

# PG&E HEARING EXHIBIT PGE-02

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## PG&E'S SECURITIZATION 2020

Chapter 2 ..... Background (Steffen Lunde)

**PACIFIC GAS AND ELECTRIC COMPANY**  
**CHAPTER 2**  
**BACKGROUND ON UTILITY SECURITIZATION**  
**WITNESS: STEFFEN LUNDE**

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CHAPTER 2  
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5   **A. Introduction**

6           This chapter provides a general overview of Asset-Backed Securities (ABS)  
7   as well as a more detailed review of the market for “utility securitizations.”<sup>1</sup>

8           A brief overview of the history of both the ABS market and utility  
9   securitization market will be provided. Additionally, the basic structuring  
10   principles of securitization financings will be reviewed with a specific focus on  
11   utility securitizations. Finally, this chapter will also discuss the size of the ABS  
12   market as well as the pricing mechanics, marketing strategies, and typical fees  
13   and expenses for these transactions.

14   **B. Overview of the Securitization Market**

15    **1. History of the Securitization Market**

16           The ABS market developed as an outgrowth of the mortgage-backed  
17   securities market in the 1980s. Pools of mortgage loans were packaged into  
18   highly rated, liquid and marketable securities that were primarily sold to  
19   institutional investors. Cash flows from the underlying pool of mortgage  
20   loans were used to pay interest and principal on the offered securities.

21           The ABS market expanded the use of this technique to include a variety  
22   of financial assets that have predictable cash flow streams. Some of the  
23   most common asset classes financed through securitization include auto  
24   loans/leases, credit cards, and equipment leases, as well as a variety of  
25   unsecured consumer obligations. Historically, many utilities have raised  
26   securitization financing in the bank market backed by their account  
27   receivables from ratepayers. Over the years, the securitization market has  
28   grown significantly, and total term debt issuance in 2019 across all

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1   The term “utility securitizations” is intended to cover securitization financings backed by a nonbypassable charge that allows regulated electric utilities to recover a variety of costs, such as “stranded costs”, storm recovery costs, pollution costs, nuclear or environmental remediation costs, and rate stabilization costs.

1 securitization asset classes was approximately \$235.9 billion.<sup>2</sup> Additionally,  
2 there is significant securitization funding provided by a number of large  
3 banks outside the public markets.<sup>3</sup>

4 In the mid-1990s, another asset class—generally referred to in this  
5 chapter as “utility securitization”—was introduced to the securitization  
6 market. In 1995, Puget Sound, the first issuer of utility securitization bonds,  
7 issued approximately \$202 million of conservation bonds backed by an  
8 intangible property right to bill and collect securitization charges from the  
9 utility’s customers related to prior investments in energy-efficient equipment  
10 for its customers.

11 Not long after the Puget Sound issuance, the state of California signed  
12 into law comprehensive legislation (Assembly Bill (AB) 1890) that  
13 restructured the state’s electric utility industry by opening up the market for  
14 electricity generation to competition and, thereby, encouraging lower rates  
15 for electricity. A critical feature of this initiative was the commitment of the  
16 California Public Utilities Commission (CPUC or Commission) to provide  
17 investor-owned electric utilities an opportunity to recover up to 100 percent  
18 of their “stranded costs.”<sup>4</sup> Pacific Gas and Electric Company (PG&E),  
19 Southern California Edison Company, San Diego Gas & Electric Company  
20 and Sierra Pacific Power Company all took advantage of this opportunity by  
21 arranging for the issuance of securitized bonds. The recovery of these  
22 “stranded costs” took place by the issuance of over \$6 billion of “rate  
23 reduction bonds,” the primary collateral for which was the utility’s statutory  
24 right to collect a “fixed transition amount” on the electric bill of residential  
25 and small commercial customers.

26 A second set of utility securitizations took place in the State of California  
27 in connection with the California energy crisis. In 2005, PG&E issued in

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2 Please refer to Table 2-2 for further details.

3 These financing are private in nature and no market data is therefore available.

4 Stranded costs are, broadly speaking, costs that are rendered uneconomic as a result of the emergence of a deregulated or competitive market for the generation of electricity. Typical examples include unrecovered investments in above-market generation (particularly nuclear plants), commitments to above-market power purchase contracts and so-called “regulatory assets” that represent a regulatory promise to collect future revenues related to past investments.

1 aggregate approximately \$2.7 billion of energy recovery bonds through  
2 two separate transactions.

3 Since the last issuance by PG&E back in 2005, the utility securitization  
4 market has continued to expand. To date, over \$56.7 billion of securitization  
5 transactions have been completed, including over \$19 billion of additional  
6 securitizations since the 2005 PG&E transactions. In addition, the purposes  
7 of utility securitizations have evolved over time, to include (in addition to the  
8 recovery of “stranded costs”) the recovery of storm costs, pollution control  
9 equipment costs, and rate stabilization costs.

## 10 **2. Basic Structuring Principles in Standard Securitizations**

### 11 Bankruptcy and Legal Considerations:

12 Securitizations, like all structured financings, are designed to take into  
13 account a wide range of financial, rating agency, legal, tax and accounting  
14 objectives.

15 Typically, the single most important structural driver for a securitization  
16 transaction is the objective of ensuring that the credit quality of the securities  
17 is delinked from (and may be higher than) that of the originating company  
18 such that highly rated (typically AAA(sf)) bonds can be sold to investors at  
19 attractive interest rates. This is true for all securitization issuances,  
20 regardless of the credit worthiness (including bankruptcy status) of the  
21 originating company. Without this delinking through a legal separation of the  
22 bond issuer from the originating company, the maximum allowable ratings  
23 uplift of the securitization transaction above the unsecured credit rating of  
24 the originating company would in most cases not result in the desired  
25 AAA(sf) rating.

26 The process for achieving this legal separation of the securitized assets  
27 entails an absolute transfer (contribution or sale) of the assets to a  
28 bankruptcy remote Special Purpose Entity (SPE). The transfer of the assets  
29 is structured as a “true sale” for legal purposes. In addition, the  
30 organizational documents of the SPE, in order to establish  
31 “bankruptcy-remoteness” from the originating company: (a) require one or  
32 more independent members on its board of directors, in the case of a  
33 corporation or a limited liability company, or an independent trustee, in the  
34 case of a trust; (b) impose restrictions on the SPE’s ability to declare

1 bankruptcy voluntarily or to engage in corporate reorganizations; and  
2 (c) substantially limit the activities of the SPE to those related to the  
3 securitization.

4 The rating agencies generally require “true sale” and “non-consolidation”  
5 opinions from legal counsel providing assurance that the assets have been  
6 transferred for bankruptcy purposes to the SPE and that the assets would  
7 not be part of the bankruptcy estate of the originating company and thus  
8 would not be available to creditors of the originating company in the event of  
9 an originator bankruptcy.

10 Securitizations are structured so that the SPE also has a security  
11 interest in the securitized assets transferred to the SPE, which is generally  
12 perfected through filing a financing statement under the Uniform Commercial  
13 Code (UCC Financing Statement). The UCC Financing Statement  
14 memorializes the SPE’s security interest by documenting that the securitized  
15 assets, as of a specified cutoff date, and all collections related to those  
16 assets are owned by the SPE. The UCC Financing Statement protects the  
17 SPE’s security interest in the securitized assets and limits another party’s  
18 ability to claim ownership over those assets, thereby protecting the rights of  
19 the secured investors in the SPE. Some state utility securitization statutes  
20 (including the California statutes) also provide for a “statutory lien” upon the  
21 securitized assets transferred to the SPE.

22 Servicing Considerations:

23 Following the closing of a securitization, the originating entity of the  
24 securitized assets will typically have responsibility for “servicing” the  
25 collateral pool. The servicer typically receives compensation for servicing  
26 the securitized assets, consistent with the costs of servicing similar assets.

