PJM2019 FINANCIAL REPORT

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MANAGEMENT'S DISCUSSION AND ANALYSIS

FORWARD-LOOKING STATEMENTS

In addition to the historical information presented throughout this report, there are forward-looking statements that reflect management's expectations for the future. Sometimes the words "estimate," "plan," "expect," "believe" or similar expressions will be used to identify such forward-looking statements. These forward-looking statements are based on current expectations. These statements are not guarantees of future performance and are subject to certain risks and uncertainties.

Many factors could cause actual results to differ materially from these statements. These factors include, but are not limited to, the results of regulatory proceedings, the conditions of the capital markets, interest rates, actuarial assumptions, availability of credit, liquidity and general economic conditions; changes in accounting principles and practices; acts of terrorists; the actions of adjacent control areas and other Regional Transmission Organizations (RTOs); and other operational conditions that could arise on the power system. For a description of these and other factors that may cause actual results to differ, reference is made hereby to PJM Interconnection L.L.C.'s (PJM or the Company) Consolidated Financial Statements, Notes thereto and other documents filed by the Company from time to time with the Federal Energy Regulatory Commission (FERC).

These forward-looking statements represent PJM's estimates and assumptions only as of the date of this report, and PJM assumes no responsibility to update these forward-looking statements.

NATURE OF OPERATIONS

The Company currently coordinates a pooled generating capacity of more than 186,788 megawatts (MW) and operates wholesale electricity markets with more than 1,047 members. PJM enables the delivery of electric power to approximately 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

PJM manages a sophisticated regional planning process for generation and transmission expansion to ensure continued reliability of the electric system. Using information technology, PJM provides real-time information to market participants to support their daily transactions and business decision-making. In addition to ensuring the reliable supply of electricity, PJM administers internet-based bid markets in which participants buy and sell day-ahead and spot-market energy, Financial Transmission Rights (FTRs), synchronized reserves and regulation services.

PJM Settlement, Inc. (PJM Settlement) is a wholly owned subsidiary of PJM, organized as a Pennsylvania nonprofit corporation, and is a FERC-regulated entity. PJM Settlement was formed to handle all of the credit, billing and settlement functions for PJM's members' transactions in the PJM markets and for transmission service. PJM Settlement acts as a counterparty to members' pool transactions in the PJM markets. For the pool transactions in the PJM markets, flash title passes through PJM Settlement immediately prior to passing to the ultimate buyer and seller of the product. This arrangement reinforces PJM's authority to continue to net a member's offsetting financial positions in PJM markets for credit and billing purposes, provides clarity in PJM Settlement's legal standing to pursue collection from a bankrupt member, and complies with FERC's recommendation on credit policy requirements for competitive wholesale electricity markets.

PJM Connext, L.L.C. (PJM Connext) is a wholly owned subsidiary of PJM and is not a FERC-regulated entity. PJM Connext was formed to provide service and technology solutions to existing and emerging energy markets, system operators, RTOs and other entities.

PJM Technologies, Inc. (PJM Tech) is a wholly owned subsidiary of PJM Connext and is not a FERC-regulated entity. PJM Tech provides international consulting services including training, program planning and implementation advice regarding development of wholesale electric market design and market rules.

PJM Environmental Services, Inc. (PJM EIS) is a wholly owned subsidiary of PJM Connext formed to provide environmental and emissions attributes reporting and tracking services to its subscribers in support of renewable portfolio standards and other disclosure requirements that may be implemented by governmental agencies. PJM EIS is not a FERC-regulated entity.

TARIFF COST RECOVERY

PJM recovers its administrative costs through a stated-rate mechanism under the Company's Open Access Transmission Tariff (Tariff). PJM's most recent stated-rate filing was approved by FERC on December 22, 2016, with an effective date of January 1, 2017.

The stated-rate Tariff provided a composite stated rate of 36 cents per megawatt hours (MWh) effective for 2017 and 2018. In 2019, the composite stated rate increased by 2.5 percent. The composite stated rate will continue to increase by 2.5 percent each year on the first day of each of the next four calendar years. The composite stated rate will be 41 cents per MWh effective January 1, 2024, and will remain at that level until PJM submits a superseding rate-change filing.

SIGNIFICANT ACCOUNTING POLICIES

Preparation of the financial statements and related disclosures in compliance with generally accepted accounting principles in the United States requires the application of appropriate technical accounting rules and guidance, as well as the use of estimates. PJM's application of those principles involves judgments regarding many factors, which, in and of themselves, could materially affect the financial statements and disclosures. A future change in the assumptions or judgments applied in determining the following matters, among others, could have a material impact on future financial results: revenue recognition; net presentation of member activity; accounting for deferred recovery of pension and postretirement costs; accounting for deferred regulatory liability; benefit plan accounting; fixed asset capitalization; income tax accounting; and study and interconnection activity.

Net Presentation of Member Activity

The Company has determined that although PJM has flash title to pooled transactions through the wholly owned subsidiary, PJM Settlement, all activity for which PJM Settlement is the central counterparty should be recorded on a net basis. The Company's determination is based on these facts: (1) the member company, not PJM Settlement, is the primary obligor in each transaction; (2) PJM Settlement earns a fixed amount per transaction; and (3) the member company has the credit risk, not PJM Settlement. As such, the Company presents member activity for which PJM Settlement is the central counterparty, including accounts receivable, accounts payable, FTRs, revenue and expense, on a net basis in its consolidated financial statements.

Deferred Recovery of Pension and Postretirement Costs

The Company recognizes the funding status of the projected benefit obligation (PBO) of its defined benefit pension plan and other postretirement employee benefit plan as liabilities in the Consolidated Statements of Financial Position. The PBO represents the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future salary increases. At December 31, 2018, in addition to recording the underfunded PBO as a liability, PJM recorded a regulatory asset to reflect the anticipated future recovery of the amounts expected to be funded in the future through the Company's rate structure. This regulatory asset, which will be amortized each quarter as the net periodic benefit cost of the underfunded liability is recognized, was \$32.9 million and \$30.1 million at December 31, 2019, and 2018, respectively.

Deferred Regulatory Liability

The stated-rate Tariff provides for the accumulation of a financial reserve. PJM is permitted to maintain a reserve as a deferred regulatory liability in an amount up to 6 percent of its annual stated-rate revenues, except that in every third year, the financial reserve must be reduced to 2 percent of annual stated-rate revenues. The amount accumulated under the financial reserve provisions is classified as a non-current liability in the Company's Consolidated Statements of Financial Position. On a quarterly basis, PJM refunds the deferred regulatory liability balance in excess of the permitted financial reserve for the previous quarter. The quarterly refund rate is established after the financial close of each quarter, and refunds are distributed to the members on a prospective basis in the following quarter. During calendar years 2019, 2018 and 2017, PJM made refunds of \$30.7 million, \$13.3 million and \$15.2 million, respectively.

Any under- or over-refund amounts will be reflected in the deferred regulatory liability activity in the following quarter.

For PJM Settlement, the deferred regulatory liability is defined in its rate schedule in the Tariff and is equal to revenues collected in excess of accrual-basis expenses. This balance is refunded quarterly. The quarterly refund rate is established after the financial close of each quarter, and refunds are distributed to the members on a prospective basis in the following quarter. The PJM Settlement rate schedule does not include a financial reserve element.

PJM recognizes deferred regulatory income in the revenue section of the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income for the amount by which service fee revenues pursuant to the rate schedules differ from applicable expenses in the reporting period. The amount by which cumulative revenues under the rate schedules exceed cumulative expenses and refunds is reported as a deferred regulatory liability in the Consolidated Statements of Financial Position. In circumstances in which revenues are less than expenses, PJM reduces the deferred regulatory liability with an offset to deferred regulatory income.

At December 31, 2019, and 2018, the deferred regulatory liability was \$20.0 million and \$24.2 million, respectively. At December 31, 2019, the current portion of the deferred regulatory liability was \$14.0 million, representing PJM and PJM Settlement's expected refunds to members during the first quarter of 2020. At December 31, 2018, the current portion of the deferred regulatory liability was \$6.4 million, which was refunded to members by PJM and PJM Settlement during the first quarter of 2019. The non-current portion of the deferred regulatory liability of \$6.0 million and \$17.8 million represents the amount of PJM's reserve at December 31, 2019, and 2018, respectively. The December 31, 2019, deferred regulatory liability reserve balance reflects the reduction to 2 percent of annual stated-rate revenues as required every third year under PJM's stated-rate Tariff.

Benefit Plan Accounting

PJM accrues the costs of providing future employee benefits in accordance with the guidance of Employers' Accounting for Pensions and Postretirement Benefits Other than Pensions. Under this guidance, assumptions are made regarding the valuation of benefit obligations and performance of plan assets. Delayed recognition of differences between actual results and those assumed is a guiding principle of these standards. This approach allows for a relatively even recognition of the effects of changes in benefit obligations and plan performance over the working lives of the employees who benefit under the plans.

In addition to recognizing the underfunded or overfunded PBO of a defined benefit pension plan as an asset or a liability in the Consolidated Statements of Financial Position, PJM recognizes annual changes in gains or losses, prior service costs or other credits that have otherwise not been recognized as a part of the liability for pension benefits in the Consolidated Statements of Financial Position. A corresponding regulatory asset, deferred pension and postretirement costs, has been recognized in the Consolidated Statements of Financial Position.

PJM's selection of the discount rate, health care cost trend rate and expected rate of return on pension assets is based on its review of available current, historical and projected rates, as applicable.

In selecting the discount rate assumption for the PJM retirement plan at December 31, 2019, the Company used a method that matches projected payouts from the plan with a yield curve that was produced from a universe containing over 500 U.S.-issued Aa-rated corporate bonds, all of which were noncallable (or callable with make-whole provisions), and excluding the 10 percent of the bonds with the highest yields and the 10 percent with the lowest yields. The discount rate was then developed as a level equivalent rate that would produce the same present value as would result using spot rates to discount the projected pension benefit payments. Based on this analysis, the discount rate for the PJM pension plan decreased to 3.65 percent at December 31, 2019. The discount rate for the PJM postretirement health care plan decreased to 3.55 percent as of December 31, 2019. The results during 2018 were derived using a discount rate of 4.30 percent.

In selecting an expected return on plan assets, PJM considers past performance and economic forecasts for the types of investments held by the plans. The assumption for the expected rate of return on assets was 6.40 percent during 2019 and at December 31, 2019. The assumption for the expected rate for which compensation will increase remained at 4.50 percent during 2019 and at December 31, 2019. In selecting health care cost trend rates, PJM considers past performance and forecasts of health care costs. The rate selected at December 31, 2019, for pre-65 plan participants was 5.65 percent, declining to 4.46 percent over the next 18 years. The rate selected at December 31, 2019, for post-65 plan participants was 6.02 percent, declining to 4.45 percent over the next 20 years.

During 2019, PJM expensed net periodic pension and other postretirement benefit costs of \$9.9 million.

Fixed Asset Capitalization

PJM's fixed assets are comprised of principally software and capitalized software development costs, leasehold improvements, computer hardware and buildings. The costs incurred to acquire and develop computer software for internal use, including financing costs, are capitalized. However, costs incurred prior to the determination of feasibility of developed software and costs incurred following the in-service date of developed software are expensed. Fixed assets are depreciated or amortized using the straight-line method over the useful lives of the assets as follows:

Software and capitalized software development costs 3 to 10 years Computer hardware 3 to 5 years Vehicles 5 years Furniture and fixtures 10 years Leasehold improvements 10 to 15 years Buildings 25 years

Income Tax Accounting

PJM has elected to be taxed as a corporation for both federal and state income tax purposes. PJM and its subsidiaries file a consolidated federal income tax return. The consolidated financial statements include prepaid income taxes, accrued income taxes and deferred income taxes. Prepaid income taxes relate to federal and state overpayments on deposit with taxing authorities. These overpayments will be applied to future federal and state income tax liabilities. Deferred income taxes represent the temporary differences between the Company's financial statement basis and tax basis in existing assets and liabilities measured using presently enacted tax rates. A valuation allowance has been provided against certain deferred tax assets for in which management has concluded it is more likely than not the Company will be unable to recognize the income tax benefit associated with those future tax deductions.

