the savings calculation.

Table 4 – Duke Energy Florida Project Finance Interest Savings

Tranche/Series	Principal Amount (\$)	Weighted Avg. Life (X axis)	Non- Saber Spread (Y axis)	DEF Spread (Y axis)	Basis Point Savings	Nominal Savings (\$)	NPV [1] Savings at 2.72% (\$)	NPV [2] Savings at 8.12% (\$)
A-1/Series A 2018	183,000,000	2	43.354	43.044	0.31	11,343	10,751	9,704
A-2/Series A 2021	150,000,000	5	48.876	48.621	0.254	19,055	16,663	12,897
A-3/Series A 2026	436,000,000	10	58.078	58.364	-0.286	-124,710	-95,359	-57,127
A-4/Series A 2032	250,000,000	15.2	67.649	40.039	27.609	10,491,547	6,977,501	3,202,343
A-5/Series A 2035	275,290,000	18.7	74.09	43.106	30.985	15,950,586	9,657,134	3,704,535
Total	\$1,294,290,000					\$26,347,822	\$16,566,689	\$6,872,351

(1) Discounted at the duration-weighted interest rate for the DEF bonds, which was 2.72%

(2) Discounted at DEF's weighted average cost of capital of 8.12%.

In the case of DEF, total net present value interest savings calculated using the above methodology totaled \$16.6 million when discounted at the RBB rate of 2.72% and \$6.9 million when discounted at

DEF's weighted average cost of capital (WACC) of 8.12%. Using the same methodology but including underwriting costs for both Saber and non-Saber deals, the NPV savings increases slightly to \$16.8 million discounted at the RBB or \$7.1 million discounted at Duke FL weighted average cost of capital of 8.12%.⁹

Conclusion

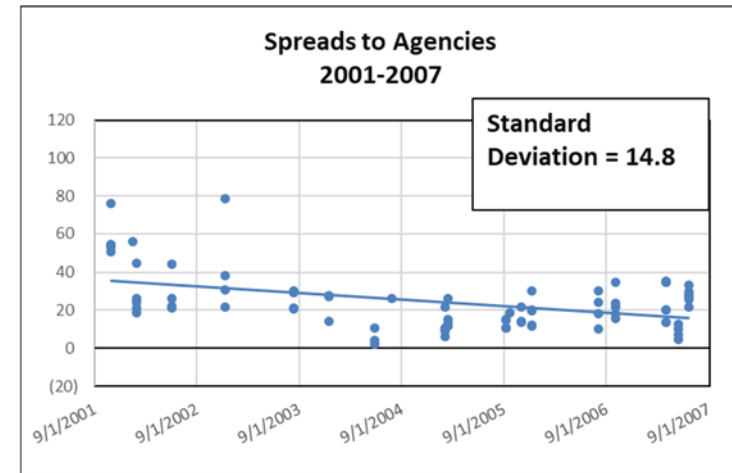
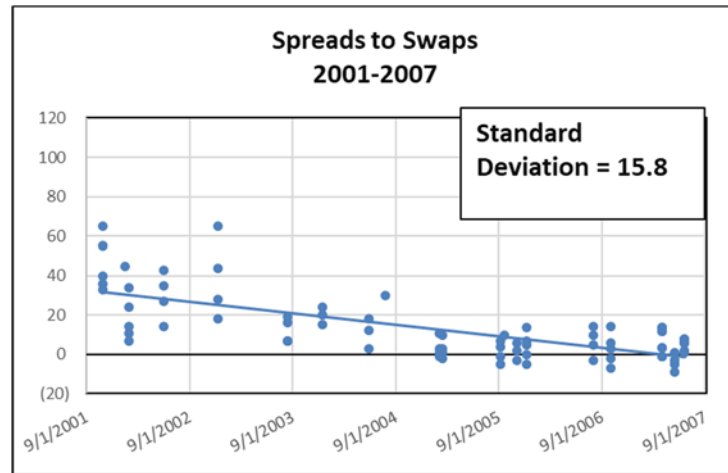
Various categories of debt issuers may be useful in providing comparable securities, in some sense, during the marketing and pricing of RBB securitization bonds. These include high quality corporates such as Johnson & Johnson and Microsoft. Also, AAA-rated sovereign debt should be considered. At the shorter end of the yield curve (2-5 years), credit card securitizations provide useful comparisons. It can also be useful to look at electric utility debt (first mortgage bonds) even though the highest rated of such debt is AA.