27 These servicing responsibilities are set forth in a servicing agreement  
28 and typically include obligor billing (preparation and distribution of billing  
29 statements), collecting payments from obligors, resolving billing disputes,  
30 and remitting collections to a trustee. Additionally, the servicer will generate  
31 periodic reports on the collateral pool (collateral performance and  
32 performance related trigger events), determine allocation of cash collections,  
33 and prepare distribution instructions, all in accordance with the transaction  
34 documentation. Typically, a securitization transaction involves a trustee

1 (generally a specialized trust department of a large financial institution) that  
2 holds a security interest in the securitized assets pledged on behalf of the  
3 investors and is responsible for making debt service distributions to  
4 investors from transaction dedicated collection accounts.

5 The originating entity, as servicer for the securitization, is contractually  
6 obligated to act with the same level of care and to service the securitized  
7 assets in the same manner as if the assets had not been transferred.  
8 Because investors look to the securitized assets for repayment—and  
9 generally do not have recourse to the originating company if the cash flows  
10 from the securitized assets are insufficient for repayment—rating agency  
11 and investor due diligence focuses on the credit quality of the securitized  
12 assets as well as the quality and experience of the servicer.

13 In the event of a servicing default by the origination company,  
14 the transaction documents typically allow the trustee (as instructed by the  
15 bondholders) to appoint a replacement servicer.

16 Rating Agency Considerations:

17 The major rating agencies all have published asset class specific ratings  
18 criteria summarizing their analytical approach for evaluating legal  
19 requirements (see discussion above) as well as their basic credit analysis  
20 for the applicable asset class.

21 As noted above, from a credit perspective, the objective of a  
22 securitization is to achieve a credit rating for the transaction based primarily  
23 on the credit quality of the securitized assets, with little to no consideration  
24 of the credit quality of the originating entity. Rating agencies will evaluate  
25 several factors in assessing the credit quality of the assets securitized. For  
26 standard securitizations backed by pools of loans or receivables (e.g., auto  
27 loans, credit cards, or account receivables), the main credit factor related to  
28 the assets is the potential for cash flow impairment resulting from  
29 delinquencies (delay in obligor payments) or losses on the securitized  
30 assets (obligor defaults). Depending on the structure of the securitization,  
31 credit losses or cash flow disruptions due to delinquencies or losses may  
32 cause an inability to meet debt service payments on the securitized debt.

33 When analyzing the securitized assets, the rating agencies will also take  
34 into account the size and diversity of the obligor base, as well as any



1 geographic or product specific concentrations in the pool, in order to  
2 determine whether these factors could significantly impact the credit  
3 performance of the pool. The rating agency review process is typically  
4 based on a statistical analysis of a pool of diversified payment obligations.  
5 Accordingly, securitization pools that are not sufficiently diverse or that have  
6 one or more obligors representing a significant portion of the assets, may  
7 not be ideal for securitization.

8 The structure of the securitization transaction is also an important factor  
9 in the rating agency analysis. In a hypothetical example with no credit  
10 enhancement, the ratings of the securitization would be based exclusively  
11 on the credit quality and performance of the underlying securitized assets.  
12 As such a securitization would be susceptible to investor losses to the extent  
13 there are losses on the underlying securitized assets, the structuring of a  
14 securitization typically includes various forms of credit enhancement that  
15 enable the transaction to be more resilient to losses and achieve a higher  
16 rating. This credit enhancement may consist of a combination of the  
17 following:

- 18 • overcollateralization: the transfer of securitized assets to the SPE with  
19 an aggregate payment obligation in excess of the amount necessary to  
20 repay the securitized debt amount;
- 21 • excess spread: interest earned on securitized assets that is in excess of  
22 the aggregate amount of interest on the notes, the servicing fee, and  
23 other administrative expenses;
- 24 • subordinate classes with lower designated credit ratings (based on the  
25 priority of interest and principal payments);
- 26 • cash reserve accounts; and/or
- 27 • a surety bond or letter of credit provided by a highly rated financial  
28 institution.

29 The aggregate required credit enhancement for a particular class of  
30 notes is determined by applying increasingly stressful assumptions to the  
31 projected cash flow collections from securitized assets for each successively  
32 higher rating category. Almost all standard securitization transactions are  
33 structured with the senior most notes having AAA(sf) ratings to take

1 advantage of the associated borrowing cost savings. (Note that certain  
2 asset classes may not qualify for AAA(sf) ratings.)

3 For utility securitizations, the rating agencies also consider the impact of  
4 the securitization on the customers, specifically how much the securitization  
5 charges will increase the typical invoice. For purposes of this analysis, an  
6 equal securitization charge per kilowatt-hour (kWh) across all customer  
7 classes can, in certain circumstances, be beneficial as it may (compared to  
8 other allocation methods) reduce the impact of the securitization charge  
9 relative to the total bill for residential customers (a ratio that certain rating  
10 agencies are particularly focused on). An equal securitization charge per  
11 kWh across all customer classes would also benefit from the fact that it  
12 would not be impacted by shifts in the relative size of customer classes as  
13 would be the case if there was a fixed allocation percentage for each  
14 customer class.

15 Finally, the servicer's servicing ability, credit quality (as defined by the  
16 rating agencies), and business experience will be reviewed by the rating  
17 agencies as part of their due diligence.

#### 18 Accounting Considerations:

19 While the securitized assets are legally transferred to an SPE as  
20 described above, US GAAP typically requires the originator (which is  
21 generally also the servicer) to consolidate the SPE. As a result, the assets  
22 and liabilities associated with the securitization are consolidated with the  
23 assets and liabilities of the originator for financial statement purposes.

#### 24 Tax Considerations:

25 From a tax perspective, two basic issues are typically considered when  
26 structuring a securitization: (a) whether any income taxes are triggered in  
27 connection with the transfer of the securitized assets from the originator to  
28 the SPE; and (b) whether any income taxes are triggered at the SPE level  
29 from the ongoing activities of the SPE.

30 Securitizations are typically characterized as debt for tax purposes, in  
31 which case the assets are deemed to have been "pledged" to secure the  
32 originator's debt. "Debt for tax" characterization means that the assets are  
33 still deemed to be owned by the originator for tax purposes, which defers  
34 any potential immediate tax liability. Instead, taxes are payable over time as

1 the revenues, in respect of the securitized asset, are billed. For tax  
2 purposes, the originator continues to be the owner of the securitized assets,  
3 reports income generated by the securitized assets and deducts interest  
4 expense payable by the SPE. Tax counsel typically requires that the SPE  
5 have at-risk equity equal to at least 0.50 percent of the original principal  
6 amount of the securitization to support debt treatment for tax purposes.

7 As it relates to taxation of the ongoing activities of the SPE,  
8 securitizations are typically structured such that the SPE is disregarded for  
9 tax purposes (i.e., no taxes are paid at the entity level). This is done in  
10 order to avoid any reductions in cash collections available to the note  
11 holders resulting from tax obligations, including the impact from any future  
12 changes in tax laws.

### 13 **3. Basic Structuring Principles in Utility Securitizations**

14 While utility securitizations to a large extent are based on the principles  
15 discussed above, there are certain noteworthy distinctions. The next section  
16 describes these distinctions as well as the application of the basic  
17 structuring principles to a utility securitization.