Study and Interconnection Activity

Under the Tariff, PJM's transmission provider role is to direct the operation and coordinate the maintenance of the transmission system and indicate, based on studies conducted by PJM, necessary enhancements or modifications to the transmission system. The modifications that are performed on the transmission system, such as network upgrades and generation additions, are conducted principally by third-party vendors at the request of transmission customers. In its system planning capacity as a transmission service provider, PJM provides billing and collection services in the interconnection service agreement process. Billings and collections by PJM for work it performs on behalf of the counterparties to the specific interconnection agreements are reported on a net basis in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income.

RESULTS OF OPERATIONS FOR 2019, 2018, AND 2017

REVENUES

PJM's service fees increased \$10.5 million, or 3 percent, to \$320.4 million from 2018 to 2019. The variance in service fees is principally due to a 2.5 percent increase in the composite stated rate on January 1, 2019, and increased bidding activity under the various PJM auctions. Transmission volumes for 2019 were 823 terawatthours (TWhs) as compared to 836 TWhs for 2018.

PJM's service fees increased \$1.9 million, or 1 percent, to \$309.8 million from 2017 to 2018. Transmission volumes for 2018 were 836 TWhs as compared to 807 TWhs for 2017.

Deferred regulatory income represents the change in PJM's deferred regulatory liability for the period, resulting from PJM's stated-rate Tariff service fees in excess of, or lower than, expenses. For the year ended December 31, 2019, PJM recorded \$26.5 million in deferred regulatory income, a decrease of \$1.1 million from 2018. At December 31, 2018, PJM recorded \$27.6 million in deferred regulatory income, an increase of \$11.4 million from 2017.

Net income is derived from PJM's non-FERC-regulated subsidiaries. Net income was \$1.8 million, \$1.1 million and \$0.4 million for each of the years ended December 31, 2019, 2018 and 2017, respectively.

EXPENSES

Total expenses, excluding FERC fees, study and interconnection services, interest expense, and income taxes, increased \$8.2 million to \$297.0 million in 2019 as compared to an increase of \$3.2 million in 2018. The increase in expenses in 2019 resulted primarily from an increase in compensation expenses due to incremental costs associated with employee retirements that were one-time in nature. Expenses also increased due to higher outside services, including increased Board of Managers and consulting expenses that were one-time in nature. The increase period over period was offset by a decrease in depreciation and amortization, primarily due to a lower fixed asset balance period over period and a reduction in other expenses including travel, meals and training expense.

Total expenses, excluding FERC fees, study and interconnection services, interest expense, and income taxes, increased \$3.2 million to \$288.7 million in 2018 as compared with an increase of \$7.7 million in 2017. The increase in expenses in 2018 resulted primarily from an increase in compensation expenses due to increased headcount resulting from targeted contractor conversions to employees and increased software subscription costs and cloud storage services.

For each of the years ended December 31, 2019, 2018 and 2017, outside services included amounts paid to PJM's independent auditor, PricewaterhouseCoopers LLP, totaling \$1.0 million, which were predominantly for audits of the PJM Consolidated Financial Statements and examination of certain internal controls related to PJM's market settlements and associated information technology systems and processes.

Key information systems, system enhancements and capital investments completed by PJM in 2019 include:

- Market System Enhancements: Enhancing capacity markets, demand response, market coordination, and Real-Time Markets
- Operations and Planning System Enhancements: Enhancing operations and planning applications, including the energy management system, dispatch interactive map application, forecasting applications, dispatcher tools and interconnection database and planning applications
- Technology Infrastructure and Visualization: Upgrading firewalls, servers, storage, network and telecommunications
- Facilities Infrastructure: Replacing backup generators and computer room cooling system
- Information Technology: Expanding the data tool for providing PJM members with markets and operations information and replatforming the OASIS application
- Access Management: Automating, modifying, and enhancing PJM's applications used to monitor and grant user access to system and facilities ensuring PJM meets compliance requirements

BILLINGS FOR SERVICES

PJM had approximately 1,047 members at December 31, 2019, as compared with approximately 1,018 members at December 31, 2018. The billings presented below are administered on behalf of the members; however, the associated receivables and payables are presented net in PJM's Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income. The only billings included in PJM's consolidated financial statements are PJM Scheduling, System Control and Dispatch, PJM Settlement and FERC annual charge recovery. For 2019, 2018 and 2017, settlements processed by PJM under the Tariff, Operating Agreement and Reliability Assurance Agreement, which is a non-GAAP measure, were as follows:

(\$ in millions)	2019 Amount Billed	2018 Amount Billed	2017 Amount Billed
Energy markets	\$ 18,825	\$ 27,645	\$ 21,087
Capacity	8,989	10,634	9,103
Network transmission service	5,528	4,745	4,680
Transmission enhancement	1,281	1,494	1,500
FTR auction revenues	1,281	1,000	904
Transmission congestion	1,449	1,714	757
Transmission losses (point-to-point)	751	1,034	849
Reactive supply	311	319	309
PJM scheduling, system control and dispatch (operating expense reimbursement, net of stated-rate refunds)	290	297	293
Regulation market	91	146	104
Operating reserves	79	153	68
Point-to-point transmission service	77	61	49
Member default allocation assessments	74	70	_
RTO scheduling, system control and dispatch (transmission owners' control center expenses)	68	74	73
Black start service	65	65	72
FERC annual charge recovery	63	64	61
Distribution facilities	63	51	46
Synchronized reserve market	44	65	49
Day-ahead scheduling reserve market	18	37	34
Generation deactivation	17	41	21
ReliabilityFirst Corporation (RFC)	16	15	15
Miscellaneous	12	12	7
North American Electric Reliability Corporation (NERC)	11	10	9
Monitering Analytics, LLC	10	10	12
PJM Settlement	9	7	7
MIso Transmission Expansion Planning (MTEP) cost recovery	7	8	9
Inadvertent interchange	2	5	7
Load response program	2	3	3
Expansion cost recovery and RTO startup cost recovery	2	2	2
Reactive services	1	13	20
Organization of PJM States, Inc. (OPSI) fees	1	1	1
Consumer Advocates of PJM States, Inc. (CAPS) fees	_	-	-
Seams elimination cost assignment	_	-	21
Total	\$ 39,203	\$ 49,795	\$ 40,172

LIQUIDITY AND CAPITAL RESOURCES

The stated-rate Tariff provided a composite stated rate of 36 cents per MWh effective for 2017 and 2018. In 2019, the composite stated rate increased by 2.5 percent. At December 31, 2019, the accumulated financial reserve was \$19.9 million. PJM is projected to refund approximately \$15 to \$20 million to members during 2020, which would result in a projected accumulated financial reserve balance of approximately \$18 million at December 31, 2020.

In the event PJM's actual expenses are projected to exceed its revenues and financial reserve, PJM is empowered to and would need to file a rate case with FERC.

PJM maintains with PNC Bank (PNC) a FERC-approved revolving line of credit agreement with a capacity amount of \$150 million. On November 12, 2019, PJM filed with FERC requesting approval to continue to borrow under this facility, which would otherwise have expired on January 31, 2020. PJM received approval from FERC on January 13, 2020, to continue to borrow under this facility through January 31, 2022. On January 24, 2020, the extension term of the facility was executed with PNC. The revolving line of credit is unsecured and available to fund short-term cash obligations. At December 31, 2019, there were no outstanding borrowings under the revolving credit agreement.

On June 28, 2018, FERC approved PJM's application to refinance the Company's existing bank loan with a new term loan at Bank of America (BoA). On July 20, 2018, PJM entered into a \$20.2 million loan agreement with BoA. The BoA term loan has a seven-year term and is unsecured. At December 31, 2019, the outstanding borrowings under the term loan were \$16.6 million. PJM is expected to make \$2.9 million of principal payments during 2020.

Under the loan covenants for each facility, PJM is required to provide unaudited financial statements 45 days after each quarter and audited financial statements 120 days after year-end. PJM is in compliance with these covenants.

At December 31, 2019, PJM and PJM Settlement were assigned an Aa2 issuer rating by Moody's Investors Service.

For study and interconnection work performed, PJM obtains liquid collateral from the transmission customer for the estimated costs of the transmission system modifications. PJM's study and interconnection receivables are comprised of billings to transmission customers for services performed under these interconnection service agreements. PJM's study and interconnection payables represent amounts due to the transmission owners for services performed under these interconnection service agreements. PJM held deposits related to study and interconnection activity totaling \$159.3 million and \$105.5 million at December 31, 2019, and 2018, respectively.

PJM Settlement requires deposits from various parties in connection with services to be performed or as collateral for market activity. PJM Settlement held credit deposits of \$1,438.6 million and \$1,395.3 million at December 31, 2019, and 2018, respectively. These deposits are maintained in separate cash accounts that are not legally restricted. At December 31, 2019, PJM Settlement also held approximately \$2.1 billion in letters of credit as collateral for market activity.

For 2020, PJM's Board of Managers has approved a capital budget of \$40 million. These capital expenditures will be used for application replacements, system reliability applications, new products and services for PJM's membership, risk management and interregional coordination. Actual expenditures may differ from these amounts as PJM continues to assess its capital needs.

RISKS AND UNCERTAINTIES

PJM does not provide forecasts of future financial performance. While PJM management is optimistic about the Company's long-term prospects, the following issues and uncertainties, among others, should be considered in evaluating its outlook.

CONTINGENCIES AND RECENT REGULATORY ACTIONS

Third-Party Relationships

PJM engages third parties as suppliers in arrangements to provide services in areas other than core competencies to ensure the service and support of members and timely product development. Although PJM seeks to establish strong working relationships with parties that share PJM's industry goals and have adequate resources to fulfill their responsibilities, these relationships lead to a number of risks. These suppliers may suffer financial or operational difficulties that may affect their performance, which could lead to delays in product development or timely completion of projects. Also, major companies from which PJM purchases components or services may be competitors in other areas, which could affect pricing, new product development or future performance. Finally, difficulties in coordinating activities may lead to gaps in delivery and performance of PJM services.

Credit Risks

PJM bills and collects its operating expenses monthly from its members. Payment of all operating expense bills is due from PJM's members three business days after the month-end bill is issued by PJM, generally within the first two weeks of each month. During 2019, approximately 55 percent of PJM's operating expenses were billed to 19 of its members, each of which either has an investment-grade credit rating according to at least one of the three major rating services or has provided a guaranty from an affiliate with an investment-grade rating. PJM had approximately 1,047 members at year-end 2019. In the event of a default of any PJM members, PJM has the right to bill the remaining PJM members a ratable portion of the operating expenses previously billed to the defaulting member.

In accordance with PJM's credit policy, PJM obtains collateral from certain members in order to secure their credit positions. The collateral can be in the form of a cash deposit or letter of credit. Corporate guaranties are also accepted from creditworthy affiliates to fulfill certain credit requirements.

PJM implemented significant FTR credit policy enhancements during 2018 and 2019, including FERC-approved adoption of mark-to-auction provisions in April 2019. Mark-to-auction provides a valuation of the cleared FTR portfolio based on the most recent auction prices and also takes into consideration the value of auction revenue right entitlements allocated to firm transmission service customers. The value of FTRs as of December 31, 2019, under a mark-to-auction model was \$401.0 million.