However, for quantifying pricing efficiency and dollar savings through effective and efficient pricing, we have found using AAA-rated US Agency debt to be the most useful and defensible approach to take with respect to RBB debt issuances.

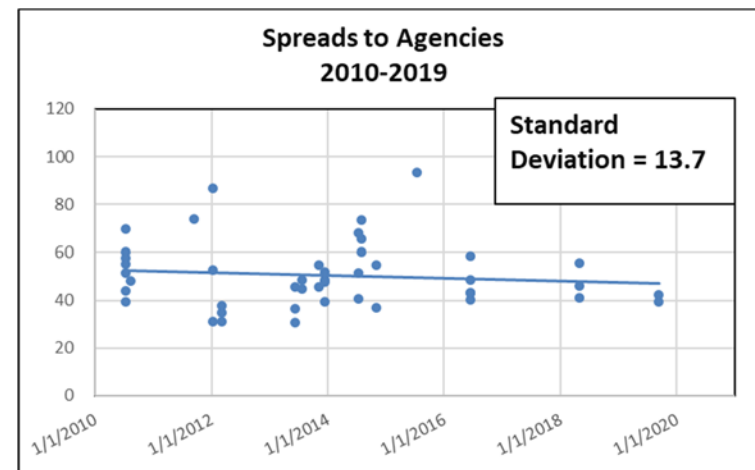
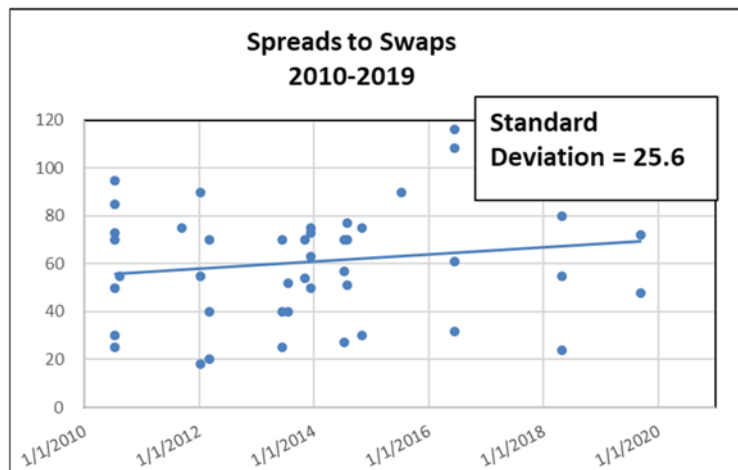
⁹ If we were to look at non-Saber deals over a shorter period, for example 2013 to 2016, the savings calculated would be somewhat less but still significant at \$13.2 million (including underwriting coats).