#### 18 Basic Utility Securitization Structure:

19 A utility securitization is a financing backed by an intangible property  
20 right to bill and collect securitization charges from some or all of the utility's  
21 customers, issued by an SPE that has securities whose credit quality is  
22 de-linked from that of the utility in order to achieve higher credit ratings and  
23 lower financing costs. In order to accomplish this, the utility sells the  
24 revenue stream and other entitlements and property created by a financing  
25 order issued by the public utility commission to a bankruptcy remote SPE in  
26 a transaction that, consistent with the regulatory statute in the applicable  
27 state, represents a "true sale" for bankruptcy purposes. This sale insulates  
28 the securitization property from the creditors of the utility and, thereby, from  
29 the credit risk of the utility. The SPE then issues bonds to bondholders  
30 backed by an intangible property that includes, among other things, the right  
31 to bill and collect nonbypassable securitization charges from the utility's  
32 customers and the right to periodic adjustments to the securitization charges  
33 such that collections are sufficient to satisfy scheduled debt service  
34 obligations and other costs and expenses relating to the transaction on a

1 timely basis. A trustee acts on behalf of bondholders, remits payments to  
2 bondholders, and ensures bondholders' rights are protected in accordance  
3 with the terms of the financing documents. The utility will perform routine  
4 meter readings, billing, collection, and reporting duties as the servicer for the  
5 SPE pursuant to a servicing agreement between the utility, the SPE, and the  
6 trustee. In addition to the "ring-fencing" of the securitized asset, credit  
7 enhancements, such as a capital contribution to the SPE and the true-up  
8 mechanism described below, are necessary to reach the rating standard for  
9 this type of securitization, which is the highest possible rating<sup>5</sup> from each of  
10 two or more of the major rating agencies.

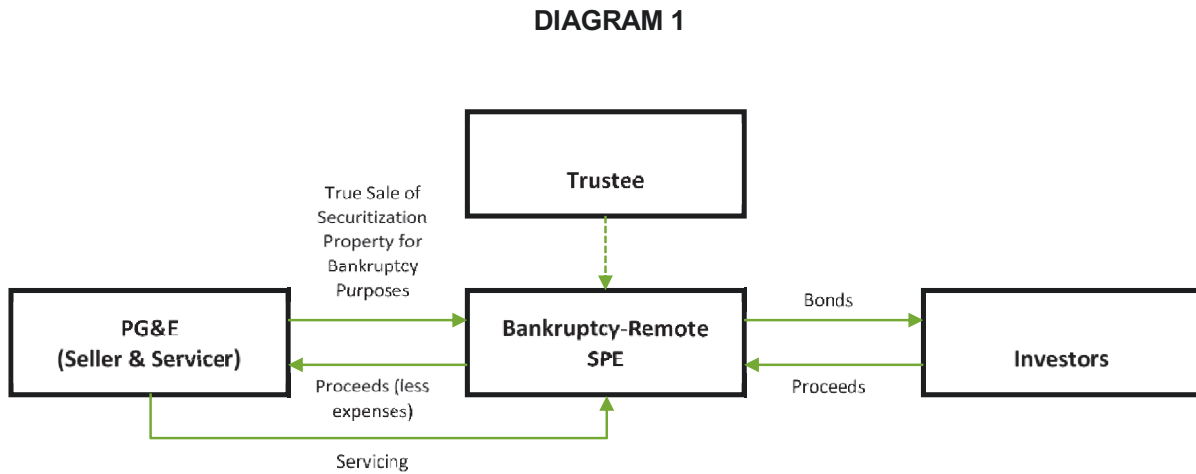
11 Unlike other securitizations, the primary source of credit enhancement in  
12 a utility securitization is a periodic adjustment known as the "true-up  
13 mechanism." The true-up mechanism is utilized to adjust the billing rate per  
14 kWh in relation to under- or over-collections primarily resulting from  
15 variances in the actual electric consumption, delinquencies of collections as  
16 well as write-offs in each case relative to the projections utilized to develop  
17 the securitization charges. The billing rate is adjusted, generally on either a  
18 semiannual and/or an annual basis, as needed to ensure cash collections  
19 match the SPE's payment obligations. In early utility securitizations, the  
20 true-up mechanism was an annual true-up of the securitization charge.  
21 However, as sponsor utilities moved away from utilizing other forms of credit  
22 enhancement (including an overcollateralization account), the true-up  
23 mechanism has been enhanced to include more frequent true-ups. The  
24 current standard is for an annual review and true-up, and a mandatory semi-  
25 annual true-up if the servicer projects collections of the securitization charge  
26 will be insufficient to pay scheduled debt service. In addition, the servicer  
27 may request an additional true-up at any time if it projects that collections of  
28 the securitization will be insufficient to pay scheduled debt service and  
29 various transaction expenses. Although earlier utility securitizations  
30 included overcollateralization accounts, in recent times the credit  
31 enhancement for these transactions primarily comes from the true-up

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<sup>5</sup> Utility securitizations typically receive AAA(sf) credit ratings from the major rating agencies. The 2015 Entergy New Orleans securitization in Louisiana was a recent exception to this as it was rated Aa1 by Moody's.

1 mechanism, so for most transactions an overcollateralization account is no  
 2 longer necessary. An efficient and timely true-up mechanism provides  
 3 significant credit support allowing the rating agencies to rate the bonds at  
 4 the targeted rating levels. The ability to make true-up adjustments  
 5 expeditiously typically means that the commission's review of the true-up  
 6 adjustment is limited to mathematical accuracy. Because the true-up  
 7 mechanism is designed to prevent potential shortfalls in the timely payment  
 8 of scheduled debt service and transaction expenses, deficiencies in the  
 9 collection of securitization charges from ratepayers (e.g., non-payments)  
 10 may result in the reallocation of such deficiencies to other customers to the  
 11 extent that a customer base exists to pay such additional securitization  
 12 charges.

13 Diagram 1 is representative of a utility securitization transaction:



14 The typical utility securitization financing structure and required cash  
 15 flows reflect annual debt service and revenue requirements that are  
 16 substantially level (except that the annual debt service and revenue  
 17 requirements may be adjusted: (a) for the first period given an  
 18 extended/shortened length; and (b) in general to reflect debt service  
 19 requirements with respect to other utility securitizations previously issued).<sup>6</sup>

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<sup>6</sup> For example, in 2009, securitized bonds were issued for The Potomac Edison Company and for Monongahela Power Company to finance cost overruns of a project previously financed by 2007 securitized bonds. Principal on those 2009 securitized bonds was scheduled to be paid only after all principal on the 2007 securitized bonds was scheduled to be fully repaid.

1 Additionally, in geographical areas with significant seasonality in electric  
2 consumption, there may be further adjustments with respect to the periodic  
3 debt service and revenue requirements (semi-annual debt service payments  
4 are common). The projected levels for these requirements are designed to  
5 satisfy rating agency stress scenarios required for AAA(sf) ratings in  
6 precedent utility securitization bond transactions.

7 Utility securitizations have used a number of approaches to allocate the  
8 securitization charges associated with the debt service and related ongoing  
9 transaction costs among customers. Many recent transactions have  
10 allocated the securitization charges among customer classes based on a set  
11 of allocation percentages established for each customer class where these  
12 percentages, if appropriate, can be revised from time to time. Within each  
13 customer class the securitization charges allocated to specific customers  
14 are further determined by a combination of energy and/or demand  
15 consumption. There have, however, also been examples where all  
16 customers paid an equal securitization charge per kWh. Such a rate  
17 structure can, in certain circumstances, be beneficial for the rating agency  
18 analysis as described above.