Other Items

Marginal Line Loss Surplus Payment Reallocation

In July 2012, 14 member companies defaulted on payment obligations totaling approximately \$28 million, net of collateral held by PJM. These obligations resulted from a FERC-ordered reallocation of marginal line loss payments. PJM Settlement filed two civil complaints in the state of Delaware alleging breach of contract against the former members.

Following additional proceedings at FERC and initiation of appellate proceedings, in November 2016, FERC filed an unopposed motion to remand the proceeding to FERC. On June 20, 2019, FERC issued an Order on Voluntary Remand and Granting Rehearing (June 20 Remand Order) finding that the previously ordered allocation was appropriate and reversing its prior reallocation determinations. As a result, PJM was directed to pay additional refunds of marginal line loss payments to financial marketers, including the 14 member companies that had defaulted, effectively mooting the above-referenced complaints.

Credit Matter

On June 21, 2018, GreenHat Energy, LLC defaulted on its obligations related to its FTR portfolio, which included positions applicable to the then-current planning year as well as the 2019–2020 and 2020–2021 planning years. In January 2019, FERC denied PJM's waiver requesting to only offer the August 2018 defaulted FTRs for liquidation in the FTR auction conducted in July 2018. In June 2019, FERC issued an order on clarification and set the matter for paper hearing and settlement judge procedures.

The parties submitted a settlement with FERC on October 9, 2019, that resolves all issues in this proceeding and avoids the resettlement of the stopped liquidation auction. FERC accepted the settlement by order dated December 30, 2019. The settlement provides for payment of \$17.5 million that will be allocated to members as part of the default allocation. The aggregate payment default of this member, net of collateral held, will be billed to the non-defaulting members in accordance with the default allocation assessment formula in the Operating Agreement.

Old Dominion Electric Cooperative v. PJM 2014 Polar Vortex Complaint

On February 22, 2019, Old Dominion Electric Cooperative (ODEC) filed an amended complaint (Amended Complaint) against PJM in Circuit Court for Henrico County, Virginia, alleging PJM committed ODEC to purchase natural-gas during the 2014 Polar Vortex event in which temperatures fell to unprecedented levels, and ODEC should be made whole for its gas costs incurred with outstanding amounts of \$15 million. ODEC had previously attempted and failed to recover the same exact costs through a waiver petition filed before FERC in June 2014.

On April 3, 2019, PJM removed the Amended Complaint to the United States District Court for the Eastern District of Virginia (District Court) because ODEC's civil action arises under federal law, namely the Federal Power Act, the PJM Tariff, the PJM Operating Agreement and related federal doctrines. PJM also filed a motion to dismiss, which remains pending.

This matter remains pending before the District Court. PJM does not view ODEC's claims as meritorious or probable.

Radford's Run Complaint

On November 15, 2018, FERC issued an order (Order) granting in part a complaint filed by Radford's Run Wind Farm, LLC (Radford) against PJM. Radford filed the complaint on June 26, 2018 (Complaint). In the Complaint, Radford alleged that it is entitled to 279 MW of Incremental Capacity Transfer Rights (ICTR) because Radford funded a network upgrade that improved a transmission constraint.

In the Order, FERC granted the Complaint in part because FERC found that "PJM did not comply with its Tariff," which provides that PJM must determine in the System Impact Study whether a customer is entitled to any ICTR resulting from a Customer-Funded Upgrade that it has. Because FERC was not able to determine based on the record if Radford should have been awarded ICTR if PJM had followed its Tariff, FERC established paper hearing procedures for PJM to assess whether Radford's upgrades increased the Capacity Emergency Transfer Limit of a Locational Deliverability Area, and thus is eligible for ICTR. There is no monetary claim for damages stated in the Complaint.

TranSource Matter

On June 23, 2015, TranSource, LLC (TranSource) filed a complaint (Complaint) against PJM with FERC. In the Complaint, TranSource asked FERC to order PJM to provide Incremental Auction Revenue Rights (IARR) associated with its proposed transmission upgrade.

Following an evidentiary hearing in January 2018, a FERC Administrative Law Judge issued an initial decision in which, among other things, TranSource was granted limited relief, ordering PJM to restore TranSource's original queue position and refund the \$0.15 million paid by TranSource for the study of its upgrade request. All other requests for relief were denied. On August 26, 2019, FERC issued an order affirming in part and denying in part the initial decision. On October 25, 2019, FERC issued an order rejecting TranSource's attempted request for rehearing. No appeal was filed by TranSource.

Separate from the Complaint pending before FERC, TranSource had commenced a civil action against PJM and four PJM transmission owners in the Montgomery County Pennsylvania Court of Common Pleas. This action was removed to Federal District Court. On January 7, 2020, the district court issued an order dismissing the civil action with prejudice. Therefore, all litigation related to this matter is concluded.

REPAR

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The management of PJM Interconnection, L.L.C. is responsible for the preparation and objectivity of the following consolidated financial statements and for their integrity. These financial statements have been prepared to conform to accounting principles generally accepted in the United States of America and, where required, include amounts that represent management's best judgments and estimates. PJM's management is responsible for the preparation of other information in this annual report and for its accuracy and consistency with the financial statements.

PJM has established a system of internal accounting and financial controls and procedures designed to provide reasonable assurance as to the integrity and reliability of financial reporting. Management continually reviews the effectiveness and efficiency of this system, and takes actions when opportunities for improvement are identified.

This system includes a separate Internal Audit Department, which monitors internal controls and reports directly to the Risk and Audit Committee of the Board of Managers. Management views the purpose of internal auditing to be an independent examination and assessment of PJM's activities related to compliance with policy, procedures and the law, as well as safeguarding of assets. The Risk and Audit Committee meets with management, internal auditors and the independent auditors on a regular basis to review financial information, risk and internal controls and the internal audit process.

PJM's independent auditors, PricewaterhouseCoopers LLP, are engaged to conduct an independent audit of PJM's consolidated financial statements in accordance with generally accepted auditing standards promulgated by the American Institute of Certified Public Accountants.

Manu Asthana

President and Chief Executive Officer

Lisa Drauschak

Vice President, Chief Financial Officer and Treasurer

Show M. Drougel

REPORT OF INDEPENDENT AUDITORS

To Management and the Board of Managers of PJM Interconnection, L.L.C.:

We have audited the accompanying consolidated financial statements of PJM Interconnection, L.L.C. and its subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income and paid-in capital, retained earnings and accumulated other comprehensive income, and of cash flows for each of the three years in the period ended December 31, 2019.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of PJM Interconnection, L.L.C. and its subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2019, in accordance with accounting principles generally accepted in the United States of America.

Philadelphia, Pennsylvania March 6, 2020

Pricewaterhouse Coopers LLP

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

Operating cash 51,629 362,285 Receivables 51,90 39,994 Study and interconnection receivables 17,334 9,457 Prepaid income taxes 10,864 9,248 Prepaid expenses and other 10,864 9,328 Non-current assets: 1,736,534 1,925,820 Fixed assets, net of accumulated depreciation and amortization 98,790 97,551 Land 1,420 9,420 Projects in development 98,790 97,551 Land 1,420 1,420 Projects in development 98,790 97,551 Land 1,420 1,420 Prepaid expenses and other 38,351 30,047 Prepaid expenses and other 29,293 20,431 Note receivable 1,251 4,651 Other 2,300 2,250 Expendition as a second of valuation allowance 3,264 2,230 Land 1,252 4,54 Note receivable 1,252 4,54 Note receivable 1,252<	(\$ in thousands)	2019	2018
Deposits on hand	Assets		
Non-current assets: Fixed assets, net of accumulated depreciation and amortization	Deposits on hand Operating cash Receivables Study and interconnection receivables Prepaid income taxes Prepaid expenses and other	\$ 51,629 57,190 17,334 16 10,864	\$ 1,500,794 362,285 39,694 9,457 2,481 9,323 1,786
Fixed assets, net of accumulated depreciation and amortization of \$712,61 and \$675,440 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,420 1,4		1,736,534	1,925,820
Total assets \$ 1,967,144 \$ 2,139,666 Liabilities, paid-in capital, retained earnings and accumulated other comprehensive (loss) income Current liabilities. \$ 37,748 \$ 33,962 Accounts payable and accrued expenses \$ 102,498 404,980 Study and interconnection payables 17,902 9,247 Accrued income taxes 1,361 - Current portion of long-term debt 2,886 2,886 Current portion of capital lease 1,781 1,707 Deferred FERC fees 1,268 20 Deferred revenue 3,508 3,444 Postretirement health care benefits liability 1,439 1,327 Other employee benefits 3,044 227 Deposits 1,597,884 1,500,794 Non-current liabilities: 1,823,790 1,993,349 Long-term debt 13,285 15,067 Deferred regulatory liability 6,032 17,843 Interest rate swap 6,032 17,843 Pension benefits liability 20,036 15,415 Other employee bene	Fixed assets, net of accumulated depreciation and amortization of \$712,616 and \$675,440 Land Projects in development Deferred recovery of pension and postretirement costs Deferred income taxes, net of valuation allowance Prepaid expenses and other Note receivable	1,420 38,351 32,996 29,293 2,735 1,521	97,551 1,420 35,047 30,092 26,431 455 550 22,300
Liabilities, paid-in capital, retained earnings and accumulated other comprehensive (loss) income Current liabilities: \$ 37,748 \$ 33,962 Accounts payable and accrued expenses \$ 102,498 404,980 Study and interconnection payables 17,902 9,247 Accrued payroll and benefits 38,455 28,383 Accrued income taxes 1,361 - Current portion of long-term debt 2,886 2,886 Current portion of capital lease 1,781 1,701 Deferred regulatory liability 14,016 6,333 Deferred regulatory liability 1,268 20 Deferred repulatory liability 1,358 3,443 Postretirement health care benefits liability 3,508 3,443 Postretirement health care benefits liability 1,597,884 1,500,794 Non-current liabilities: 13,707 16,593 Long-term capital lease 13,285 15,067 Deferred regulatory liability 6,032 17,843 Interest rate swap 648 325 Pension benefits liability 50,175		230,610	213,846
Current liabilities: \$ 37,748 \$ 33,962 Accounts payable and accrued expenses \$ 102,498 404,980 Due to members \$ 102,498 404,980 Study and interconnection payables \$ 17,902 9,247 Accrued payroll and benefits 38,455 28,383 Accrued income taxes \$ 1,361 \$ - Current portion of long-term debt 2,886 2,886 Current portion of capital lease 1,781 1,701 Deferred regulatory liability 14,016 6,393 Deferred regulatory liability 1,268 20 Deferred revenue 3,508 3,443 Postretirement health care benefits liability 1,439 1,327 Other employee benefits 3,044 227 Deposits 1,597,884 1,500,794 Non-current liabilities: 1,823,790 1,993,349 Long-term debt 13,707 16,593 Long-term debt 13,205 15,067 Deferred regulatory liability 6,032 17,843 Interest rate swap 648<	Total assets	\$ 1,967,144	\$ 2,139,666
Long-term debt 13,707 16,593 Long-term capital lease 13,285 15,067 Deferred regulatory liability 6,032 17,843 Interest rate swap 648 325 Pension benefits liability 20,036 15,415 Postretirement health care benefits liability 50,175 43,459 Other employee benefits 28,637 27,646 Total liabilities 1,956,310 2,129,697 Commitments and contingencies (Note 12) 722 722 Paid-in capital 722 722 Retained earnings 10,129 8,286 Accumulated other comprehensive (loss) income (17) 961 Total paid-in capital, retained earnings and accumulated other comprehensive (loss) income 10,834 9,969	Current liabilities: Accounts payable and accrued expenses Due to members Study and interconnection payables Accrued payroll and benefits Accrued income taxes Current portion of long-term debt Current portion of capital lease Deferred regulatory liability Deferred FERC fees Deferred revenue Postretirement health care benefits liability Other employee benefits	\$ 102,498 17,902 38,455 1,361 2,886 1,781 14,016 1,268 3,508 1,439 3,044 1,597,884	\$ 33,962 404,980 9,247 28,383 - 2,886 1,707 6,393 20 3,443 1,327 227 1,500,794 1,993,349
Commitments and contingencies (Note 12) Paid-in capital 722 722 Retained earnings 10,129 8,286 Accumulated other comprehensive (loss) income (17) 961 Total paid-in capital, retained earnings and accumulated other comprehensive (loss) income 10,834 9,969	Long-term debt Long-term capital lease Deferred regulatory liability Interest rate swap Pension benefits liability Postretirement health care benefits liability Other employee benefits	13,285 6,032 648 20,036 50,175 28,637	16,593 15,067 17,843 325 15,415 43,459 27,646
Paid-in capital 722 722 Retained earnings 10,129 8,286 Accumulated other comprehensive (loss) income (17) 961 Total paid-in capital, retained earnings and accumulated other comprehensive (loss) income 10,834 9,969		1,956,310	 2,129,697
	Paid-in capital Retained earnings	10,129	722 8,286 961
Total liabilities, paid-in capital, retained earnings and accumulated other comprehensive (loss) income \$ 1,967,144 \$ 2,139,666	Total paid-in capital, retained earnings and accumulated other comprehensive (loss) income	10,834	9,969
	Total liabilities, paid-in capital, retained earnings and accumulated other comprehensive (loss) income	\$ 1,967,144	\$ 2,139,666

