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	/)
Carolinas, LLC and Duke Energy	/)
Progress, LLC Issuance of Storm	1)
Recovery Financing Orders)
)

DIRECT TESTIMONY OF STEVEN HELLER, PRESIDENT OF ANALYTICAL AID, CONSULTANT TO SABER PARTNERS, LLC

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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Direct Testimony of

Steven Heller, President of Analytical Aid, and

Consultant to Saber Partners, LLC

December 21, 2020

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INTRODUCTION

1	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.		
2	Α.	My name is Steven Heller. My business address is 3 Fairbanks Ct,		
3		Woodbury, NY 11797		
4	Q.	BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR		
5		POSITION?		

A. I am President of Analytical Aid, and a consultant to Saber Partners,
 LLC, solely for purposes of evaluating this North Carolina
 securitization petition.

4 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND 5 PROFESSIONAL EXPERIENCE.

- Α. I have a B.A. (1981) from Union College in Computer Science / 6 7 Chemistry and an M.B.A (1983) in Finance from NYU. I have over 37 years of experience in structuring and analyzing real estate and non-8 9 real estate asset backed securities (ABS) while being employed at 10 firms including Salomon Brothers, Merrill Lynch, Credit Suisse and 11 Andrew Davidson & Co. My real estate ABS experience includes well 12 over 100 residential mortgage, commercial mortgage and PACE 13 assessment financings. My non-real estate ABS experience has 14 included several dozen Student Loan, Auto, and Pharmaceutical 15 Royalty transactions.
- 16 I also have extensive experience with non-ABS transactions such 17 as Stranded Cost / Rate Reduction Bond or Ratepayer-Backed Bond 18 financings with investor-owned utility securitization like the 19 Companies. With respect to Ratepayer-Backed Bonds similar to the 20 storm recovery bonds proposed by the Companies, my experience 21 has included being structuring agent on the following six (6) AAA 22 (S&P and Fitch) and Aaa (Moody's) rated investor-owned utility 23 Ratepayer-Backed Bond transactions over 14 years:

1		1. 2016 \$1.294 Billion for Duke Energy Florida (Duke Energy
2		Florida Project Finance LLC)
3		2. 2009 \$64 million Monongahela Power (MP Environmental
4		Funding LLC)
5		3. 2009 \$22 million for Potomac Edison (PE Environmental
6		Funding LLC)
7		4. 2007 \$652 million for Florida Power & Light Storm Recovery
8		Bonds (FPL Recovery Funding LLC)
9		5. 2006 \$1.739 billion for AEP Texas Central (AEP Texas
10		Central Transition Funding II LLC)
11		6. 2006 \$115 million for West Penn Power (WPP Funding LLC)
12	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
12 13	Q. A.	WHAT IS THE PURPOSE OF YOUR TESTIMONY? I will discuss the function of the modeler and structuring agent of
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13 14 15		I will discuss the function of the modeler and structuring agent of Ratepayer-Backed Bonds and give some insight into the different perspectives and objectives of the structuring agent when working
13 14 15 16		I will discuss the function of the modeler and structuring agent of Ratepayer-Backed Bonds and give some insight into the different perspectives and objectives of the structuring agent when working for an investment bank as opposed to when the structuring agent is
13 14 15 16 17		I will discuss the function of the modeler and structuring agent of Ratepayer-Backed Bonds and give some insight into the different perspectives and objectives of the structuring agent when working for an investment bank as opposed to when the structuring agent is an independent member of the financing team.
13 14 15 16 17 18		I will discuss the function of the modeler and structuring agent of Ratepayer-Backed Bonds and give some insight into the different perspectives and objectives of the structuring agent when working for an investment bank as opposed to when the structuring agent is an independent member of the financing team. In addition, except as otherwise defined in this testimony, terms have

1 Q. WHAT INFORMATION DID YOU REVIEW FOR THIS 2 TESTIMONY?

I reviewed the Companies Testimony and the descriptions of the 3 Α. securities and the assumptions and other aspect of the proposed 4 5 structure to evaluate in generally accepted financial principles the 6 outcomes and conclusions put forth by the Companies. To evaluate 7 someone else's financial work product, one needs to understand 8 what they did, what are their assumptions, what variables can be 9 independently verified and why they did it so as to properly give an 10 informed opinion as to my conclusions. Consequently, I reviewed the 11 Companies Witness Atkins' testimony and responses to Data 12 Requests from Public Staff to familiarize myself with the Companies 13 basic assumptions regarding Ratepayer-Backed Bond securitization 14 and the methodology employed to determine whether it was 15 reasonable and accurate based on my professional experience in 16 similar situations. Correct financial analysis requires context as well 17 as calculations.