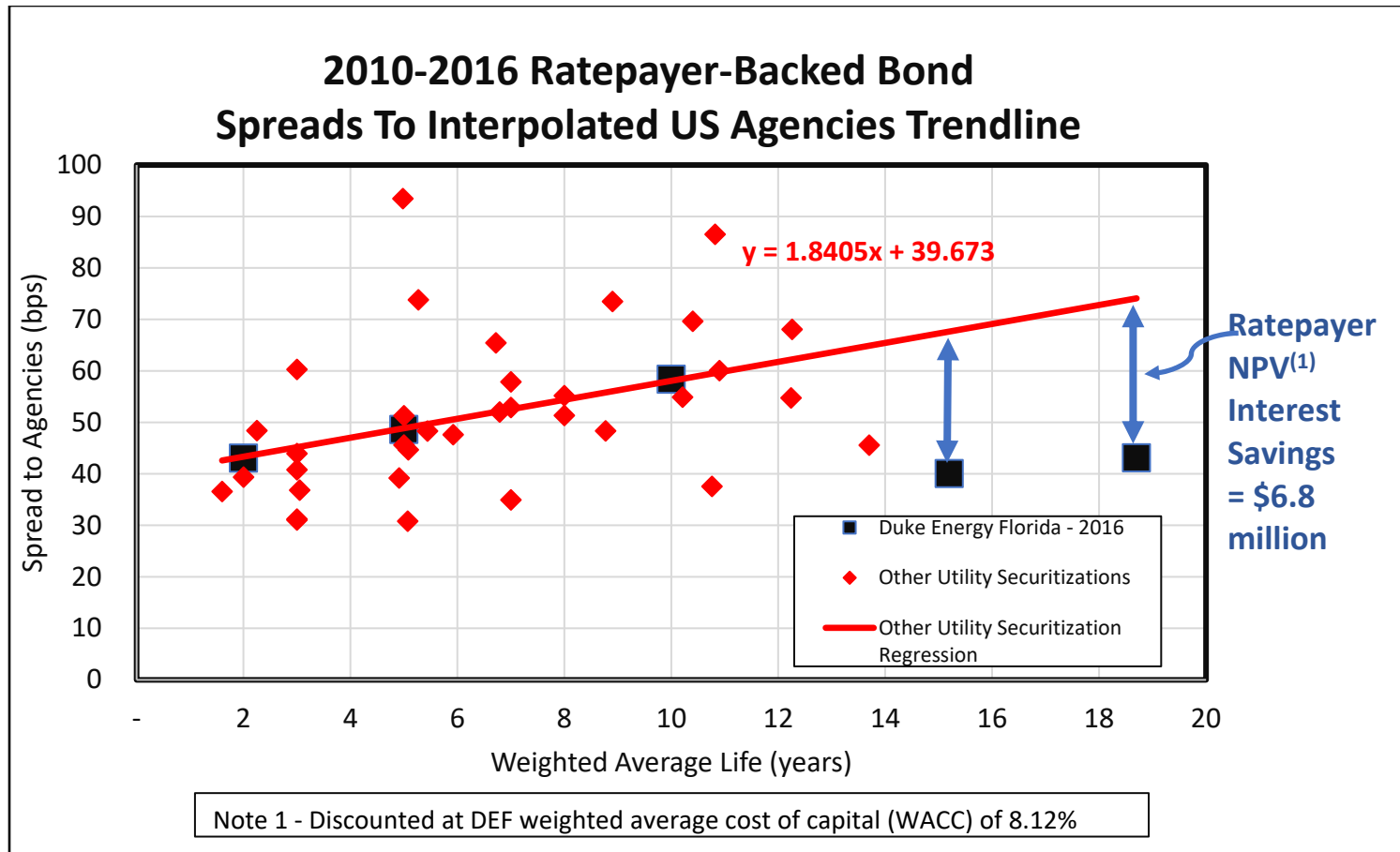
Standard Deviation of Securitization Spreads to Swaps and to US Agencies Before and After Financial Crisis of 2008-2009