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF INCOME, COMPREHENSIVE INCOME AND PAID-IN CAPITAL, RETAINED EARNINGS AND ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME

(\$ in thousands)	2019		2018	2017
Income				
Operating revenue: Service fees	\$ 320,410	\$	309,864	\$ 307,963
Deferred regulatory income	(26,510)	•	(27,563)	(15,847)
FERC fees reimbursement	62,395		63,972	63,502
Study and interconnection fees	4,323		3,998	3,869
Membership fees	3,602		3,688	3,460
Other	 4,523		5,288	3,211
Total operating revenue	368,743		359,247	 366,158
Operating expenses:				
Compensation	150,043		137,167	135,402
FERC fees	62,395		63,972	63,502
Outside services	59,932		54,993	56,157
Depreciation and amortization	37,192		45,730	45,708
Software licenses and fees	19,466		19,222	16,699
Other expenses	10,243		13,357	10,170
Pension benefits – service cost	9,924		11,321	9,482
Computer maintenance and office supplies	8,233		6,978	9,181
Study and interconnection services	4,323		3,998	3,869
Lease expenses	1,959		1,916	2,169
Postretirement health care benefits – service cost	1,493		1,694	1,543
Total operating expenses	365,203		360,348	353,882
Operating income (loss)	 3,540		(1,101)	 12,276
Other income:				
Interest income	33,123		16,552	5,422
Interest expense	34,329		16,699	5,729
Pension and postretirement health care benefits –	,-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
other components of net benefit cost	(1,468)		(3,530)	(964)
Total other income	262		3,383	657
Income before income taxes	3,802		2,282	12,933
Income tax expense	1,959		1,193	12,533
·	 ·		,	
Net income	\$ 1,843	\$	1,089	\$ 362
Other comprehensive income: Unrealized (loss) gain on securities, net	(978)		290	129
Comprehensive income, net	\$ 865	\$	1,379	\$ 491
Paid-in capital, retained earnings and accumulated other comprehensive (loss) income				
Beginning balance	\$ 9,969	\$	8,590	\$ 8,099
Net income	1,843		1,089	362
Other comprehensive (loss) income	(978)		290	129
Ending balance	\$ 10,834	\$	9,969	\$ 8,590

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(\$ in thousands)		2019		2018		2017
Cash flows from operating activities:						
Net income	\$	1,843	\$	1,089	\$	362
Adjustments:						
Depreciation and amortization expense		37,192		45,730		45,708
Deferred income taxes, net of valuation allowance		(2,862)		(3,785)		23,419
Deferred recovery of pension and postretirement costs		(2,904)		8,525		(23,572)
Deferred regulatory liability		26,497		27,579		15,846
Employee benefit expense greater than (less than) funding		15,257		(51,710)		24,381
Net fair value changes related to interest rate swap		323		(215)		(480)
Changes in assets and liabilities:						
Increase (decrease) in receivables		(17,496)		54,121		(54,471)
Increase (decrease) in study and interconnection receivables		(7,877)		(2,392)		9,012
Increase (decrease) in prepaid expenses and other		(9,711)		1,090		(8,097)
Decrease (increase) in deferred FERC fees				2,229		(156)
Decrease (increase) in prepaid income taxes		2,465		15,487		(16,554)
Increase (decrease) in accounts payable and accrued expenses		3,198		3,271		(1,125)
Increase in accrued income taxes		1,361		2 112		(0.002)
Increase (decrease) in study and interconnection payables		8,655		2,113		(8,883)
Increase (decrease) in accrued payroll and benefits		10,072		(2,123)		4,101
Increase in deferred FERC fee liability Increase in deferred revenue		1,268 65		_ 56		169
Refunds to members						
		(30,685)		(13,252)		(15,239)
Net cash provided by (used in) operating activities		36,661		87,813		(5,579)
Cook flows (word in) investing activities						
Cash flows (used in) investing activities:		(41 147)		(41.012)		(20.204)
Cost of projects in development Note receivable		(41,147)		(41,013)		(38,324)
Note receivable		(802)		847		1,725
Net cash (used in) investing activities		(41,949)		(40,166)		(36,599)
Cash flows from financing activities:						
Borrowings under line of credit		498,557		452,855		734,313
Repayments under line of credit		(498,557)		(452,855)		(734,313)
Borrowings of long-term debt		(133,037)		20,200		(, 0 .,010,
Repayments of long-term debt		(2,886)		(21,467)		(1,317)
(Decrease) increase in due to members		(302,482)		7,584		(40,909)
Increase (decrease) in deposits		97,090		42,050		(42,906)
Net cash (used in) provided by financing activities		(208,278)		48,367		(85,132)
Net (decrease) increase in cash and cash equivalents		(213,566)		96,014		(127,310)
Cash and cash equivalents balance (including customer deposits), beginning of year		1,863,079		1,767,065		1,894,375
Cook and and annivelents belong (including systems describe) and of the	Φ.	1.C40.E12	φ.	1.062.070	ф.	1 707 005
Cash and cash equivalents balance (including customer deposits), end of year	\$	1,649,513	\$	1,863,079	\$	1,767,065
Cash paid during the year for:						
Interest	\$	787	\$	790	\$	882
Income taxes	Ψ	784	*	3,635	Ψ	6,900
Noncash activity:		, 0 +		5,000		5,500
Projects in development additions included in ending accounts payable						
and accrued expenses	\$	588	\$	1,494	\$	(109)
and doordod oxponoco	Ψ	330	Ψ	1,-5-	Ψ	(103)

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2019

(\$ in tables in thousands, unless otherwise noted)

1. COMPANY OVERVIEW

Background

PJM Interconnection, L.L.C. (PJM or the Company) is a Regional Transmission Organization (RTO) responsible for the operation of wholesale electric markets and for centrally dispatching electric systems in the PJM region. PJM's services and the markets PJM operates are subject to regulation by the Federal Energy Regulatory Commission (FERC).

PJM is a limited liability, non-stock company incorporated in the state of Delaware. PJM's Board of Managers is constituted as an independent body, and PJM operates independently from its members.

Nature of Operations

The Company currently coordinates a pooled generating capacity of more than 186,788 megawatts (MW) and operates wholesale electricity markets with approximately 1,047 members. PJM enables the delivery of electric power to more than 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

PJM manages a sophisticated regional planning process for generation and transmission expansion to ensure continued reliability of the electric system. Using information technology, PJM provides real-time information to market participants to support their daily transactions and business decision-making. In addition to ensuring the reliable supply of electricity, PJM administers internet-based bid markets in which participants buy and sell day-ahead and spot-market energy, Financial Transmission Rights (FTRs), synchronized reserves and regulation services.

PJM Settlement, Inc. (PJM Settlement) is a wholly owned subsidiary of PJM, organized as a Pennsylvania nonprofit corporation, and is a FERC-regulated entity. PJM Settlement was formed to handle all of the credit, billing and settlement functions for PJM's members' transactions in the PJM markets and for transmission service. PJM Settlement acts as a counterparty to members' pool transactions in the PJM markets. For the pool transactions in the PJM markets, flash title passes through PJM Settlement immediately prior to passing to the ultimate buyer and seller of the product. This arrangement reinforces PJM's authority to continue to net a member's offsetting financial positions in PJM markets for credit and billing purposes, provides clarity in PJM Settlement's legal standing to pursue collection from a bankrupt member, and complies with FERC's recommendation on credit policy requirements for competitive wholesale electricity markets.

PJM Connext, L.L.C (PJM Connext) is a wholly owned subsidiary of PJM and is not a FERC-regulated entity. PJM Connext was formed to provide service and technology solutions to existing and emerging energy markets, system operators, RTOs and other entities.

PJM Technologies, Inc. (PJM Tech) is a wholly owned subsidiary of PJM Connext and is not a FERC-regulated entity. PJM Tech provides international consulting services including training, program planning and implementation advice regarding development of wholesale electric market design and market rules.

PJM Environmental Services, Inc. (PJM EIS) is a wholly owned subsidiary of PJM Connext formed to provide environmental and emissions attributes reporting and tracking services to its subscribers in support of renewable portfolio standards and other disclosure requirements that may be implemented by governmental agencies. PJM EIS is not a FERC-regulated entity.

Tariff Cost Recovery

PJM recovers its administrative costs through a stated-rate mechanism under the Company's Open Access Transmission Tariff (Tariff). PJM's most recent stated-rate filing was approved by FERC on December 22, 2016, with an effective date of January 1, 2017.

The stated-rate Tariff provided a composite stated rate of 36 cents per MWh effective for 2017 and 2018. In 2019, the composite stated rate increased by 2.5 percent. The composite stated rate will continue to increase by 2.5 percent each year on the first day of each of the next four calendar years. The composite stated rate will be 41 cents per megawatt hours (MWh) effective January 1, 2024, and will remain at that level until PJM submits a superseding rate-change filing.

PJM Settlement recovers its administrative costs under a separate schedule under the Tariff.

Summary of Service Fees

Total service fees	\$ 320,410	\$ 309,864	\$ 307,963
PJM Settlement revenues	8,822	6,520	6,851
PJM stated-rate revenues	\$ 311,588	\$ 303,344	\$ 301,112
	2019	2018	2017

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND SELECTED FINANCIAL INFORMATION

Accounting Standards Not Yet Adopted

Leases

In February 2016, the Financial Accounting Standard Board (FASB) issued new guidance related to lease accounting. The key objective of the new standard is to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). For income statement purposes, a dual model has been retained, with leases to be designated as operating leases or finance leases. Expenses will be recognized on a straight-line basis for operating leases and a front-loaded basis for finance leases. The new standard is effective for periods beginning after December 15, 2019, with early adoption permitted. The new standard can be adopted using a modified retrospective transition and provides for certain practical expedients. The Company is currently evaluating the effect of the new standard on the Company's Consolidated Statements of Financial Position; Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income; and Consolidated Statements of Cash Flows.