18Q.YOU HAVE BEEN THE STRUCTURING AGENT ON SIX UTILITY19RATEPAYER-BACKED BOND TRANSACTIONS, THREE WHILE20WORKING AT A WALL STREET FIRM AND THREE WITH YOUR21OWN FIRM OVER THE PAST 16 YEARS AND ONE OF THOSE22WAS THE DUKE ENERGY FLORIDA RATEPAYER-BACKED23BOND TRANSACTION. DID YOU RECEIVE A REQUEST FOR

- 1 PROPOSAL FROM DEC/DEP FOR STRUCTURING ADVISOR IN
- 2 THIS TRANSACTION?
- A. No, I did not.

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- HOW THE STRUCTURING AGENT/ADVISOR AFFECTS RATEPAYER INTERESTS
- Q. AS THE STRUCTURING AGENT ON THOSE SIX
 TRANSACTIONS AND CURRENT TRANSACTIONS, DID YOU DO
 ALTERNATIVE SCENARIO ANALYSES?
- 9 A. Yes. I have prepared analyses of timing of a transaction under
 10 different market conditions and different bond structures and
 11 requirements of the issuer and commission to help the decision12 makers make informed decisions regarding securitization bonds.
- 13 Q. AS THE STRUCTURING AGENT ON THOSE SIX TRANSACTIONS AND BASED ON YOUR REVIEW OF THE 14 STATUS OF THE CURRENT PROPOSED TRANSACTION, DID 15 YOU PREPARE MANY MORE SCENARIOS ANALYSES TO 16 17 COMPARE COSTS TO THE RATEPAYER THAN THAT PRESENTED BY DEC/DEP IN ITS TESTIMONY? 18
- A. Yes. I would normally run a number of structures varying the number
 of tranches and tranche sizes to target different average lives to see
 which produced the lowest cost and largest NPV savings to
 ratepayers.

1	Q.	WHAT DATA MUST BE PROVIDED WHEN STRUCTURING A		
2		UTILITY SECURITIZATION/ RATEPAYER-BACKED E	BOND TO	
3		COMPARE COSTS TO THE RATEPAYER IN AL	TERNATE	
4		SCENARIOS?		
5	Α.	Generally, the first step is obtaining data from the sponse	oring utility	
6		on the following:		
7		1. Long-term demand forecast by customer clas	ss to the	
8		expected final term of the financing		
9		2. Historical collection curve by customer class		
10		3. Targeted proceeds - how much money is to	be raised	
11		including all recoverable expenses		
12		4. Allocation of financing cost by customer class		
13		5. Targeted term (maturity) of financing		
14		6. Targeted Settlement Date of initial offering		
15		7. U.S. Treasury yield curve and assumed pricing crea	dit spreads	
16		for average lives of tranches of two years and up		
17		8. Historical demand variance - actual six-month vs fo	recast six-	
18		month		

1Q.WITNESS ATKINS HAS PROPOSED A TRANCHE WITH A2WEIGHTED AVERAGE LIFE OF JUST 1.4 YEARS. WHY WOULD3YOU JUST LOOK AT THE TREASURY YIELD CURVE STARTING4AT 2 YEARS?

5 Α. In all the deals I've worked on, no charge goes on customers' bills 6 until after the settlement date of the financing. Applying class by 7 class collection curve means actual cash comes in with a delay after 8 billing. So, the deal doesn't reach a full monthly cashflow until several 9 months into the deal. We have gotten permission to start level 10 revenue exempting these early months (otherwise you'd need to 11 start with a higher per kwh charge and then drop it once you were 6 12 months in). There typically would just be enough cash receipts to pay 13 interest for the first 6-9 months and not enough receipts to cover 14 principal in an amount needed a achieve a significant class size with 15 less than an average life of 2 years.

16Q.AS THE STRUCTURING AGENT, HOW DO YOU PREPARE A17MODEL TO COMPARE COSTS TO THE RATEPAYER UNDER18DIFFERENT SCENARIOS?

A. Using the data described above, an initial model can be set up that
provides the required amount of financing that is paid back over the
desired term using a charge per class determined by the model so
that when applied to the demand forecast and collected at the pace
of the collection curves for each class, allocates the cost of the

financing across classes as required by the allocation provided.
Scenarios are then modeled based upon alternative inputs for
targeted proceeds, cost allocation, and terms to determine the
structure with the lowest all-in cost of funds. Over the course of the
pre-pricing period of a bond offering, many deal structures will be
analyzed repeatedly as benchmark U.S treasuries and credit
spreads move around.