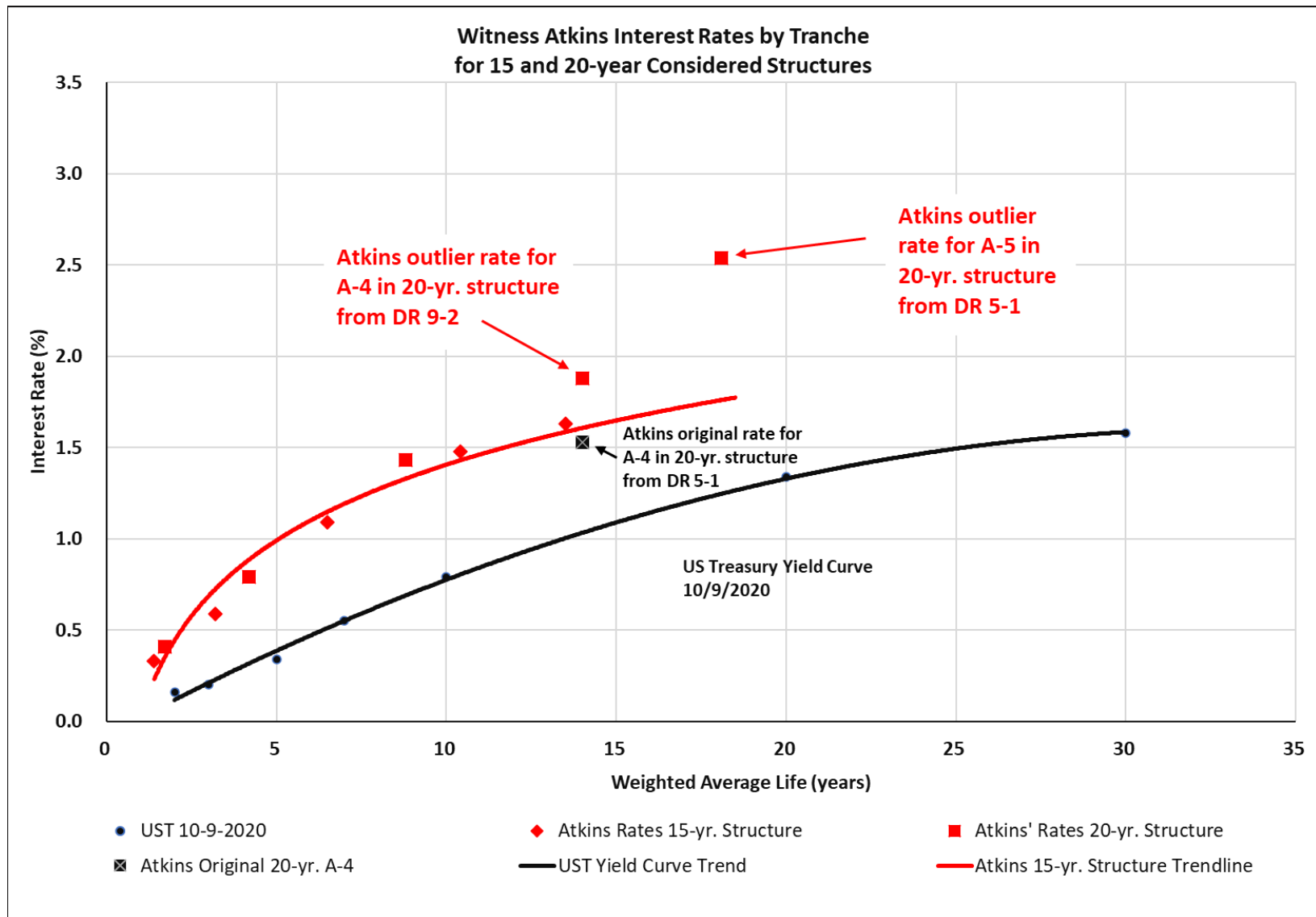
BEFORE



AFTER







How Much Does Size Matter?

7/15/2010

Louisiana Utilities Restoration Corporation Project/ELL

	Principal	WAL	Coupon	Overall i-rate	
				Wtd by Principal & WAL	Wtd by Principal Alone
A-1	112,000,000	2.0	1.110%	0.0800%	
A-2	111,000,000	5.0	2.470%	0.4410%	
A-3	121,000,000	8.0	3.450%	1.0744%	
A-4	124,900,000	10.9	3.960%	1.7344%	
	468,900,000	6.6		3.330%	2.7949%

Louisiana Utilities Restoration Corporation Project/EGSL

	Principal	WAL	Coupon	Overall i-rate	
				Wtd by Principal & WAL	Wtd by Principal Alone
A-1	97,000,000	3.0	1.520%	0.2736%	
A-2	60,000,000	7.0	3.220%	0.8364%	
A-3	87,100,000	10.4	3.990%	2.2354%	
	244,100,000	6.6		3.3454%	2.8192%

Overall Difference by Principal and WAL **0.0157%**

Overall Difference by Principal Only 0.0243%

Interest rate favors large transaction by just 1.6 basis points

7/29/2014

Louisiana Local Government System Restoration/ELL

	Principal	WAL	Coupon	Overall i-rate	
				Wtd by Principal & WAL	Wtd by Principal Alone
A-1	91,700,000	3.0	1.660%	0.2803%	
A-2	152,150,000	8.9	3.240%	2.6929%	
	243,850,000	6.7		2.9732%	2.6458%