Recently Adopted Accounting Standards

Revenue Recognition

In May 2014, the FASB issued authoritative guidance to provide a single, comprehensive revenue recognition model for contracts with customers. The guidance contains principles that the Company applied to determine the measurement and timing of revenue recognition. The guidance was adopted by PJM on January 1, 2019, utilizing the modified retrospective approach whereby prior periods have not been restated.

The Company has reviewed its revenue recognition policies to ensure compliance with the requirements of the guidance and has determined adoption did not have a material impact on current revenue recognition policies. Under the standard, PJM is required to provide more comprehensive revenue disclosures to allow financial statement users to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Adoption of the requirements of this guidance did not materially affect the Company's Statements of Financial Position; Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income; and Consolidated Statements of Cash Flows.

Pension and Other Postretirement Benefits

In March 2017, the FASB amended its authoritative guidance on the presentation of net periodic pension and postretirement benefit cost. The guidance requires the service cost component of net periodic benefit cost to be presented separately from the other components of net periodic benefit cost in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income. The guidance also provides that only the service cost component of pension and other postretirement benefit cost is eligible for capitalization. PJM adopted this standard on January 1, 2019, and utilized prior-year pension and other postretirement benefit plan footnote disclosures to apply retrospective income statement presentation requirements. Adoption of the requirements of this guidance did not materially affect the Company's Consolidated Statements of Financial Position: Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income; and Consolidated Statements of Cash Flows.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB amended its authoritative guidance related to the classification and measurement of financial instruments. The guidance revises an entity's accounting related to the classification and measurement of investments in equity securities and the presentation of certain fair value changes for financial liabilities measured at fair value. The guidance also amends certain disclosure requirements associated with the fair value of financial instruments. PJM adopted this standard on January 1, 2019, with no material impact on the Company's Consolidated Statements of Financial Position; Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income; and Consolidated Statements of Cash Flows.

Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared on an accrual basis in accordance with generally accepted accounting principles in the United States of America (GAAP) and include the accounts of PJM Interconnection, L.L.C. and its wholly owned subsidiaries (collectively referred to herein as PJM or the Company). All intercompany transactions and balances have been eliminated.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures. The following accounting policies are particularly important to PJM's financial position or results of operations, and some require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. These estimates are based on management's best knowledge of current events and actions the Company may undertake in the future. Certain reclassifications have been made to conform previously reported data to the current presentation.

Net Presentation of Member Activity

The Company has determined that although PJM has flash title to pooled transactions through its wholly owned subsidiary PJM Settlement, all activity for which PJM Settlement is the central counterparty should be recorded on a net basis. The Company's determination is based on these facts: (1) the member company, not PJM Settlement, is the primary obligor in each transaction; (2) PJM Settlement earns a fixed amount per transaction; and (3) the member company has the credit risk, not PJM Settlement. As such, the Company presents member activity for which PJM Settlement is the central counterparty, including accounts receivable, accounts payable, FTRs, revenue and expense, on a net basis in its consolidated financial statements.

Lease Transactions

The Company accounts for lease transactions as either capital leases or operating leases, depending on the terms of the underlying lease agreements.

Assets leased under a capital lease are recorded at cost, which is the net present value of the future lease payments. Such assets are included in fixed assets in the Company's Consolidated Statements of Financial Position and depreciated using the straight-line method over the shorter of the lease term or estimated useful lives. The aggregate lease payments are recorded as a capital lease obligation, net of interest charges as determined by the excess of lease payments over the cost of the leased asset. This implicit interest cost is charged to expense over the lease term using the effective interest rate method.

The lease payments under an operating lease are recognized as current expenses on an accrual basis over the term of the lease agreement.

Study and Interconnection Activity

Under the Tariff, PJM's transmission provider role is to direct the operation and coordinate the maintenance of the transmission system and indicate, based on studies conducted by PJM, necessary enhancements or modifications to the transmission system. The modifications that are performed on the transmission system, such as network upgrades and generation additions, are conducted principally by third-party vendors at the request of transmission customers. In its system planning capacity as a transmission service provider, PJM provides billing and collection services in the interconnection service agreement process. Billings and collections by PJM for work it performs on behalf of the counterparties to the specific interconnection agreements are reported on a net basis in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income.

Cash Equivalents

Highly liquid investments with maturities of three months or less when purchased are considered cash equivalents.

Concentration of Credit Risk

Financial instruments that subject PJM to credit risk consist primarily of accounts receivable relating to monthly service fee billings. As provided in PJM's Operating Agreement, members are required either to maintain approved credit ratings or to post specified financial security to obtain credit within the PJM markets. During 2019, approximately 55 percent of PJM's operating expenses were billed to 19 of its members, each of which either has an investment-grade credit rating according to at least one of the three major rating services or has provided a guaranty from an affiliate with an investment-grade rating. PJM had approximately 1,047 members at year-end 2019.

Under the terms of the PJM Operating Agreement, any payment defaults may be billed to and collected from PJM's other member companies.

Fixed Asset Capitalization

PJM's fixed assets are comprised of principally of software and capitalized software development costs, leasehold improvements, computer hardware and buildings. The costs incurred to acquire and develop computer software for internal use, including financing costs, are capitalized. However, costs incurred prior to the determination of feasibility of developed software and costs incurred following the in-service date of developed software are expensed. Fixed assets are depreciated or amortized using the straight-line method over the useful lives of the assets as follows:

Software and capitalized software development costs 3 to 10 years Computer hardware 3 to 5 years Vehicles 5 years Furniture and fixtures 10 years Building and leasehold improvements 10 to 15 years Buildings 25 years

Deferred Recovery of Pension and Postretirement Costs

The Company recognizes the funding status of the projected benefit obligation (PBO) of its defined benefit pension plan and other postretirement employee benefit plan as liabilities in the Consolidated Statements of Financial Position. The PBO represents the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future salary increases. At December 31, 2019, in addition to recording the underfunded PBO as a liability, PJM recorded a regulatory asset to reflect the anticipated future recovery of the amounts expected to be funded in the future through the Company's rate structure. This regulatory asset, which will be amortized each quarter as the net periodic benefit cost of the underfunded liability is recognized, was \$32.9 million and \$30.1 million at December 31, 2019, and 2018, respectively.

Deferred FERC Fees and Deferred FERC Fee Asset/Liability

FERC charges an annual assessment to all public utilities based on kilowatt-hours of interstate transmission service provided. PJM recovers from its members the annual charges from FERC. At December 31, 2019, PJM had a \$1.3 million deferred FERC fee liability that resulted from over-collections during 2019 and will be netted into amounts billed to PJM's members during 2020. At December 31, 2018, PJM had a \$0.02 million deferred FERC fee liability that resulted from over-collections during 2018 and was netted into amounts billed to PJM's members during 2019.

Deferred Regulatory Liability

PJM recovers as service fees its administrative costs under its stated-rate Tariff.

The stated-rate tariff provides for the accumulation of a financial reserve. PJM is permitted to maintain a reserve as a deferred regulatory liability in an amount up to 6 percent of its annual stated-rate revenues, except that in every third year, the financial reserve must be reduced to 2 percent of annual stated-rate revenues. The amount accumulated under the financial reserve provisions is classified as a non-current liability in the Company's Consolidated Statements of Financial Position. On a quarterly basis, PJM refunds the deferred regulatory liability balance in excess of the permitted financial reserve for the previous quarter. The quarterly refund rate is established after the financial close of each quarter, and refunds are distributed to the members on a prospective basis in the following quarter. During calendar years 2019, 2018 and 2017, PJM made refunds of \$30.7 million, \$13.3 million and \$15.2 million, respectively.

Any under- or over-refund amounts will be reflected in the deferred regulatory liability activity in the following quarter.

For PJM Settlement, the deferred regulatory liability is defined in its rate schedule in the Tariff and is equal to revenues collected in excess of accrual-basis expenses. This balance is refunded quarterly. The quarterly refund rate is established after the financial close of each quarter, and refunds are distributed to the members on a prospective basis in the following quarter. The PJM Settlement rate schedule does not include a financial reserve element.

PJM recognizes deferred regulatory income in the revenue section of the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income for the amount by which service fee revenues pursuant to the rate schedules differ from applicable expenses in the reporting period. The amount by which cumulative revenues under the rate schedules exceed cumulative expenses and refunds is reported as a deferred regulatory liability in the Consolidated Statements of Financial Position. In circumstances in which revenues are less than expenses, PJM reduces the deferred regulatory liability with an offset to deferred regulatory income.

At December 31, 2019, and 2018, the deferred regulatory liability was \$20.0 million and \$24.2 million, respectively. At December 31, 2019, and 2018, the current portion of the deferred regulatory liability was \$14.0 million, representing PJM and PJM Settlement's expected refunds to members during the first quarter of 2020. At December 31, 2018, the current portion of the deferred regulatory liability was \$6.4 million, which was refunded to members by PJM and PJM Settlement during the first quarter of 2019. The non-current portion of the deferred regulatory liability of \$6.0 million and \$17.8 million represents the amount of PJM's reserve at December 31, 2019, and 2018, respectively. The December 31, 2019, deferred regulatory liability reserve balance reflects the reduction to 2 percent of annual stated-rate revenues as required every third year under PJM's stated-rate Tariff.

Deferred Revenue

PJM membership fees, which are billed and collected in advance of the year for which they apply, are amortized ratably over the related annual membership period.

Deposits

At December 31, 2019, the deposits balance comprised \$159.3 million received for study and interconnection fees and \$1,438.6 million for customer credit. At the end of 2018, PJM held deposits of \$105.5 million for study and interconnection fees and \$1,395.3 million for customer credit. These deposits are maintained in separate cash accounts that are not legally restricted.

Income Tax Accounting

PJM has elected to be taxed as a corporation for both federal and state income tax purposes. PJM and its subsidiaries file a consolidated federal income tax return. The consolidated financial statements include prepaid income taxes, accrued income taxes and deferred income taxes. Prepaid income taxes relate to federal and state overpayments on deposit with taxing authorities. These overpayments will be applied to future federal and state income tax liabilities. Deferred income taxes represent the temporary differences between the Company's financial statement basis and tax basis in existing assets and liabilities measured using presently enacted tax rates. A valuation allowance has been provided against certain deferred tax assets for which management has concluded it is more likely than not the Company will be unable to recognize the income tax benefit associated with those future tax deductions.

Fair Values of Financial Instruments

The carrying amounts reported in the Consolidated Statements of Financial Position for current financial assets and liabilities generally approximate their fair values.

Benefit Plan Accounting

PJM accrues the costs of providing future employee benefits based on assumptions made regarding the valuation of benefit obligations and performance of plan assets. Delayed recognition of differences between actual results and those assumed allows for a relatively even recognition of the effects of changes in benefit obligations and plan performance over the working lives of the employees who benefit under the plans.

In addition to recognizing the underfunded or overfunded PBO of a defined benefit pension plan as an asset or liability in the Consolidated Statements of Financial Position, PJM recognizes annual changes in gains or losses, prior service costs or other credits that have otherwise not been recognized as a part of the liability for pension benefits in the Consolidated Statements of Financial Position. A corresponding regulatory asset, deferred recovery of pension and postretirement costs, has been recognized as a non-current asset in the Consolidated Statements of Financial Position.

PJM's selection of the discount rate, health care cost-trend rate and expected rate of return on assets is based on its review of available current, historical and projected rates, as applicable.

Derivatives

PJM has one interest rate swap that qualifies as a derivative instrument. The Company accounts for this derivative as either an asset or liability at fair value in the Consolidated Statements of Financial Position with changes in fair value recorded through earnings. Refer to Note 7 for additional details related to PJM's interest rate swap.