Q. WERE YOU ABLE TO REVIEW ANY SCENARIO ANALYSES PREPARED BY DEC/DEP OR PREPARE YOUR OWN ADDITIONAL SCENARIO ANALYSES?

A. No, not in any great detail, because the Companies have conducted
very limited analysis and only provided some of the basic data
needed for such a model.

14 Q. COULD THIS MODELING BE CONDUCTED IN THIS CASE AS

15 PART OF A PRE-BOND ISSUANCE REVIEW PROCESS?

A. Yes, the type of modeling I describe above can and should be
conducted as part of a pre-bond issuance review process to ensure
compliance with the requirement that that customer costs be
minimized and present value savings to customers maximized to the
extent possible.

WOULDN'T AN EXAMINATION OF ALTERNATIVES 1 Q. TO 2 MAXIMIZE PRESENT VALUE FOR RATEPAYERS BE PERFORMED BY THE UNDERWRITER? 3 4 Α. No, generally not. The underwriter's model is generally just audited 5 for accuracy but not for policy objectives like minimizing the charge 6 on customers. This is an important distinction. CONFLICTS OF INTEREST WITH RATEPAYERS'S BEST 7 8 INTERESTS ARE CREATED WHEN AN UNDERWRITER IS ALSO THE STRUCTURING AGENT 9 Q. YOU HAVE MODELED RATEPAYER-BACKED BOND DEALS AT 10 INVESTMENT BANKS AND AS AN INDEPENDENT MODELER. 11 12 WHAT DIFFERENCES HAVE YOU EXPERIENCED THAT ARE RELEVANT FOR THE COMMISSION TO CONSIDER 13 IN 14 EVALUATING THE COMPANIES BASE CASE? 15 Α. At an investment bank, my typical direction came from a syndicate or trading desk with a subjective guidance on average life targets and 16 17 number of classes or tranches including scheduled maturities. The 18 objectives usually will be the easiest or fastest sale. The firm makes its profits by executing transactions. It wants to do as many 19 20 transactions as possible during the fiscal year (compensation cycle) 21 with the least risk to the firm's capital. That usually means to price 22 securities to sell quickly so that other deals can get done.

1 When consulting to utilities with active Commission involvement and 2 an independent financial advisor, I have access to a full supply of spreads for different average lives (and potentially payment 3 4 windows/ principal amortizations and scheduled maturities). So 5 instead of being told the structure to create. I had the opportunity to 6 evaluate a larger number of alternatives in order to discover the best 7 structure with the lowest cost of funds (highest present value 8 savings) for the ratepayer rather than the structure that is the most 9 advantageous to the underwriter and their sales and trading 10 departments.

- 11 Q. BASED ON YOUR EXPERIENCE, WHEN AN INVESTMENT BANK HAS SERVED AS THE STRUCTURING AGENT FOR A UTILITY 12 13 SECURITIZATION, HAS THE STRUCTURING AGENT 14 RECOMMENDED STRUCTURES THAT FACILITATED THE QUICKEST SALE AND NOT NECESSARILY THE LOWEST 15 16 CHARGES TO THE CONSUMER RATEPAYER?
- 17 A. Yes, that is correct.

18 Q. COULD YOU PROVIDE AN EXAMPLE OF THIS?

A. Yes. In the most recent Ratepayer-Backed Bond I modeled, for Duke
Energy Florida, the underwriters (which included Guggenheim
Securities) wanted a 4-tranche structure to provide larger tranches
sizes. This is similar to Witness Atkins' proposal to combine the

1 transactions simply to get a larger tranche size. However, the 2 commission's independent financial advisor (Saber Partners, LLC) and the utility asked for alternatives to be examined. Through my 3 4 analysis (with credit spreads for the yield curve provided by the 5 underwriters) Saber Partners recommended a 5-tranche structure 6 that had sufficient tranche sizes and narrower principal payment 7 windows and had a lower all-in cost of funds to the ratepayer, and 8 that's the deal that went to market (after a modest amount of 9 resistance from the bank). Without an independent and experienced 10 financial advisor in the process, the underwriter's structure would 11 have been used and the other alternatives not examined.

- 12QWITNESS ATKINS TESTIFIES THAT QUALIFYING STORM13RECOVERY BONDS FOR INCLUSION IN THE AGGREGATE14BOND INDEX AS AN ASSET-BACKED SECURITY SHOULD BE15A PRIME MOTIVATING FACTOR FOR STRUCTURING THIS16TRANSACTION. HAS THIS TOPIC EVER COME UP IN YOUR17DISCUSSIONS?
- 18 A. No, not to my recollection.
- 19Q.ARE THERE ANY OTHER MATERIAL DIFFERENCES BETWEEN20STRUCTURING UNDER THE DIRECTION OF AN INVESTMENT21BANK/UNDERWRITER VERSUS AS AN INDEPENDENT

MODELER NOT EMPLOYED BY AN UNDERWRITER OF THAT 2 TRANSACTION?