19 Unlike corporate bonds with date-certain maturities, the principal  
20 repayment requirements in utility securitization bonds reflect the uncertainty  
21 with respect to the ability to collect on a timely basis the required revenue  
22 amounts (which among other things may be influenced by differences  
23 between projected and actual electricity consumption).<sup>7</sup> In lieu of a single  
24 fixed maturity date for each bond, securitization bonds have scheduled  
25 amortization resulting in payment by an “expected” or “scheduled” final  
26 payment date (the date when principal is expected to be repaid) and then  
27 specify a “legal” maturity date (the date following the scheduled final  
28 payment date by which all principal is due). No legal obligation exists to  
29 retire a bond by the scheduled final payment date, only by the legal maturity  
30 date. Similarly, although the true-up mechanics are specifically designed to  
31 make scheduled principal payments on a timely basis, there are no legal

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<sup>7</sup> Note that the true-up mechanism is a key structural element in managing such differences.

1 obligations to satisfy scheduled amortization on scheduled principal  
2 payment dates. The legal maturity date of the securitization bonds generally  
3 may be up to two years beyond the scheduled final payment date. The  
4 ratings on the utility securitization bonds are derived in part based on the  
5 assumption that the outstanding principal of a class will be paid in full by the  
6 legal maturity date.

7 Most utility securitization bonds are issued with multiple tranches  
8 (i.e., individual sub-groups of bonds with different maturities and average  
9 lives) to take advantage of discrete pockets of investor demand across the  
10 entire term of the transaction. This is especially the case in transactions  
11 with extended tenors.

#### 12 Bankruptcy and Legal Considerations:

13 Similar to conventional securitizations, one of the basic structuring  
14 objectives for a utility securitization is legal separation of the securitized  
15 asset from that of the utility's estate. This is achieved through the standard  
16 securitization structuring techniques involving a true sale and bankruptcy  
17 remoteness of the SPE.

18 What is very different from other forms of securitization is the nature of  
19 the assets being securitized. For most other securitization asset classes,  
20 the securitized asset is a diversified pool of obligations (e.g., auto loans or  
21 leases) with fixed payment amounts and due dates.

22 In a utility securitization, the transferred asset is composed of the rights  
23 and interests of the utility created pursuant to legislation and a financing  
24 order. This includes the right to impose, collect, and receive from the utility's  
25 electric customers amounts necessary to pay principal and interest on the  
26 securitization bonds, as well as the SPE's other ongoing costs and  
27 expenses (such as servicing fees, trustee fees and expenses, legal fees,  
28 auditor expenses, administration fees, rating agency fees, independent  
29 manager fees, SEC reporting expenses, and other operating expenses  
30 incurred by or on behalf of the SPE), timely, in full, and including the ability  
31 to adjust the amounts of the securitization charges periodically through a  
32 "true-up" mechanism. The securitization property, the SPE's rights under  
33 the transaction documents, and the "other collateral" hereinafter discussed,



1 are then pledged by the SPE as collateral to the trustee under the indenture  
2 under which the securitization bonds are issued.

3 The “other collateral” is typically composed of a “Collection Account”,  
4 which is established by the SPE as a trust account to be held by the trustee  
5 to ensure the payment of principal, interest, and other costs associated with  
6 the securitization bonds in full and on a timely basis. The “other collateral”  
7 typically also includes any other credit enhancements provided by or on  
8 behalf of the SPE, as well as a pledge of the SPE’s rights under the  
9 transaction documents, including the agreement for the sale of the  
10 securitization property, the servicing agreement, and an administration  
11 agreement (whereby the sponsoring utility provides administration services  
12 to the SPE). The “other collateral” may also include an inter-creditor  
13 agreement or agreements that establishes conventions for allocating  
14 payments from customers received by the servicer among the SPE, the  
15 servicer, the trustee for the securitization, and the trustee for any other  
16 existing or future securitizations. The utility also typically covenants that it  
17 will not undertake another securitization transaction or execute any trade  
18 receivables purchase and sale agreement unless such inter-creditor  
19 agreement is amended to cover those other financing transactions.

20 Servicing Considerations:

21 The servicing function in a utility securitization is in many respects no  
22 different from what is required for a more standard securitization. The utility,  
23 in accordance with its regular operating procedures, will be responsible for  
24 meter readings, obligor billing, collecting payments from obligors and  
25 resolving billing disputes. Additionally, the servicer will be required to  
26 generate periodic reports on the collateral pool, determine allocation of cash  
27 collections and prepare distribution instructions all in accordance with the  
28 transaction documentation. Finally, the servicer/utility will be responsible for  
29 monitoring the performance of the transaction and applying to the  
30 Commission for and implementing true-ups as required (to the extent  
31 appropriate).

32 The servicing fee for utility securitizations is typically calculated as a  
33 percentage of the original principal balance because, unlike that for a more  
34 standard securitization with a self-liquidating pool of securitized assets, the



1 number of accounts serviced remains constant, and servicing costs are level  
2 over the life of the utility securitization.

3 Table 2-1 provides a snapshot of annual servicing fees for the initial  
4 servicer on various recent utility securitizations as a percentage of the  
5 original principal balance outstanding.

**TABLE 2-1  
RECENT UTILITY SECURITIZATION ANNUAL SERVICING FEE PERCENTAGES**

Line No.	Deal	Annual Servicing Fee (% of Initial Principal Balance)
1	AEP Texas Restoration Funding	0.10%
2	PSNH 2018-1	0.05%
3	UDSA 2017	0.05%
4	DUK	0.05%
5	UDSA 2016A	0.05%

6 As the cost of servicing should not be impacted by the financing amount  
7 of the securitization (variables that are more relevant include number of  
8 obligors, complexity of billing, bank account management), the servicing  
9 fees percentages are generally lower for larger transactions.

10 In the event of a servicing default by the origination company,  
11 the transaction documents typically allow the trustee (as instructed by the  
12 bondholders) to appoint a third party as replacement servicer. Replacement  
13 servicing fees in past utility securitization have generally been between  
14 0.60 percent and 1.25 percent of the initial principal balance.

15 Rating Agency Considerations:

16 Similar to more standard securitizations, the major rating agencies have  
17 all published ratings criteria for utility securitizations.

18 The strength of the support from the applicable legislative bodies,  
19 governmental agencies (including the public utility commission),  
20 the applicable legislation and the financing order are vital elements of the  
21 rating agency analysis. The rating agencies' transaction review will,  
22 accordingly, start with an analysis of the following key elements of the  
23 supporting legislative statutes and the financing order:

- 24 • nonbypassability of the securitization charges;
- 25 • bankruptcy remote status for the SPE;

- 1 • a current property right in the rights established under the regulatory
- 2 framework and financing order, which is established by the financing
- 3 order and statute and transferred to the SPE pursuant to a true sale,
- 4 • the assignment of the SPE's rights to the trustee in a perfected
- 5 first priority security interest;
- 6 • the terms of a true-up mechanism occurring with requisite frequency and
- 7 subject only to mathematical review by the public utility commission;
- 8 • the irrevocability of the financing order;
- 9 • the state non-impairment pledge and reaffirmation of the state's pledge
- 10 by the public utility commission; and
- 11 • federal and state constitutional protections.

12 The next area of focus of the rating agencies is the credit enhancement  
13 structure for the utility securitization transaction. Given that the nature of the  
14 transferred asset supporting a utility securitization is different from the  
15 underlying asset in a more standard securitization, the approach to credit  
16 enhancement is also a little different. There is no excess spread or  
17 subordination through notes with lower designated credit ratings, and letters  
18 of credit or surety bonds are generally not used. While there typically is a  
19 small cash reserve account (0.5 percent of the initial debt balance), the real  
20 credit enhancement comes from the right to impose, collect, and receive  
21 from the utility's electric customers, amounts necessary to pay principal and  
22 interest on the securitization bonds, and to pay the SPE's other ongoing  
23 costs, timely and in full, and including the ability to adjust the amounts of the  
24 securitization charges periodically through a "true-up" mechanism. In other  
25 words, the performance of a utility securitization is primarily driven by the  
26 ability to accurately predict the future level of electricity consumption,  
27 delinquencies, and losses, and a nimble "true-up" mechanism that ensures  
28 timely payment of debt service and transaction expenses. For large  
29 investor-owned utilities, the size and diversity of the customer base, the  
30 small size of the securitized charge relative to the aggregate electric bill, the  
31 essentiality of the service provided by the utility, and the true-up mechanism  
32 ensure the high credit quality of utility securitizations and typically enable  
33 utility securitizations to receive the highest ratings from the rating agencies.