An FTR is a financial instrument that enables PJM market participants to reduce their congestion-related price risk when delivering or selling energy on the grid. PJM Settlement is neither the buyer nor the seller of FTRs, but as FTR auctions clear, PJM Settlement is temporarily the counterparty to both the FTR buyer and FTR seller. Refer to Note 8 for additional details related to FTR derivative disclosures.

Revenue Recognition

PJM recognizes as revenue amounts both billed and unbilled under PJM and PJM Settlement's Tariff rate schedules.

Revenues recorded as study and interconnection fees arise from billing and collection services in the interconnection service agreement process performed by PJM. These revenues are presented on a gross basis in the Company's Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income, and are offset directly by the corresponding interconnection expenses.

PJM Connext, PJM Tech and PJM EIS recognize as revenues amounts both billed and unbilled.

Subsequent Events

PJM has performed an evaluation of subsequent events through March 6, 2020, which is the date the consolidated financial statements were issued.

3. REVENUE AND ACCOUNTS RECEIVABLE

Disaggregated Revenues

The Company has included in the table below disaggregation of PJM service fee revenues by subsidiary schedule as defined in Schedule 9 of the Company's Tariff.

	2019
PJM stated-rate revenues Control area administration service Market support service FTR administration service Capacity resource and obligation management service Regulation and frequency response	\$ 177,090 83,931 33,177 14,778 2,612
	311,588
PJM Settlement service fees	8,822
Total service fees	\$ 320,410

For the 12-month period ended December 31, 2019, PJM Connext recorded consolidated revenue of \$4.5 million, which is included in other operating revenue in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income.

Contract Balances

PJM and PJM Connext membership fees, which are billed and collected in advance of the year for which they apply, are recognized as revenue ratably over the related annual membership period. Under the revenue guidance, membership fees – recorded as deferred revenue – are considered contract liabilities. The December 31, 2019, balance of deferred revenue resulting from contracts with customers was \$3.5 million. During 2019, PJM recognized \$3.6 million of revenue for PJM and PJM Connext membership fees.

There were no material contract assets as of December 31, 2019.

PJM's accounts receivables at December 31, 2019, consisted of the following:

	2019
Billed:	,
PJM Connext	\$ 695
	695
Unbilled:	
PJM service fees, net of refunds to members	24,460
Marginal line loss billing adjustment	16,559
PJM recovery of pass-through charges	10,541
Default allocation assessment	4,935
	56,495
Total accounts receivable	\$ 57,190

PJM's member companies are billed on a monthly basis for recovery of PJM and PJM Settlement's administrative costs under the Tariff.

All study and interconnection receivables were billed at December 31, 2019.

4. FIXED ASSETS

A summary of fixed assets by classification as of December 31, 2019, and 2018, follows:

	2019	2018
Buildings	\$ 18,812	\$ 18,812
Leasehold improvements	68,048	60,494
Capitalized lease	25,889	25,889
Software development	553,667	530,133
Computer hardware	139,021	131,694
Furniture and fixtures	5,787	5,787
Vehicles	182	182
Subtotal	811,406	772,991
Accumulated depreciation and amortization	(712,616)	(675,440)
Total fixed assets, net of accumulated depreciation and amortization	\$ 98,790	\$ 97,551

Amortization of software development costs for the years ended December 31, 2019, 2018 and 2017, were \$24.9 million, \$31.5 million and \$32.6 million, respectively.

Amortization of capitalized lease costs was \$1.7 million for each of the years ended December 31, 2019, 2018 and 2017.

Total interest costs incurred for the years ended December 31, 2019, 2018 and 2017, were \$35.0 million, \$17.4 million and \$6.5 million, respectively. For the years ended December 31, 2019, 2018 and 2017, interest capitalized for assets under development was \$0.7 million, \$0.7 million and \$0.8 million, respectively.

5. NOTE RECEIVABLE

On March 21, 2008, FERC approved a settlement to restructure the relationship between PJM and PJM's former Market Monitoring Unit. As part of the settlement, the Market Monitoring Unit and its functions transitioned from being an internal PJM department to an external firm, Monitoring Analytics, LLC (MA). MA operates independently of PJM management and the Board of Managers. In order to facilitate the externalization of this function and as part of the settlement agreement approved by FERC, PJM entered into a revolving loan agreement with MA during March 2008. The original revolving loan agreement was extended in November 2018 to March 31, 2026.

The purpose of the PJM revolving loan to MA is to fund capital needs associated with MA's technology systems and working capital needs related to MA's responsibilities per Attachment M of the Tariff to monitor the markets administered by PJM. The revolving loan has a capacity of \$11.0 million and is secured by MA's accounts receivable and future collections of accounts receivable. At December 31, 2019, and 2018, the interest rate on the revolving loan agreement between PJM and MA was 4.75 percent and 5.50 percent, respectively. The interest rate on all loan advances is equal to the PNC Bank Base Rate. The PNC Bank Base Rate is the highest of (A) the Prime Rate, (B) the sum of the Federal Funds Rate plus 50 basis points (0.50 percent), or (C) the sum of the Daily London Interbank Offered Rate (LIBOR) plus 100 basis points (1.0 percent).

At December 31, 2019, and 2018, the outstanding balance due from MA recorded by PJM as a note receivable was \$3.1 million and \$2.3 million, respectively. At December 31, 2019, and 2018, the current portion of the note receivable was \$1.6 million and \$1.8 million, respectively. The current balance at December 31, 2019, represents the amount to be repaid during 2020. The non-current portion of the note receivable was \$1.5 million at December 31, 2019, and \$0.5 million at December 31, 2018.

6. SHORT-TERM DEBT

PNC Bank (PNC) Revolving Line of Credit

PJM maintains with PNC a FERC-approved revolving line of credit agreement with a capacity amount of \$150 million. On November 12, 2019, PJM filed with FERC requesting approval to continue to borrow under this facility, which would otherwise have expired on January 31, 2020. PJM received approval from FERC on January 13, 2020, to continue to borrow under this facility through January 31, 2022. On January 24, 2020, the extension in term to the facility was executed with PNC. The revolving line of credit is unsecured and available to fund short-term cash obligations.

Under the loan covenants for the revolving line of credit agreement, PJM is required to meet certain financial and non-financial covenants. PJM was in compliance with these covenants as of December 31, 2019.

At both December 31, 2019, and 2018, there were no amounts outstanding under the revolving line of credit agreement. The interest rate on borrowings under this facility is based on the 30-day LIBOR rate plus a spread of 62.5 basis points (0.625 percent). At December 31, 2019, the interest rate was 2.387 percent.

The line of credit facility has a commitment fee of 6.00 basis points (0.6 percent) on the unused balance. This fee is calculated daily and paid quarterly.

7. LONG-TERM DEBT AND DERIVATIVE FINANCIAL INSTRUMENT – INTEREST RATE SWAP

Bank of America (BoA) Loan Agreement

On June 28, 2018, FERC approved PJM's request to refinance the Company's existing bank loan through a new term loan from BoA. On July 20, 2018, PJM entered into a \$20.2 million loan agreement with BoA. The BoA term loan has a seven-year term and is unsecured.

As of December 31, 2019, the outstanding borrowings under the term loan were \$16.6 million. As defined in the loan agreement, the term loan bears interest at a rate per annum equal to the LIBOR rate plus a spread of 65 basis points (0.65 percent). As of December 31, 2019, the interest rate was 2.359 percent.

Under the loan agreement, PJM is required to meet certain financial and non-financial covenants. PJM was in compliance with these covenants as of December 31, 2019.

Repayments of principal under the BoA Bank Loan Agreement are scheduled as follows:

Year ending December 31,

2,163	
2,886	
2,886	
2,886	
2,886	
\$ 2,886	
\$	2,886 2,886 2,886 2,886

Derivative Financial Instrument - Interest Rate Swap

To manage interest rate risk associated with the \$20.2 million loan agreement with BoA, the Company entered into an interest rate swap agreement with BoA effective August 1, 2018. The interest rate swap agreement effectively fixes the interest payments of the Company's floating rate debt instrument at a rate of 3.62 percent. The term of the interest rate swap matches the term of the loan.

While PJM has entered into an economic hedge of its interest rate, the Company has elected not to designate this instrument as a cash flow or fair value hedge for accounting purposes. Accordingly, the interest rate swap is carried at fair value in the Consolidated Statements of Financial Position with changes in fair value recorded through earnings. At December 31, 2019, and 2018, the fair value of the swap was a liability of \$0.6 million and \$0.3 million, respectively.

For the 12-month periods ended December 31, 2019, 2018, and 2017, in conjunction with changes in the fair value of the interest rate swap, PJM recognized a \$0.3 million derivative mark-to-market loss, a \$0.2 million derivative mark-to-market gain and a \$0.5 million derivative mark-to-market gain, respectively, as interest expense in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income.

The Company does not hold or issue financial instruments for speculative or trading purposes for its own account.

8. DERIVATIVE FINANCIAL INSTRUMENT – FTRS

PJM Settlement is the central counterparty to members' pool transactions. Accordingly, PJM Settlement has flash title pass through it when markets settle and as charges/credits are assessed on pool transactions.

An FTR is a financial instrument that enables market participants to reduce their congestion-related price risk when delivering or selling energy on the grid. It provides an economic hedging mechanism against congestion charges that can be transacted by members separately from transmission service. Ultimately, PJM Settlement is neither the buyer nor seller of FTRs, but, as FTR auctions clear, PJM Settlement is temporarily the counterparty to both the FTR buyer and the FTR seller. For reporting purposes, these positions net to zero in the Consolidated Statements of Financial Position and the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income, and do not represent a credit risk to PJM. However, because FTRs have ongoing open positions at period end, the Company is disclosing the fair value of these instruments, even though they do not present a direct credit risk to PJM.

The gross fair value of both the FTR assets and FTR liabilities as of December 31, 2019, was \$327 million. A total of 304 members are FTR holders related to a total of 3.8 million MWh. As of December 31, 2019, PJM held \$1.8 billion in collateral related to these FTR transactions. The collateral is based on the calculated net value of the positions held in each member's FTR portfolio. The collateral can be in the form of cash or a letter of credit.

Roll-forward of FTR activity for the years ended December 31, 2019, and 2018, consisted of the following:

(\$ in millions)

	(\$ IN MILLIONS)
\$ 343 510 ir value (526)	Balance at January 1, 2019 Auction additions Settlement and change in fair value
)19 \$ 327	Balance at December 31, 2019
\$ 394 592 ir value (643)	Balance at January 1, 2018 Auction additions Settlement and change in fair value
018 \$ 343	Balance at December 31, 2018
\$ ir value	Balance at January 1, 2018 Auction additions Settlement and change in fair value

9. FAIR VALUE DISCLOSURES

Fair value is the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date (exit price). In determining fair values, PJM utilizes market data or assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. The authoritative guidance pertaining to fair value establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three levels of the fair value hierarchy defined by this guidance are as follows:

Level 1 – Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 – Pricing inputs are other-than-quoted prices in active markets included in Level 1, that are directly or indirectly observable as of the reporting date. Level 2 includes those financial instruments that are valued using broker quotes in liquid markets and other observable pricing data. Level 2 also includes those financial instruments that are valued using internally developed methodologies that have been corroborated by observable market data through correlation or by other means. Significant assumptions are observable in the marketplace throughout the full term of the instrument and can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 – Pricing inputs include significant inputs that are generally less observable than those from objective sources.

PJM utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. PJM is able to classify fair value balances based on the observability of the inputs. In accordance with the authoritative guidance, financial assets and liabilities are classified in their entirety based on the lowest level of observability for an input that is significant to the fair value measurement. PJM's assessment of the significance of a particular input to the fair value measurement requires the exercise of judgment and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

The following table presents PJM's cash and cash equivalents as well as financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2019, and 2018, by level within the fair value hierarchy.