Α. Yes. Additionally, the investment bank typically charges a fee for 3 4 structuring between \$300,000 and 500,000 and typically wants 5 access to the underwriting fees which are higher in amounts since 6 they are based on a percentage of the bond size and not a fixed fee. 7 This fee is roughly three to five times the fee that I accept, which I believe is fair for the work involved. All transactions that I have 8 9 worked on have achieved a AAA rating from all three nationally 10 recognized rating agencies in the same amount of time as when I 11 was at Credit Suisse, and all transactions I have worked on were sold 12 to investors at tight spreads.

Q. HOW IMPORTANT IS ACCURACY IN MODELING CUSTOMER CHARGES TO ACHIEVING A AAA RATING WHILE ALSO ACHIEVING THE LOWEST CUSTOMER CHARGE?

16 Α. It is very important in order to anticipate and respond to rating agency 17 concerns regarding sensitivity to changes in sales, write-offs and 18 other variables. Rating agencies provide stress scenarios which 19 specify stressed demand forecasts as well as stressed collections. 20 For each stress scenario, we have to model what the charge for each class would be at each true up. This is simulated in the model as 21 22 accurately as it would be by the client doing the true up in the future 23 in response to changes in demand and collections.

1Q.DO YOU THINK THE MODELS DONE FOR RATEPAYER-2BACKED BOND TRANSACTIONS ARE PROPRIETARY WORK3PRODUCT LIKE A TRADE SECRET AS THE COMPANIES CLAIM4THAT GUGGENHEIM ASSERTS IN RESPONSE TO PS DATA5REQUEST 8-3 IV?

A. No I do not. My model under contract to Duke Energy Florida for
example was used by the company and its underwriters without any
restriction,

9 This is how we operate. I've developed Ratepayer-Backed Bond 10 models over and over again. They get a little better each time and 11 make it easier to do the most frequent tasks 1) running stress 12 scenarios and 2) considering structural alternatives. But the basic 13 model is not terribly complicated. For each customer class, multiply 14 the load forecast by the charge per kilowatt hour to get the billing 15 amount. Apply historical collection curve to the billing amount to get 16 revenue received. That revenue is the source of payments of interest 17 and principal on the bonds. Now it's slightly more complicated in that 18 we modify the per kilowatt charge in response to changes in the load 19 forecast to maintain a level revenue. And we determine the charge 20 so that the billed amounts for each customer class apportions 21 responsibility for the cost of financing according to some proscribed 22 percentages. But that's the extent of the complication.

We usually distribute cash flows workbook (sans formulas) to the
rating agencies but have shared the model without modification
amongst client, bankers and financial advisors. We shared our model
with Guggenheim and Royal Bank of Canada during the last Duke
transaction. I also recall creating a custom worksheet for the client to
facilitate periodic true up calculations. All of this was pursuant to my
contract with no claim as to proprietary or trade secret.

RATEPAYER-BACKED BONDS SHOULD NOT BE TREATED AS ASSET-BACKED SECURITIES (ABS)

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10Q.IN ADDITION TO THE PROBLEMS IDENTIFIED ABOVE, WHAT11OTHER PROBLEMS HAVE YOU IDENTIFIED IN CONNECTION12WITH STRUCTURING AND MARKETING SECURITIZED UTILITY13RATEPAYER-BACKED BONDS?

14 Α. Any decisions to treat the proposed bonds as "asset-backed 15 securities" (ABS) when it should be treated as Ratepayer-Backed 16 Bond, as in the Duke Energy Florida Project Finance securitization 17 bond precedent in 2016, would likely reduce the potential savings to 18 ratepayers. The two structures are different in all material ways that 19 are of concern to investors. ABS are typically described with scenario 20 analyses that certainly include prepayment risk and might also 21 include risk of loss. Even AAA asset-backed securities with little or 22 no risk of loss trade at a wider spread than AAA corporates, at least 23 in part, because of variability in the timing of principal return.