1 Another element of the rating agencies' analysis involves the breadth of  
2 the market to which the securitization charge will be applied and the extent  
3 to which the charge might be "bypassable" by the electric customers. In  
4 certain utility transactions, pre-defined classes of customers may be  
5 exempted from contributing to payment of debt service and associated  
6 transaction costs and expenses. Generally, such exemptions are very  
7 limited in nature with the statute or the financing order specifying exactly  
8 which customer classes will be responsible for the securitization charges for  
9 the life of the utility securitization bonds. The financing order typically also  
10 specifies that customers that currently or at some future point may receive  
11 electric generation from a third-party, including alternative Energy Service  
12 Providers (ESP) and municipalities, will continue to be assessed the  
13 securitization charges for the life of the utility securitization bonds.

14 In the case of third-party ESPs, they may provide a consolidated bill for  
15 their generation services as well as the tariffs (and the securitization  
16 charges) owed to the utility. Where this is the case, the ESP is typically  
17 liable to pay the tariff to the utility within a certain period of time regardless  
18 of whether it has received collections from the electric customer. As a  
19 result, the utility securitization may be exposed to credit risk on the ESP  
20 (i.e., the resulting loss of commingled tariffs in the event of the bankruptcy of  
21 an ESP). This risk is typically mitigated by imposing certain restrictions on:  
22 (a) the minimum credit quality of the ESP (investment grade or posting  
23 collateral such as letters of credit); and (b) the maximum length of time that  
24 an ESP may commingle funds before submitting payment to the utility. If the  
25 ESP fails to satisfy the minimum credit rating requirements or becomes  
26 delinquent in payments, direct and consolidated billing may cease and  
27 service and separate billing to the end-user customer would be made for the  
28 tariff. While these arrangements largely mitigate the risks associated with  
29 third-party ESPs, the ESP nevertheless is allowed to commingle funds for a  
30 number of days before making payment. To address this risk, the rating  
31 agency may prepare stressed cash flow runs that eliminate one or more  
32 months of collections per year from such third-party ESPs at the utility's  
33 peak billing cycle.

1 Relative to more standard securitization transactions, the analysis of  
2 securitization bonds is necessarily somewhat more limited because the sole  
3 sources of payment are the dedicated revenue streams and other assets of  
4 the SPE. The rating agencies perform extensive analyses—often referred to  
5 as “stress tests”—on the cash flows of the underlying assets to assess  
6 whether interest will be paid in a timely fashion and principal will be fully  
7 repaid by the legal maturity date (although actual experience deviates  
8 significantly from predicted historical norms). Some of the key variables in  
9 this analysis include the impact of stressed variances between projected  
10 and actual electric consumption, collection delays (delinquencies) and  
11 charge-offs.

12 The rating agencies will also analyze the impact of the securitization  
13 charges on the ratepayers; a substantial securitization charge relative to the  
14 regular billed amount can be cause for concern. Rating agency stresses for  
15 this purpose will also include looking at customers falling out of the eligible  
16 ratepayer base (i.e., exempted customer classes, if any) and the total  
17 securitization charge as a percent of the customers’ utility bill.

18 Securitization bonds backed by securitization property and financing  
19 orders have maintained their high ratings, even when the credit of the utility  
20 has been downgraded and/or the utility has entered bankruptcy, thus  
21 justifying the investors’ confidence in the bonds.

22 Accounting Considerations:

23 While the utility has the ability to sell the securitization property from a  
24 legal true sale perspective, utility securitizations issued by utilities governed  
25 by US GAAP generally do not meet the accounting requirements to  
26 recognize the transfer of the securitization property as a sale for accounting  
27 and instead recognized the associated assets and liabilities on the utility’s  
28 balance sheet. There have been certain very limited instances where utility  
29 securitizations have been determined to meet the accounting requirements  
30 for off-balance sheet treatment.

31 Tax Considerations:

32 The Internal Revenue Service in 2005 issued a revenue procedure  
33 (2005-62) that states that a utility entering into a “qualifying securitization”  
34 (which among other things requires that the issuing SPE is capitalized by an

1 equity contribution from the utility of no less than 0.5 percent of the  
2 aggregate principal amount of the financing) will receive the following tax  
3 treatment:

- 4 • be treated as not recognizing gross income in connection with: (i) the  
5 receipt of the financing order; (ii) the receipt of cash or other  
6 consideration in exchange for the transfer of the intangible property right  
7 created under the financing order; or (iii) the receipt of cash or other  
8 consideration in exchange for securitized instruments issued by the  
9 SPE;
- 10 • the securitized instruments will be treated as obligations of the utility;  
11 and
- 12 • the securitization charges are gross income to the utility.

13 Revenue Procedure 2005-62 clarifies that a typical qualifying utility  
14 securitization will avoid recognition by the utility of gross income upon  
15 receipt from the SPE of the net proceeds of the securitization bonds as the  
16 sales price of the securitization property and treats the securitization related  
17 customer charges as gross income to the utility under its usual method of  
18 accounting.

## 19 **C. Securitization Market Size and Investor Base**

### 20 **1. Size of the Securitization Market**

21 The first public asset-backed securities were issued in 1985 by  
22 Sperry Lease Finance, which securitized computer leases. A variety of  
23 asset types have been securitized in the public markets since then, including  
24 credit card receivables, trade receivables, automobile loans and leases,  
25 student loans, home equity loans and lines of credit, equipment leases,  
26 manufactured housing contracts, unsecured consumer loans and a number  
27 of other less traditional assets. The following table shows a breakdown of  
28 2019 United States (U.S.) public securitization issuance by asset type.

**TABLE 2-2**  
**2019 UNITED STATES SECURITIZATION ISSUANCE BY ASSET TYPE**

Line No.	Asset Type	Volume (\$ Billions)	Percentage (%)
1	Auto	119.6	50.7%
2	Credit Card	24.5	10.4%
3	Equipment	19.6	8.3%
4	Student Loan	13.9	5.9%
5	Consumer Loan	14.4	6.1%
6	Utility	0.2	0.1%
7	Other/Esoteric	43.7	18.5%
8	Total	235.9	100.0%

Note: Source: Bloomberg.

1           The securitization market has settled into a mature market since the  
2 financial crisis, with issuance peaking in 2018 at \$237 billion and slightly  
3 down in 2019 at \$236 billion. While the first two months of 2020 saw strong  
4 issuance volumes in the securitization market that outpaced the first two  
5 months of 2019, the spread of COVID-19 caused the securitization market  
6 to see nearly no new issuances from March 16, 2020 to April 13, 2020.  
7 During that same period, secondary ABS spreads widened significantly  
8 relative to both historical levels and levels in effect immediately prior to the  
9 onset of COVID-19.

10           Following the four-week shutdown, the securitization market has  
11 recovered significantly, with new issuance volumes in June and July 2020  
12 slightly outpacing the same period in 2019. Additionally, investor demand  
13 for new issuances has been near historic highs, allowing issuers to place  
14 larger amounts of debt in each trade, such as Ford, which placed over  
15 \$2 billion of ABS debt in early June 2020 (the largest single amortizing prime  
16 auto trade since 2012). The same dynamic has played out in the secondary  
17 market where renewed ABS demand has resulted in significant spread  
18 tightening from the March peak.