(\$ in millions)		Dec. 31	Dec. 31, 201		
	Level 1	Level 2	Level 3	Carrying Value	Carrying Value
Cash and cash equivalents Deposit	\$ 1,650 \$	-	\$ -9	\$ 1,650	\$ 1,863
liabilities	1,598	-	-	1,598	1,501
Derivative liabilities	1		_	1	1

The fair value of FTR assets and liabilities for which PJM Settlement is the counterparty for an instant are determined on a recurring basis based on Level 3 inputs within the fair value hierarchy. The valuation model used is based on a three-year weighted average of historical location marginal prices by month by node. The model also calculates separate historic values for on-peak, off-peak and 24-hour FTRs. For reporting purposes, these positions net to zero in the Consolidated Statements of Financial Position and the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income, and are not presented in the table above.

10. INCOME TAXES

Income tax expense shown on the Consolidated Statements of Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income consisted of the following:

	2019	2018	2017
Federal income taxes Current Deferred Change in valuation allowance	\$ 3,381 (2,124) 42	\$ 4,193 (3,430) 10	\$ (11,843) 20,462 357
	1,299	773	8,976
State income taxes			
Current	849	1,538	129
Deferred	(189)	(1,118)	2,124
Change in valuation allowance	=		1,342
	660	420	3,595
Income tax expense	\$ 1,959	\$ 1,193	\$ 12,571

On December 22, 2017, the President of the United States signed the Tax Cuts and Jobs Act legislation. Within the 2017 income tax provision, PJM was required to revalue the Company's deferred tax assets and liabilities to reflect the corporate income tax rate reduction provided by the Tax Cuts and Jobs Act. The result of the revaluation, after accounting for the acceleration of various employee-related expenses, was \$8.1 million.

The effects of temporary differences giving rise to deferred income tax assets at December 31, 2019, and 2018, consisted of the following:

	2019	2018	
Deferred tax liabilities			
Deferred pension and postretirement costs	\$ (15,619)	\$ (8,700)	
	(15,619)	(8,700)	
Deferred tax assets			
Postretirement health care	15,573	12,948	
Accrued expenses	10,321	6,296	
Pension	13,356	6,565	
Net operating loss carryforwards	6,346	6,687	
Deferred regulatory liability	1,802	5,262	
Fixed assets	994	811	
	48,392	38,569	
Net deferred income tax assets	32,773	29,869	
Valuation allowance	(3,480)	(3,438)	
Deferred income tax assets, net	\$ 29,293	\$ 26,431	

The income tax rate on PJM's operating activities differed from the federal statutory rate as follows:

	2019	2018	2017
Income tax expense at the federal statutory rate Income resulting from:	\$ 798	\$ 479	\$ 4,527
Changes in valuation allowance	42	10	1,699
Meals and entertainment	431	255	427
State income taxes, net of federal tax benefit	510	330	1,074
Deferred income tax revaluation for enacted changes in tax law	_	_	4,839
Other	178	119	5
Income tax expense	\$ 1,959	\$ 1,193	\$ 12,571

PJM has net operating loss carryforwards of \$83.1 million for Pennsylvania state tax purposes that begin expiring in 2023. PJM has concluded that is more likely than not, due to enacted statutory restrictions, that certain Pennsylvania net operating loss carryforwards will expire, and, therefore, the Company recorded a \$2.1 million valuation allowance against these deferred tax assets and a \$1.4 million valuation allowance against certain other deferred tax assets with an indefinite future reversal period.

PJM and its subsidiaries file a U.S. consolidated federal income tax return and consolidated or separate company tax returns in various states, including of the Commonwealth of Pennsylvania. The tax years subsequent to 2014 remain open to examination by the United States Internal Revenue Service, and generally, the tax years subsequent to 2015 remain open to examination by various state taxing authorities. There are no ongoing audits at this time.

11. BENEFIT PLANS

Pension Plan

PJM sponsors a defined benefit Pension Plan (the plan) that covers all regular full-time employees and part-time employees hired prior to January 1, 2014. Benefits under the plan are based on years of service and the employee's compensation. PJM's funding of the plan is determined according to the funding requirements set forth by the Employee Retirement Income Security Act of 1974 (ERISA). Plan assets are invested primarily in stocks and bonds and are monitored by PJM's Benefits Administration Committee. This plan was closed to new participants beginning January 1, 2014. Employees hired on or after January 1, 2014, are given a supplemental benefit in their 401k Savings Plan (the savings plan) based on their age and years of service.

Supplemental Executive Retirement Plan (SERP)

PJM sponsors a SERP to provide certain members of executive management with benefits in excess of normal pension benefits. PJM invested \$4.2 million in equity securities in prior years with the intention to use the proceeds to offset future obligations under the SERP. There were no contributions made during the years ended December 31, 2019, and 2018. The investment is included in other non-current assets in the Consolidated Statements of Financial Position at its market value of \$1.1 million and \$1.6 million as of December 31, 2019, and 2018, respectively.

During 2020, PJM expects to recognize a \$0.9 million settlement charge related to the payment of lump-sum SERP benefits in 2020.

Deferred Compensation Plan

PJM sponsors a deferred compensation plan to provide an opportunity to certain members of executive management and the PJM Board of Managers to defer a portion of compensation. At December 31, 2019, and 2018, the value of this employee liability amounted to \$24.3 million and \$20.6 million, respectively. This amount is included in other employee benefits in the Consolidated Statements of Financial Position.

Postretirement Benefits

The Other Postretirement Employee Benefit Plan (OPEB Plan) provides certain health care and other benefits to retired employees and their spouses and dependents. The amount of the pre-65 benefit is dependent upon the employee's years of service at retirement. The amount of post-65 benefit at retirement is dependent upon the employee's age and years of service as of January 1, 2016. The post-65 OPEB Plan was closed to new hires as of January 1, 2010.

The schedules that follow show the changes in the benefit obligations, plan assets and funded status of the respective plans as of December 31, 2019, and 2018, and components of net periodic pension and postretirement health care costs of these plans for the years ended December 31, 2019, 2018 and 2017.

				Other Postretiremen							
	(Quali	fied		SERP			ļ	Benefits		
	2019		2018	2019		2018		2019		2018	
CHANGE IN BENEFIT OBLIGATION											
Net benefit obligation at beginning of year	\$ 227,612	\$	248,255	\$ 7,293	\$	7,110	\$	56,127	\$	61,096	
Service cost	9,577		10,957	347		364		1,493		1,694	
Interest cost	9,728		9,014	317		272		2,379		2,279	
Plan amendments	· –		· –	227		_		_		. –	
Plan participants' contributions	_		_	_		_		74		67	
Actuarial loss (gain)	37,684		(33,356)	(123)		(379)		7,113		(7,798)	
Gross benefits paid	(7,754)		(7,258)	(667)		(74)		(1,360)		(1,211)	
Net obligation at end of year	\$ 276,897	\$	227,612	\$ 7,394	\$	7,293	\$	65,826	\$	56,127	

PJM uses a measurement date of December 31 for all of its pension and postretirement benefit plans.

	Pension Benefits									Other Postretirement Benefits			
		Qualified					SERF	•			Bene	hits	
		2019		2018		2019		2018		2019		2018	
CHANGE IN PLAN ASSETS													
Fair value of plan assets at beginning of year Actual return on plan assets Employer contributions Plan participants' contributions Gross benefits paid Adjustment		12,197 52,368 - - (7,754) -	\$	187,320 (17,865) 50,000 - (7,258)	\$	- 667 - (667)	\$	- 74 - (74)	\$	11,341 2,871 1,286 74 (1,360)	\$	10,109 (768) 3,144 67 (1,211)	
Fair value of plan assets at end of year	2	56,811		212,197						14,212		11,341	
Funded status at end of year Unrecognized net actuarial loss Unrecognized prior service cost Unrecognized net transition obligation	(2	20,036) - - -		(15,415) - - -		(7,394) - - -		(7,293) - - -		(51,614) - - -		(44,786) - - -	
Net amount recognized at end of year and amounts recognized in the Statements of Financial Position	\$ (20,036)	\$	(15,415)	\$	(7,394)	\$	(7,293)	\$	(51,614)	\$	(44,786)	

			Other Postretirement Benefits									
	Qualified					SERF	•		bellelits			
	2019		2018		2019		2018		2019		2018	
AMOUNTS RECOGNIZED IN DEFERRED PENSION AND POSTRETIREMENT COSTS:												
Net actuarial loss (gain) Prior service cost (gain)	\$ 45,835 3	\$	49,646 (15)	\$	2,296 220	\$	2,691 9	\$	(6,048) (9,311)	\$	(7,335) (14,904)	
Total	\$ 45,838	\$	49,631	\$	2,516	\$	2,700	\$	(15,359)	\$	(22,239)	

			Other Postretirement										
	Qualified					SERF	•		Benefits				
	2019		2018		2019		2018		2019		2018		
AMOUNTS RECOGNIZED IN THE STATEMENT OF FINANCIAL POSITION CONSIST OF:													
Current liability Noncurrent liability	\$ 20,036	\$	_ 15,415	\$	3,044 4,350	\$	227 7,066	\$	1,439 50,175	\$	1,327 43,459		
Net amount recognized at end of year	\$ 20,036	\$	15,415	\$	7,394	\$	7,293	\$	51,614	\$	44,786		

At the end of 2019 and 2018, the PBO, the accumulated benefit obligation and the fair value of plan assets for all of PJM's pension and postretirement benefit plans are as follows:

			Pension B		Other Postretirement						
	(Quali	fied		SERF	•	Benefits			S	
	2019		2018	2019		2018		2019		2018	
End of year											
Projected benefit obligation	\$ 276,847	\$	227,612	\$ 7,394	\$	7,293	\$	65,826	\$	56,127	
Accumulated benefit obligation	215,280		177,084	5,905		4,664		_		_	
Fair value of plan assets	256,811		212,197	_		-		14,213		11,341	

Expected Cash Flows

Information about expected cash flows for the pension and postretirement benefit plans follows:

	Qua	alified Benefits	SERP Benefits	Other Postretireme	nt Benefits
Employer contributions					<u> </u>
Expected employer contributions for 2020 to plan trusts	\$	-	\$ 3,044	\$	1,439
Expected employer contributions in form of direct benefit payments for 2020		-	667		1,286
Expected benefit payments 2020 2021 2022 2023 2024 2025-2030		7,428 8,231 9,638 10,822 11,587 73,613	3,044 245 288 305 385 2,461		1,439 1,603 1,788 1,995 2,208 15,003

The table above reflects the benefits expected to be paid from the plan or from PJM's assets for PJM's share of the benefit cost. The participants' share of the cost, which is funded by participant contributions to the plan, is not included in this table. Expected contributions to plan trusts reflect expected amounts to be contributed by PJM to the fund.

	Pension Benefits							Other Postretirement Benefits				nefits			
			Qualified					SERP							
	2019		2018		2017		2019	2018	2017		2019		2018		2017
COMPONENT OF NET PERIODIC BENEFIT COST															
Service cost Interest cost Expected return on assets Prior service cost/(gain)	\$ 9,577 9,728 13,333) (18)	Ċ	10,957 9,014 14,880) (18)	\$	9,199 8,575 (10,602) (18)	\$	347 317 - 7	\$ 364 272 - 7	\$ 283 241 - 7	\$	1,493 2,379 (726) (1,287)	\$	1,694 2,279 (667) (1,287)	\$	1,543 2,399 (464) (1,287)
Settlement charge Actuarial loss/(gain)	2,458		2,205		1,125		271	348	_ 224		- (627)		(83)		(388)
Total net periodic benefit cost	\$ 8,412	\$	7,278	\$	8,279	\$	942	\$ 991	\$ 755	\$	1,232	\$	1,936	\$	1,803

A discount rate of 3.65 percent was used to calculate year-end 2019 pension obligations. A discount rate of 3.55 percent was used to calculate year-end 2019 SERP and postretirement benefit obligations.