Louisiana Local Government System Restoration/EGSL

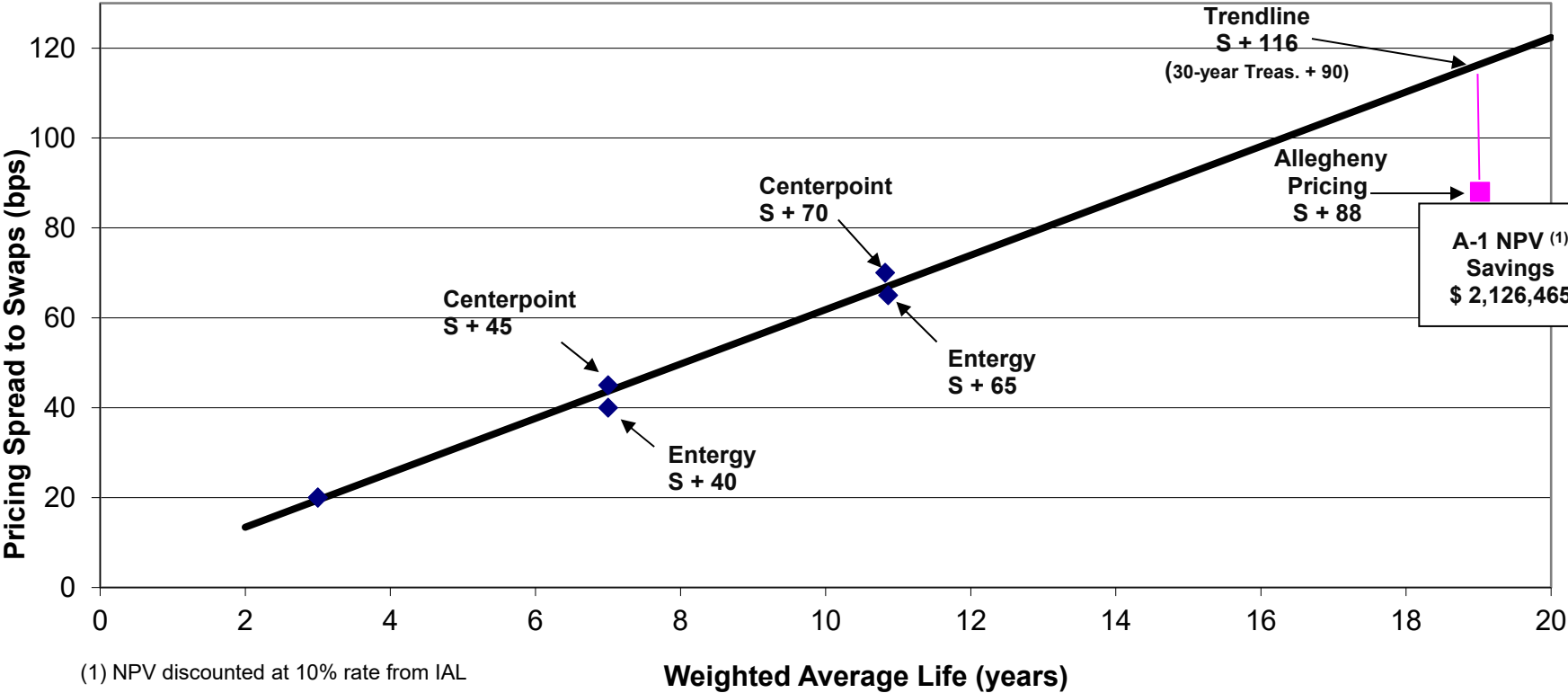
	Principal	WAL	Coupon	Overall i-rate	
				Wtd by Principal & WAL	Wtd by Principal Alone
A-1	71,000,000	6.7	2.860%	2.860%	
	71,000,000	6.7		2.860%	2.860%

Overall Difference by Principal and WAL **-0.1132%**

Overall Difference by Principal Only 0.214%

Interest rate favors smaller transaction by over 11 basis points

**AYE 2009 Interest Savings
vs. Transactions for Last 12 Months
Spreads to Swaps Trendline**



◆ Other Deals - Last 12 Months ■ AYE West Virginia - 2009 — Other Deal Trendline

*This Glossary serves as the final exhibit to the testimony of both Public Staff witness Joseph Fichera and Public Staff witness Paul Sutherland, and is the same Glossary as referenced in the testimony of Public Staff witnesses.