19           While the transaction size in the securitization market typically ranges  
20 from approximately \$200 million to \$2.0 billion, there are a number of  
21 examples of larger historical securitization issuances in the standard,  
22 non-utility securitization market. Some of the larger securitizations  
23 (Table 2-3) were the result of the Term Asset-Backed Securities Loan

1 Facility (TALF) program that was created by the U.S. Federal Reserve to  
 2 spur consumer credit lending in November 2008 by supporting the issuance  
 3 of securitizations collateralized by student loans, auto loans, credit card  
 4 loans and loans guaranteed by the Small Business Administration.  
 5 Under TALF, the Federal Reserve Bank of New York authorized up to  
 6 \$200 billion of loans on a non-recourse basis to holders of certain  
 7 AAA-rated securitizations. Since 2011, there have been a handful of  
 8 securitizations completed with a deal size exceeding \$2.0 billion (Table 2-4).

**TABLE 2-3**  
**LARGEST STANDARD (NON-UTILITY) SECURITIZATION TRANSACTIONS (TALF)**

Rank	Transaction	Issuer	Date	Asset Class	Rating(sf)	Issuance (\$mm)
1	CHAIT 2009-A2	JPM	May-09	Credit Card	AAA	\$5,000
2	SLM 2008-9	Sallie Mae	Aug-08	Student Loan	AAA	\$4,086
3	SLM 2008-5	Sallie Mae	Apr-08	Student Loan	AAA	\$4,081
4	COMNI 2009-A8	Citi	Jun-09	Credit Card	AAA	\$4,000
5	FCAOT 2008-C	Ford	May-08	Prime Auto	AAA	\$3,963

**TABLE 2-4**  
**LARGEST STANDARD (NON-UTILITY) SECURITIZATION TRANSACTIONS (2011 – 2019)**

Rank	Transaction	Issuer	Date	Asset Class	Rating(sf)	Issuance (\$mm)
1	SSC 2018-1	Sprint	Mar-18	Spectrum	BBB	\$3,937
2	SSC 2016-1	Sprint	Oct-16	Spectrum	BBB	\$3,500
3	SCFT 2014-A	Springcastle	Sep-14	Consumer	AA – B	\$2,600
4	WEN 2015-1	Wendys	May-15	Whole-Bus	BBB	\$2,425
5	AMXCA 2017-1	Amex	Feb-17	Credit Card	AAA/BBB	\$2,399
6	FORDR 2018-1	Ford	Jan-18	Prime Auto Loan	AAA-A	\$2,186
7	MBALT 2015-A	Daimler	Jan-15	Prime Auto Lease	AAA	\$2,015

9 **2. Size of the Utility Securitization Market and Investor Base**

10 Over \$56 billion of utility securitization bonds have been issued  
 11 successfully by electric utilities in various states since inception of the sector  
 12 in 1995 (Table 2-5).



**TABLE 2-5  
HISTORICAL US UTILITY SECURITIZATION TRANSACTIONS (1995-2019)**

Line No.	State	Utility	Pricing Date	Issuance (\$mm)
1	Texas	AEP Texas	09/11/2019	235
2	New Hampshire	Public Service Company of New Hampshire	05/01/2018	635
3	New York	Long Island Power Authority	10/25/2017	370
4	New York	Long Island Power Authority	03/02/2016	469
5	Florida	Duke Energy Florida	06/15/2016	1,294
6	New York	Long Island Power Authority	10/16 /2015	1,002
7	Louisiana	Entergy New Orleans	07/14/2015	99
8	Hawaii	Hawaiian Electric; Hawaii Electric Light; Maui Electric	11/04/2014	150
9	Louisiana	Entergy Gulf States Louisiana	07/29/2014	71
10	Louisiana	Entergy Louisiana	07/29/2014	244
11	Michigan	Consumers Energy	07/14/2014	378
12	New York	Long Island Power Authority	12/12/2013	2,022
13	West Virginia	Appalachian Power	11/06/2013	380
14	Ohio	Ohio Power	07/23/2013	267
15	Ohio	Cleveland Electric Illuminating; Ohio Edison; Toledo Edison	06/12/2013	445
16	Texas	AEP Texas Central	03/07/2012	800
17	Texas	CenterPoint Energy Houston Electric	01/11/2012	1,695
18	Louisiana	Entergy Louisiana	09/15/2011	207
19	Arkansas	Entergy Arkansas	08/11/2010	124
20	Louisiana	Entergy Gulf States Louisiana	07/15/2010	244
21	Louisiana	Entergy Louisiana	07/15/2010	469
22	West Virginia	Monongahela Power	12/16/2009	64
23	West Virginia	Potomac Edison	12/16/2009	22
24	Texas	CenterPoint Energy Houston Electric	11/18/2009	665
25	Texas	Entergy Texas	10/29/2009	546
26	Louisiana	Entergy Gulf States Louisiana	08/20/2008	278
27	Louisiana	Entergy Louisiana	07/22/2008	688
28	Louisiana	Cleco Power	02/28/2008	181
29	Texas	CenterPoint Energy Houston Electric	01/29/2008	488
30	Texas	Entergy Gulf States	06/22/2007	330
31	Maryland	Baltimore Gas and Electric	06/22/2007	623
32	Florida	Florida Power & Light	05/17/2007	652
33	West Virginia	Monongahela Power	04/03/2007	345
34	West Virginia	Potomac Edison	04/03/2007	115
35	Texas	AEP Texas Central	10/04/2006	1,740
36	New Jersey	Jersey Central Power & Light	08/04/2006	182
37	Texas	CenterPoint Energy Houston Electric	12/09/2005	1,851
38	California	Pacific Gas and Electric	11/03/2005	844
39	Pennsylvania	West Penn Power	09/22/2005	115
40	New Jersey	Public Service Electric and Gas	09/09/2005	103
41	Massachusetts	Boston Edison; Commonwealth Electric	02/15/2005	675
42	California	Pacific Gas and Electric	02/03/2005	1,888
43	New Jersey	Rockland Electric	07/28/2004	46
44	Connecticut	Connecticut Light and Power	06/23/2004	205
45	Texas	Oncor Electric Delivery	05/28/2004	790
46	New Jersey	Atlantic City Electric	12/18/2003	152
47	Texas	Oncor Electric Delivery	08/14/2003	500
48	New Jersey	Atlantic City Electric	12/11/2002	440
49	New Jersey	Jersey Central Power & Light	06/04/2002	320
50	Texas	Central Power and Light	01/31/2002	797



**TABLE 2-5  
HISTORICAL US UTILITY SECURITIZATION TRANSACTIONS (1995-2019)  
(CONTINUED)**

Line No.	State	Utility	Pricing Date	Issuance (\$mm)
51	New Hampshire	Public Service of New Hampshire	01/16/2002	50
52	Michigan	Consumers Energy	10/31/2001	469
53	Texas	Reliant Energy	10/17/2001	749
54	Massachusetts	Western Massachusetts Electric	05/14/2001	155
55	New Hampshire	Public Service of New Hampshire	04/20/2001	525
56	Connecticut	Connecticut Light and Power	03/27/2001	1,438
57	Michigan	Detroit Edison	03/02/2001	1,750
58	Pennsylvania	PECO Energy	02/15/2001	805
59	New Jersey	Public Service Electric and Gas	01/25/2001	2,525
60	Pennsylvania	PECO Energy	04/27/2000	1,000
61	Pennsylvania	West Penn Power	11/03/1999	600
62	Pennsylvania	PP&L	07/29/1999	2,420
63	Massachusetts	Boston Edison	07/26/1999	725
64	California	Sierra Pacific Power	04/08/1999	24
65	Pennsylvania	PECO Energy	03/18/1999	4,000
66	Montana	Montana Power	12/22/1998	63
67	Illinois	Illinois Power	12/10/1998	864
68	Illinois	Commonwealth Edison	12/07/1998	3,400
69	California	Southern California Edison	12/04/1997	2,463
70	California	San Diego Gas & Electric	12/04/1997	658
71	California	Pacific Gas and Electric	11/25/1997	2,901
72	Washington	Puget Sound Energy	07/30/1997	35
73	Washington	Puget Sound Power & Light	06/08/1995	202
74	Total			56,708