1 Generally, AAA Ratepayer-Backed Bonds have no material risk of 2 loss and no material risk of timing variability because of the frequent true up mechanism. This is because utilities' forecasts for demand 3 for a 6-12-month period are typically within a very modest variance 4 5 from actual demand which means cashflow is always very close to 6 what's expected. The strength and benefits of the true up mechanism can't be emphasized enough. Commission financial advisors have 7 challenged underwriting firms' pricing utility securitization bonds 8 9 based on ABS credit spreads versus high-quality corporate credit 10 spreads as well as other issues that could affect pricing. They have 11 done so in an effort to negotiate credit spreads (and therefore the 12 cost to the ratepayer/customer) based on the power of the regulatory 13 true up mechanism of the charge on all customers on a joint basis 14 designed to ensure principal payment timing certainty and the legal 15 protections from the state not to interfere in the transaction.

16 From my 37 years of experience, I cannot emphasize enough this 17 fundamental difference: ABS begin with a fixed asset pool, and 18 investors will, generally, receive the cashflow from those assets 19 (protected from credit loss though a subordination of claims involving 20 a senior piece and a junior piece, but with no protection against 21 variations in the timing of principal payments) whenever the 22 payments happen to arrive. This represents a material prepayment 23 and extension risk. It means either investors receive their money back sooner or later than expected, if at all. These risks and the
 complexities associated with them are either not present or not
 material in storm recovery bonds and other utility securitizations.

4 Storm recovery bonds, and other Ratepayer-Backed Bonds, begin 5 with a bond repayment schedule and have a true up mechanism to ensure that's what investors will receive on time. It makes up for 6 7 losses or changes in demand by redistributing the charge on all 8 consumers in the utility's service territory on a joint basis. Paying 9 consumers make up for losses from non-paying consumers. That's 10 not a fixed pool of receivables like ABS. It's a charge on an essential 11 commodity, and if consumers leave the service territory, the charge 12 goes up on the customers that remain. If more consumers come into 13 the service territory, the charge goes down. All the Ratepayer-14 Backed Bonds I have been involved with prohibit prepayment, and 15 the extension risk was not material.

16 In contrast, ABS investors who buy a pool of auto loans, credit cards, 17 or mortgages must look for repayment to a fixed pool. If one of the 18 payors in the pool defaults on their mortgage, auto loan, or credit 19 card, that loss is not redistributed to the mortgages, auto, loans and 20 credit cards of others in the pool. Those mortgages, auto loans or 21 credit cards are fixed. Their obligations don't go up to ensure the 22 bondholders are paid on time. But if that happens in a utility 23 securitization, the charges on those who are paying do go up. It's an

apples to oranges comparison when comparing ABS to utility
 securitizations like the storm recovery bonds proposed by the
 Companies.

4Q.IS THE FACT THAT RATINGS AGENCIES ASSIGN THE5TRANSACTIONS TO THEIR STRUCTURED FINANCE RATING6ANALYSTS MEAN THAT THEY ARE "ASSET-BACKED7SECURITIES" LIKE THOSE INCLUDED IN THE AGGREGATE8BOND INDEX THAT WITNESS ATKINS SAYS IS CRITICAL TO9STRUCTURING THE STORM RECOVERY BONDS?

10 No. That they are handled in the Structured Finance group at the Α. rating agencies is sort of a historical accident. When the first 11 12 Ratepayer-Backed Bonds were contemplated, the corporate side of 13 rating agencies hadn't had experience with, for example, SPVs. 14 (special purpose vehicles or entities) So, even though there is no 15 asset credit risk or overcollateralization component to Ratepayer-16 Backed Bonds, they landed in the structured finance group. That 17 needn't dictate how they are marketed or treated by underwriters and 18 investors.

19 20

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STRUCTURING DEC/DEP STORM RECOVERY BOND ISSUANCES SO AS TO BE INCLUDED IN THE AGGREGATE BOND INDEX AS ASSET BACKED SECURITIES (ABS) WILL COST RATEPAYERS

23 So, in my professional judgement, (i) it is very hard to justify that 24 Ratepayer-Backed Bonds like storm recovery bonds should be marketed and priced as ABS for whatever reason including
attempting to include them in the Aggregate Bond Index as Witness
Atkins asserts, and (ii) treating them and suggesting in any way to
investors that they are asset-backed securities would not be in the
ratepayers' best interest, particularly given the objective to reduce
storm recovery charges to the maximum extent possible to achieve
the lowest cost and to create present value savings for ratepayers.

8 SUCCESSFUL PRECEDENTS

9 In addition, certain of the Ratepayer-Backed Bonds like the Duke 10 Energy Florida Project Finance bonds and the MP and PE 11 Environmental Funding bonds that I have modeled for utilities and 12 were successfully sold at tight credit spreads and have offered longer 13 weighted average life bonds than is available in the ABS market. The 14 ABS market is dominated by shorter maturities, generally 5-10 years 15 and the Companies' Ratepayer-Backed Bonds will have 15-20 year 16 maturities,

17 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

18 A. Yes.