Glossary

Asset-Backed Security (ABS) - A debt security issued by an SPE, the payment of which is backed by a physical asset (e.g., rail cars or airplanes) or a financial asset (e.g., a mortgage or the value of a portfolio of credit card receivables). At least for some purposes, Ratepayer-Backed Bonds are not technically Asset-Backed Securities but often have been treated as such to the detriment of ratepayers.

Bankruptcy Remote - An entity designed in such a way that (i) the likelihood of it going into bankruptcy is extremely small, and (ii) it would experience as little economic impact as possible in the event of a bankruptcy of other related legal entities.

Basis Point (bp) - One one-hundredth of a percentage point. Often referred to in writing as “bp” (or “bps” in the plural).

Benchmark – When pricing a bond, the Benchmark is a security with high price transparency that is agreed upon by all parties so that the Yield on the new issue can be set relative to the Yield on the Benchmark. In that way, if Yields in the market move after agreeing on the spread to Benchmark but before final pricing, the parties do not have to renegotiate the final price/Yield. A Benchmark can also be a similar security used to determine Relative Value when talking to investors.

Callable/Non-Callable Bonds/Pre-Payment Risk - In many cases bonds are offered for sale with a “call provision.” For example, a company may want the right to retire a given bond in five years even though it carries a 25-year Maturity date. That bond would be said to carry a five-year call option. Investors who worry their bonds might be called away from them in a relatively short period of time will not pay a high price for those bonds because they can’t rely on earning the bonds’ stated interest rate through Maturity. Also known as Pre-Payment Risk. Non-callable bonds cannot be called away from the investor before the final Maturity date. Ratepayer-Backed Bonds typically are non-callable and have no Pre-Payment Risk.

Final Legal Maturity Date – The date by which, if the principal is not fully paid, the bonds will be considered to be in default. Usually, the Final Legal Maturity Date is one to two years after the Final Scheduled Maturity Date.

Final Scheduled Maturity Date– The date by which it is expected that the final principal payment on a bond or on a group of substantially identical bonds will be made.

Financing Order - An order issued by state regulators authorizing the issuance of Ratepayer-Backed Bonds, which order cannot be changed or revoked at a later date as long as the Ratepayer-Backed Bonds are outstanding, and which (i) segregates a specific component of the retail rate charge throughout the service territory, (ii) causes the right to receive this component to be treated as a present interest in property that can be bought, sold or pledged, (iii) authorizes the utility to sell such property to an SPE, (iv) authorizes the SPE to issue Ratepayer-Backed Bonds secured by such property, and (v) requires the utility which sold the property to use the proceeds of the sale for one or more specific purposes.

Maturity - The length of time until the issuer of a bond has to repay specified amounts to the lender / investor.

Net Present Value (NPV) - The amount of cash today that is equivalent in value to a payment, or to a stream of payments, to be received in the future. To determine the Net Present Value, each future cash flow is multiplied by a present value factor. For example, if the opportunity cost of funds is 10%, the Net Present Value of \$100 to be received in one year is $\$100 \times [1/(1 + 0.10)] = \91 . Opportunity cost means what a dollar today could earn over a specific period of time.

Nominal Dollars or **Nominal Savings** - This type of measure reflects the current situation, not adjusted for the opportunity cost of funds over time. Nominal dollars treat all dollars the same whether received today or 10 years from today. See “Net Present Value” for the way to look at dollars over time.

Ratepayer-Backed Bond – Bonds issued by an SPE for the benefit of one or more sponsoring utilities in a Securitization transaction.