1           Utility securitizations by definition are episodic in nature, raising funds in  
2           a very specific amount and for a specific purpose. The size of the above  
3           historical transactions are therefore not necessarily a reflection of market  
4           capacity at that time. Furthermore, in several cases involving large  
5           transactions, the required funding target was achieved in more than  
6           one issuance over a period of time (e.g., PECO Energy in 1999 and 2000,  
7           Oncor Electric Delivery in 2003 and 2004, PG&E in 2005, CenterPoint  
8           Energy Houston Electric in 2005 and 2008, and Long Island Power Authority  
9           in 2013, 2016, 2015 and 2017). Finally, certain transactions with similar  
10          characteristics (i.e., a charge on a customer invoice) have been issued in  
11          vary large amounts. In 2002, the California Department of Water Resources  
12          (DWR) was authorized to issue up to approximately \$13.4 billion of bonds  
13          (Power Supply Revenue Bonds), and ultimately issued \$11.5 billion to repay  
14          various entities for purchases of power at above market rates during the  
15          California energy crisis. The DWR structure was not technically a  
16          securitization as there was no bankruptcy-remote SPE, and the transactions

1 were therefore rated below AAA. However, the underlying security for the  
 2 Power Supply Revenue Bonds (i.e., the right to bill and collect statutorily  
 3 authorized, nonbypassable charges imposed by CPUC upon customers of  
 4 the investor-owned utilities in amounts sufficient to repay the bonds) is  
 5 fundamentally the same security as the security for utility securitizations.  
 6 In 2019, DWR was authorized under AB 1054 to issue an additional  
 7 \$10.5 billion in wildfire cost recovery bonds using the same security  
 8 structure. It should also be noted that outside of the securitization market,  
 9 there have been many transactions successfully issued in the corporate  
 10 market well in excess of \$7.5 billion.

**TABLE 2-6  
 LARGEST UTILITY SECURITIZATION TRANSACTIONS (1997 – 2007)**

Rank	Transaction	Utility	Date	Commission State	Issuance (\$mm)
1	PECO	PECO Energy	Mar-99	Pennsylvania	\$4,000
2	ComEd	Com. Edison	Dec-98	Illinois	\$3,400
3	PG&E-1	PG&E	Nov-97	California	\$2,901
4	PSE&G-1	PSE&G	Apr-00	New Jersey	\$2,525
5	SCE-1	SCE	Nov-97	California	\$2,463
6	PP&L-1	PA Power & Light	Jul-99	Pennsylvania	\$2,420
7	PG&E Energy	PG&E	Jan-05	California	\$1,888

**TABLE 2-7  
 LARGEST UTILITY SECURITIZATION TRANSACTIONS (2008 – 2019)**

Rank	Transaction	Utility	Date	Commission State	Issuance (\$mm)
1	UDSA 2013-1	LIPA	Dec-13	New York	\$2,022
2	CNL 2012-1	CenterPoint Texas	Jan-12	Texas	\$1,695
3	DUK	Duke Energy	Jun-16	Florida	\$1,294
4	UDSA 2015	LIPA	Oct-15	New York	\$1,002
5	AEPTC 2012-1	AEP TX	Mar-12	Texas	\$800

11 A broad range of investors have participated in utility securitization bond  
 12 issues to date, including domestic and international banks, institutional and  
 13 retail trust funds, money managers, investment advisors, pension funds,  
 14 insurance companies, securities lenders, state trust funds, and corporate  
 15 cash managers. Traditional utility unsecured, first mortgage bond and

1 municipal investors have also participated broadly, as some perceive utility  
2 securitization bonds as a highly rated substitute for the product they  
3 traditionally purchase.

4 Utility securitization bonds are a well-established asset class, and  
5 broadly understood by a diverse set of investors. Utility securitization bonds  
6 backed by securitization property and financing orders have maintained their  
7 high ratings, even when the credit of the utility has been downgraded or the  
8 utility has entered bankruptcy, thus justifying investors' confidence in the  
9 bonds.

10 The interest income received is taxable for federal income tax purposes  
11 for investors in the vast majority of these utility securitizations (some have  
12 been tax-exempt for state purposes), but there have also been some  
13 transactions issued into the municipal market where interest is tax-exempt  
14 for federal tax purposes.

#### 15 **D. Structuring, Pricing, Marketing & Upfront Transactional Expenses**

##### 16 **1. Structuring Utility Securitizations**

17 The debt service and scheduled amortization for utility securitization  
18 bonds are derived based on the expected collections to be received from the  
19 securitization charges. The weighted average life of a securitization bond  
20 refers to the average amount of time an investor is expected to invest the  
21 full amount of principal, weighted by the amount of principal received in each  
22 period. In contrast, the average life for a bullet maturity security (the typical  
23 corporate bond principal payment structure) is equal to the period of time  
24 between the issuance date and the maturity date.

25 Frequently, and especially in the case of utility securitizations with long  
26 tenors, the transaction will be structured as multiple tranches with various  
27 scheduled average lives ranging potentially from 2 to approximately  
28 30 years. The expected final principal payment of the vast majority of utility  
29 securitizations occurs within 20 years, with the furthest out expected final  
30 principal payment occurring in year 26 for the Long Island Power Authority  
31 (LIPA) 2013TE transaction. The LIPA 2013TE transaction, as well as the  
32 other LIPA transactions included in Table 2-8 below, were exempt from  
33 federal taxation. The legal maturity of the last maturing tranche of

1 securitized utility bonds will be approximately 1 to 2 years after the expected  
2 final payment date of the last maturing bond.

3 Certain utility securitizations have been designed to allow a sole SPE to  
4 issue multiple series of bonds causing the bonds not to be treated as  
5 “asset-backed securities” within the meaning of Securities and Exchange  
6 Commission (SEC) Regulation AB. This might, under certain  
7 circumstances, have advantages for marketing of longer tenor bonds.

**TABLE 2-8**  
**EXPECTED FINAL PAYMENT DATES OF RECENT UTILITY SECURITIZATIONS**

<u>Line No.</u>	<u>State</u>	<u>Utility</u>	<u>Pricing Date</u>	<u>Expected Final Payment Date (Years)</u>
1	Texas	AEP Texas	09/11/2019	10
2	New Hampshire	Public Service Company of New Hampshire	05/01/2018	15
3	New York	Long Island Power Authority	10/25/2017	22
4	New York	Long Island Power Authority	03/02/2016	18
5	Florida	Duke Energy Florida	06/15/2016	20

8 Debt service in utility securitizations is typically paid semi-annually.  
9 As monthly cashflows can be less predictable, a longer payment period can  
10 help smooth variations in the cashflows and ensure payment of debt service.  
11 However, shorter payment periods reduce the time collections are held by  
12 the SPE earning lower short-term rates while the SPE pays higher coupons  
13 on the securitized debt.

14 The structuring advisor / lead underwriter(s) will typically assist the utility  
15 by preparing financial models to assess various financing and structuring  
16 alternatives and the economic impact of such alternatives, while considering  
17 execution viability from both a rating agency and marketing perspective.  
18 The structuring advisor / lead underwriter(s) will also assist the utility in  
19 optimizing the overall amortization schedule to meet its financing goals.