Regression Line - Regression takes a group of data points and tries to find a mathematical relationship between them. This relationship is typically in the form of a straight line (linear regression) that best approximates all the individual data points. It is the most common type of “trendline” used in Excel.

Relative Value - The relationship between two securities. In pricing a new Ratepayer-Backed Bond issue, for example, it is useful to compare the Spread over Swaps of the proposed bond Yield to the Spread over Swaps or over a AAA-rated U.S. agency bond. If the two securities were judged equal in risk with identical terms (not callable, same WAL etc.) but one had a higher Spread, it would be said to have greater Relative Value.

Road Show - A formal presentation to potential purchasers of a security, typically organized by Underwriters with the involvement of the issuer and the financial advisor. A team sometimes travels around the U.S. to discuss the features of the security, resulting in the term “Road Show.” Sometimes the team travels to foreign financial centers to make these presentations. In recent years, most Road Shows have been conducted using electronic media over the Internet, reducing or eliminating the need for travel.

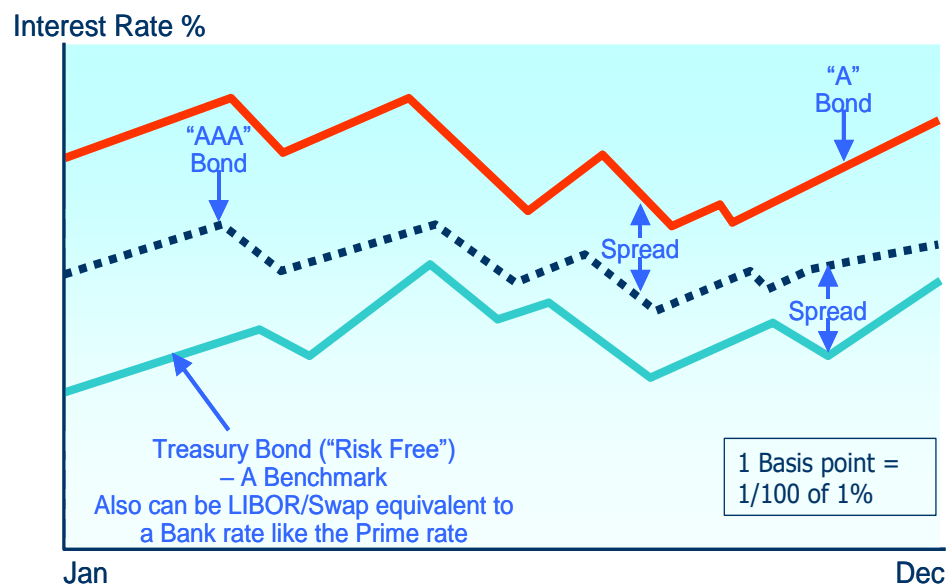
Secondary Market – The market in which stocks or bonds are traded after their initial issuance. When a publicly offered bond trades at a substantially higher price (lower Yield) in the Secondary Market immediately following its issuance, this is an indication that the bond was mispriced (priced too low) by the Underwriters in the original public offering.

Securitization - The process by which a pool of assets, such as loan receivables, is used as a basis for issuing highly rated (often AAA) bonds. The pool of assets is created and transferred to a trust or, in a utility Securitization, to a Bankruptcy Remote SPE. The entire right, title and interest in the assets are transferred at fair market value to the SPE. The SPE pledges the assets to secure the bonds and the cash flows from those assets are used to pay principal and interest on the bonds. Thus, the risk to the bondholder is just the risk associated with the cash flows from the assets in the SPE. The assets can be physical (such as plant and equipment) or intangible (such as a loan receivable or the right to some other revenue stream).

Special Purpose Entity (SPE) – A Bankruptcy Remote legal entity set up for the express purpose of owning the right, title and interest in the assets used to secure the bonds and provide the cash flows to pay interest and principal on the bonds.

Spread – The difference between the market Yields of different fixed-income securities of similar maturities, expressed in Basis Points. If a Treasury bond maturing in seven years is trading to Yield 3.87%, and a AAA-rated corporate bond is trading to Yield 4.25%, the corporate bond is said to trade at a 38 Basis Point Spread to the Treasury bond ($4.25 - 3.87 = .38$).