20 An important element of the transaction process is obtaining the highest  
21 ratings on the utility securitization bonds, which will generally need to be  
22 rated by at least two Nationally Recognized Statistical Rating Organizations  
23 (NRSRO or rating agency). The utility securitization bonds will be structured  
24 to achieve the highest ratings possible, and the structuring of the bonds will  
25 largely be driven by the rating agencies’ requirements. The utility, together  
26 with the structuring advisor / lead underwriter(s), will prepare written

1 presentations that will be delivered through in-person meetings with the  
2 rating agencies, to discuss the credit framework and strength of the  
3 proposed utility securitization.

4 Each rating agency asked to rate the bonds will review the utility's  
5 forecasting, billing and collections operations and capabilities. They will  
6 review the utility's operational capabilities as servicer and its related  
7 systems. The rating agencies will analyze the constituent documents and  
8 seek extensive opinions in reviewing the transaction and will review those  
9 matters with the utility, the structuring advisor / lead underwriter(s) and  
10 counsel. The structuring advisor / lead underwriter(s) will be required to  
11 prepare various cash flow stress scenarios to demonstrate that the bonds  
12 will be repaid under stressed cash flow projections. There will be extensive  
13 review of the utility securitization bond structures by the rating agencies.

## 14 **2. Marketing & Pricing Utility Securitizations**

15 The securitization bonds will be offered for sale to investors through one  
16 or more lead underwriter(s), each of which should have deep experience in  
17 the marketing of utility securitization bonds in various markets. The interest  
18 rate or bond coupon is a function of the market conditions at the time the  
19 bonds are sold and is influenced not only by general market conditions but  
20 also by factors including the size of the offering, ratings of the bonds and the  
21 number and quality of competitive bond offerings coming to the market at or  
22 around the same time. To my knowledge, the majority of utility  
23 securitizations to date have been sold through a negotiated sale process,  
24 although the Florida Public Services Commission (FPSC) implemented a  
25 quasi-competitive process for the sale of its hurricane recovery bond for the  
26 benefit of Florida Power & Light in 2007. The FPSC reverted to a negotiated  
27 sale process for the Duke Energy Florida securitization in 2016.

28 Information will be provided to investors regarding the utility  
29 securitization bonds. Following the delivery of the preliminary prospectus  
30 and other marketing materials, typically including an investor presentation,  
31 the utility and the lead underwriter(s) will work together to generate investor  
32 attention by informing investors of the transaction structure and terms and  
33 answering any questions from investors. The purpose of this process is to

1           garner investor interest, so that pricing will result in the lowest available cost  
2           of funds.

3           During the pre-marketing phase of the transaction, the lead  
4           underwriter(s) will disclose a fixed rate benchmark index and preliminary  
5           credit spread ranges relative to the benchmark rate for each tranche, in  
6           response to which investors provide indications of interest. The lead  
7           underwriter will be charged with keeping the master record (known as  
8           “the investor book”) in which all indications of interest received by the lead  
9           underwriter(s) from potential investors are recorded.

10          The objective in setting the preliminary credit spread ranges is to  
11          establish a level sufficient to generate enough demand to allow all bonds to  
12          be sold, without setting spreads at a level higher than necessary.

13          The benchmark index used to price utility securitizations is typically either  
14          Treasuries or US Swaps. The respective term of the benchmark index for  
15          each tranche typically matches the average life of the tranche.

16          The Treasury benchmark reflects the “risk-free” yield investors generally  
17          associate with United State Treasury securities, while the US Swap  
18          benchmark reflects the yield demanded by investors for non-Treasury  
19          securities of similar term.

20          All recent utility securitizations have used fixed rate benchmarks.  
21          Fixed rate bonds enable the costs and benefits to be evaluated in advance  
22          and ensure roughly equal charges over time.

23          The credit spreads are the margins over the benchmark indices that  
24          investors require to reflect their understanding of the risk of credit default on  
25          the bonds. The credit spread over the benchmark yield is commonly  
26          measured in hundredths of a percentage, or basis points. The credit spread  
27          for each tranche of utility securitization bonds is determined through the  
28          marketing and pricing process, as institutional investors assess the credit  
29          risk of the particular bonds and decide how low a credit spread is  
30          acceptable, given the quality and supply of other competing debt securities  
31          they could purchase at that time. Investors also may consider a minimum  
32          absolute yield for the securities being marketed.

33          At the official launch of the transaction, the lead underwriter(s) will  
34          disclose specific credit spreads for each tranche, and investors will be

1 invited to place orders through the lead underwriter(s) for the amount and  
2 specific tranches of securitization bonds they are willing to purchase,  
3 at certain prices and securitization bond coupon rates.

4 The lead underwriter(s), exercising professional judgment based on the  
5 amounts of orders received from potential investors, current benchmark  
6 index environment and with the express concurrence of the utility, may  
7 adjust the credit spreads which dictate the bond coupon rates to ensure  
8 maximum distribution of the securitization bonds at the lowest bond yields  
9 consistent with a fixed price offering. If the tranche is oversubscribed, the  
10 lead underwriter(s) may lower the credit spread, provided that this  
11 adjustment does not decrease the aggregate investor interest below the size  
12 of the tranche. If the tranche is undersubscribed, the lead underwriter(s)  
13 may increase the coupon to attract sufficient investor orders to sell the entire  
14 tranche. In the event there are no market clearing coupons and prices for  
15 one or more tranches, the transaction may be restructured in order to  
16 ascertain the tranches and market clearing interest rates required to sell all  
17 the utility securitization bonds to investors.

18 Taking into account the actual demand for the utility securitization bonds  
19 on the day of pricing, the lead underwriter(s), pursuant to the terms of an  
20 executed underwriting agreement, will agree to purchase the utility  
21 securitization bonds at specified prices and coupon rates with such bonds  
22 then resold by the lead underwriter(s) to the identified investors.

23 In summary, it is through the marketing and price discovery process that  
24 the actual market for the utility securitization bonds is determined. It should  
25 be noted that this determination is specific to the issue of the utility  
26 securitization bonds in question. It is based on the actual investor orders for  
27 particular securitization bonds on the actual day of pricing. The  
28 Commission's representative will be updated continuously throughout the  
29 marketing and pricing process. It is this process that provides assurance  
30 that the bonds are being sold at the lowest rates available.

### 31 **3. Upfront Transaction Expenses**

32 Upfront transactional expenses on recent utility securitizations have  
33 ranged from approximately 1.00 percent – 3.00 percent of the original  
34 principal amount of the utility securitization bonds (see Table 2-9).



1 These expenses will include, but are not limited to, fees in connection with  
 2 legal services, accountants, advisors, underwriters, trustees, rating  
 3 agencies, SPE / servicer setup costs, SEC registration and printers.  
 4 Depending on the original principal amount of the utility securitization,  
 5 some of these expenses may benefit from economies of scale in a  
 6 large issuance.

**TABLE 2-9  
 PUBLICLY DISCLOSED UTILITY ASSET BACKED SECURITIES ISSUANCE COST**

<u>Line No.</u>	<u>Issue Date</u>	<u>State</u>	<u>Utility Sponsor</u>	<u>Size (\$000)</u>	<u>Underwriting Fees (%)</u>	<u>Total Cost (\$)</u>	<u>Total Cost (% of Size)</u>
1	Sep-19	TX	AEP	235,000	0.40%	4,097,586	1.74%
2	May-18	NH	PSNH	635,663	0.41%	6,744,281	1.06%
3	Jul-15	LA	Entergy	98,730	0.35%	2,973,382	3.01%
4	Jul-13	OH	AEP	267,408	0.40%	3,740,395	1.40%
5	Jan-13	OH	FirstEnergy	444,922	0.40%	9,051,191	2.03%