Spread is the easiest way to compare the cost of funds represented by different debt securities. Participants will refer to the spread “relative to Treasuries” or “relative to Swaps” as the most meaningful measure used to compare a given debt security to the most liquid, most secure, and most easily available benchmark for a given Maturity. Spreads are often referred to as either “Tight” or “Wide” to the Benchmark. (See **Tight Spread/Wide Spread** definition below.)



Swaps, or Interest Rate Swap Agreements - An interest rate Swap exchanges a floating rate for a fixed rate on bonds. Under certain market conditions, a combination of floating rate bonds and fixed rate Swaps could produce a lower overall “synthetic” fixed interest rate for ratepayers. Certain investors prefer a floating rate, while other investors prefer a fixed rate. For example, many European investors prefer a floating rate. There may be an opportunity to lower overall ratepayer costs and achieve the “lowest storm recovery charges” by issuing floating rate Ratepayer-Backed Bonds and swapping them to a synthetic fixed interest rate.

Tranche – A Tranche is a piece of a larger bond offering with its own cash flows, i.e., principal amount, Maturity and interest rate, but governed by the same documents as the larger bond offering, i.e. prospectus, trust agreement, servicing agreement, etc. While Tranche is common nomenclature for ABS type debt, corporate debt usually uses the term “series” for the same purpose.

Tight Spread/Wide Spread - If a Spread is considered “Tight,” it is low and closer to the Benchmark rate. If it is “Wide,” it is much higher than the Benchmark rate. Interest rates are composed of the Benchmark plus the Spread. Thus, a Tight Spread means a lower interest rate.

True-up Mechanism - PSC-Guaranteed True-up Mechanism” or “**True-up Mechanism**” means the mechanism irrevocably mandated by state law and the Financing Order whereby ratepayer charges to pay debt service and ongoing expenses on Ratepayer-Backed Bonds are reviewed and adjusted at least annually or semi-annually (true-up period), depending on the jurisdiction. The rates at which the charges are imposed on ratepayers, to be paid on a joint and several basis, will be adjusted to correct any over collections or under collections from prior periods and to guarantee payment of all principal and interest on a timely basis.

Underwrite – This refers to the actions of an investment bank when it initially purchases newly issued bonds with the intention of re-offering or re-selling them to the ultimate investors, thus assuming the market risk for a short period of time.

Underwriters - The investment banks that initially purchase the bonds and re-offer the bonds to ultimate investors. A lead Underwriter (sometimes called the “bookrunning” manager and most often called a lead manager) is responsible for assembling and leading a syndicate which generally includes additional investment banks in an effort to reach the widest audience of buyers. A co-lead Underwriter (or “co-manager”) is another firm which also assumes responsibility to purchase bonds from the issuer. Nowadays, in practice, the Underwriters of a bond issue often have orders for 100% of a new issue before it is formally re-sold to anyone, and consequently the Underwriters do not hold the bonds or take any appreciable market risk.

Weighted Average Life (WAL) – The amount of time (in years), on average, that the principal amount will remain outstanding. It is calculated by weighting the time each component of the principal is outstanding by the principal amount. Thus, for a bond that pays back all its principal at final Maturity, the WAL is the same as the final Maturity. However, Ratepayer-Backed Bonds amortize principal over a number of years, so the WAL is always less than the Final Scheduled Maturity of each Ratepayer-Backed Bond.

Yield, Current - The annual coupon amount of interest on a bond, divided by the selling price (expressed as a percentage). A \$1,000 principal amount bond that sells for \$1,000 with a \$50 annual interest coupon has a 5% Yield. The lower the price, the higher the Yield; the higher the price, the lower the Yield.

Yield to Maturity - Yield to Maturity is the discount rate at which the sum of all future cash flows from the bond (interest and principal) is equal to the price of the bond. This measure of Yield takes into account the difference between the current price and the principal value at redemption. This is the Yield referred to when pricing a bond and comparing to the Yield on benchmark securities. It is more reflective of true value because it accounts for the time value of money.