For each of the years ended December 31, 2019, 2018 and 2017, \$0.6 million, \$0.7 million and \$0.8 million of total pension and postretirement benefits expense was included in capitalized project costs, respectively.

The estimated net loss and prior service costs for PJM's pension plans that will be amortized from deferred recovery of pension and postretirement costs into net periodic benefit cost in 2020 is \$2.5 million. The estimated net gain and prior service credits for PJM's postretirement plan that will be amortized from deferred recovery of pension and postretirement costs into net periodic benefit cost in 2020 is \$1.4 million.

The following schedule shows the assumptions used to calculate the pension and postretirement benefit expense for the years ended December 31, 2019, 2018 and 2017.

	Po	ension Benefits		Other Postretirement Benefits					
	2019	2018	2017	2019	2018	2017			
Discount rate	4.30%	3.70%	3.70%	4.30%	3.70%	4.40%			
Expected return on plan assets	6.40%	6.60%	6.75%	N/A	N/A	N/A			
Rate of comparison increase	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%			
Medical care cost trend rate									
Current (Pre-65)				5.92%	6.17%	6.42%			
Current (Post-65)				6.48%	6.93%	7.37%			
Ultimate (Pre-65)				4.46%	4.46%	4.46%			
Ultimate (Post-65)				4.45%	4.45%	4.45%			
Years to ultimate				19	20	21			

The expected return on plan assets assumption has been determined based on PJM's investment objectives and is supported by analysis of simulated investment return using capital market assumptions published in Mercer Investment Consulting's Capital Markets Outlook for the plan's target asset mix, net of an adjustment for expense to be paid from the plan assets.

The asset allocation for the PJM pension plan and other postretirement benefits plan at the end of 2019 and 2018 and the target allocation for 2020 by asset category follows. The fair value of plan assets for the PJM pension plan and other postretirement benefit plans was \$271.0 million and \$223.5 million at the end of 2019 and 2018, respectively.

Asset Category	Target Allocation	2019	2018
Equity securities	50%-60%	55%	55%
Debt securities	40%-50%	44%	44%
Other	0%–2%	1%	1%
Total	100%	100%	100%

The assets of the PJM pension plan and other postretirement benefit plan are invested to provide a source of retirement income for participants and beneficiaries of the plan. The financial objectives of the plans have been established in conjunction with the comprehensive review of the current and projected financial requirements of the plans. The financial objectives are to maximize assets in order to consistently and materially exceed the accumulated benefit obligation under the plans and to reduce contributions over time.

The assets of the PJM pension plan and other postretirement benefit plan are invested in accordance with all relevant legislation and regulation, in a manner consistent with fiduciary standards of ERISA and other applicable law. Specifically, the investment program includes such safeguards and diversity to which a prudent investor would adhere, and all transactions undertaken on behalf of the plans are in the sole interest of plan participants and their beneficiaries.

Fair Value Measurements

The following table presents PJM's pension and other postretirement benefit plan assets measured at fair value and their respective levels within the fair value hierarchy as of December 31, 2019, and 2018:

As of December 31, 2019 (a)		Level 1	1 Level 2			Level 3		arrying Value
Plan assets:								
Cash and cash equivalents	\$	441	\$	_	\$	_	\$	441
Commingled funds		_		130,821		_		130,821 (b)
Mutual funds		_		139,763		-		139,763 (c)
Total plan assets	\$	441	\$	270,584	\$	_	\$	\$271,025
As of December 31, 2018 (a)		Level 1		Level 2		Level 3	С	arrying Value
Plan assets:	·			,				
Cash and cash equivalents	\$	3,327	\$	_	\$	_	\$	3,327
Commingled funds		_		106,813		_		106,813 (b)
Mutual funds		_		113,398		_		113,398 (c)
Total plan assets	\$	3,327	\$	220,211	\$	=	\$	223,538

- (a) See Footnote 10 for a description of levels within the fair value hierarchy.
- (b) The benefit plans own commingled funds that invest in equity and fixed-income securities.
- (c) This category predominantly represents diverse issues of domestic investment-grade fixed-income securities.

Valuation Techniques Used to Determine Fair Value

Cash equivalents – Investments with maturities of three months or less when purchased, including certain short-term fixed-income securities, are considered cash equivalents and are included in the recurring fair value measurements hierarchy as Level 1.

Commingled funds — Commingled funds are maintained by investment companies that hold certain investments in accordance with a stated set of fund objectives, which are consistent with PJM's overall investment strategy. The values of the majority of commingled funds are not publicly quoted and must trade through a broker. For equity and fixed-income commingled funds traded through a broker, the fund administrator values the fund using the net asset value per fund share, derived from quoted prices in active markets of the underlying securities. These funds are valued at Net Asset Value (NAV) and have been categorized as Level 2.

Mutual funds – Mutual funds are pooled instruments that hold certain investments in accordance with a stated set of fund objectives, which are consistent with PJM's overall investment strategy. These funds consist of fixed income, developing markets and indexed securities. Fidelity Investments, the fund manager, monitors prices supplied by pricing services and may use a supplemental price source or change the primary price source of a given security if the portfolio managers challenge an assigned price and Fidelity determines that another price source is considered to be preferable. These funds are valued at NAV and have been categorized as Level 2.

Savings Plan

PJM also sponsors the 401k Plan (Savings Plan) for all eligible employees of the Company. The savings plan permits employees to contribute up to 75 percent of their gross compensation on a pretax basis, subject to limitations as described in the savings plan. PJM makes matching contributions equal to 100 percent of the employee's first 5 percent of gross salary contributed. PJM contributions to the savings plan were approximately \$5.3 million, \$4.8 million and \$4.5 million for the years ended December 31, 2019, 2018 and 2017, respectively. This expense is included in compensation in the Consolidated Statements of Income, Comprehensive Income and Paid-in Capital, Retained Earnings and Accumulated Other Comprehensive Income.

12. COMMITMENTS AND CONTINGENCIES

Leases

PJM leases office space under operating leases with various vendors. These leases are non-cancelable and expire during the period from 2020 to 2027.

Future minimum rentals under non-cancelable lease agreements are as follows:

Year ending December 31,	Operating		Capital
2020	\$	1,186	\$ 1,782
2021		1,175	1,861
2022		1,148	1,941
2023		788	2,022
2024		788	2,103
Remaining		2,168	5,358
Total	\$	7,253	\$ 15,067

Other Items

Marginal Line Loss Surplus Payment Reallocation

In July 2012, 14 member companies defaulted on payment obligations totaling approximately \$28 million, net of collateral held by PJM. These obligations resulted from a FERC-ordered reallocation of marginal line loss payments. PJM Settlement filed two civil complaints alleging breach of contract in the state of Delaware against the former members.

Following additional proceedings at FERC and initiation of appellate proceedings, in November 2016, FERC filed an unopposed motion to remand the proceeding to FERC. On June 20, 2019, FERC issued an Order on Voluntary Remand and Granting Rehearing (June 20 Remand Order) finding that the previously ordered allocation was appropriate and reversing its prior reallocated determinations. As a result, PJM was directed to pay additional refunds of marginal line loss payments to financial marketers, including the 14 member companies that had defaulted, effectively mooting the above-referenced complaints.

Credit Matter

On June 21, 2018, GreenHat Energy, LLC defaulted on its obligations related to its FTR portfolio, which included positions applicable to the then-current planning year as well as the 2019–2020 and 2020–2021 planning years. In January 2019, FERC denied PJM's waiver requesting to only offer the August 2018 defaulted FTRs for liquidation in the FTR auction conducted in July 2018. In June 2019. FERC issued an order on clarification and set the matter for paper hearing and settlement judge procedures. The parties submitted a settlement with FERC on October 9, 2019, that resolves all issues in this proceeding and avoids the resettlement of the stopped liquidation auction. FERC accepted the settlement by order dated December 30, 2019. The settlement provides for payment of \$17.5 million that will be allocated to members as part of the default allocation. The aggregate payment default of this member, net of collateral held, will be billed to the non-defaulting members in accordance with the default allocation assessment formula in the Operating Agreement.

Old Dominion Electric Cooperative v. PJM 2014 Polar Vortex Complaint

On February 22, 2019, Old Dominion Electric Cooperative (ODEC) filed an amended complaint (Amended Complaint) against PJM in Circuit Court for Henrico County, Virginia, alleging PJM committed ODEC to purchase natural-gas during the 2014 Polar Vortex event in which temperatures fell to unprecedented levels, and ODEC should be made whole for its gas costs incurred with outstanding amounts of \$15 million. ODEC had previously attempted and failed to recover the same exact costs through a waiver petition filed before FERC in June 2014.

On April 3, 2019, PJM removed the Amended Complaint to the United States District Court for the Eastern District of Virginia (District Court) because ODEC's civil action arises under federal law, namely the Federal Power Act, the PJM Tariff, the PJM Operating Agreement and related federal doctrines. PJM also filed a motion to dismiss, which remains pending.

This matter remains pending before the District Court. PJM does not view ODEC's claims as meritorious or probable.

Radford's Run Complaint

On November 15, 2018, FERC issued an order (Order) granting in part a complaint filed by Radford's Run Wind Farm, LLC (Radford) against PJM. Radford filed the complaint on June 26, 2018 (Complaint). In the Complaint, Radford alleged that it is entitled to 279 MW of Incremental Capacity Transfer Rights (ICTR) because Radford funded a network upgrade that improved a transmission constraint.

In the Order, FERC granted the Complaint in part because FERC found that "PJM did not comply with its Tariff," which provides that PJM must determine in the System Impact Study whether a customer is entitled to any ICTR resulting from a Customer-Funded Upgrade. Because FERC was not able to determine based on the record if Radford should have been awarded ICTR if PJM had followed its Tariff, FERC established paper hearing procedures for PJM to assess whether Radford's upgrades increased the Capacity Emergency Transfer Limit of a Locational Deliverability Area, and thus is eligible for ICTR. There is no monetary claim for damages stated in the Complaint.

TranSource Matter

On June 23, 2015, TranSource, LLC (TranSource) filed a complaint (Complaint) against PJM with FERC. In the Complaint, TranSource asked FERC to order PJM to provide Incremental Auction Revenue Rights (IARR) associated with its proposed transmission upgrade.

Following an evidentiary hearing, in January 2018, a FERC Administrative Law Judge issued an initial decision in which, among other things, TranSource was granted limited relief, ordering PJM to restore TranSource's original queue position and refund the \$0.15 million paid by TranSource for the study of its upgrade request. All other requests for relief were denied. On August 26, 2019, FERC issued an order affirming in part and denying in part the initial decision. On October 25, 2019, FERC issued an order rejecting TranSource's attempted request for rehearing. No appeal was filed by TranSource.

Separate from the Complaint pending before FERC, TranSource had commenced a civil action against PJM and four PJM transmission owners in the Montgomery County Pennsylvania Court of Common Pleas. This action was removed to Federal District Court. On January 7, 2020, the district court issued an order dismissing the civil action with prejudice. Therefore, all litigation related to this matter is concluded.

13. RELATED-PARTY TRANSACTIONS

PJM occupies two buildings that are owned by a subset of PJM's members. One of the buildings was purchased in 1992 at a cost of \$2.9 million. This building was subsequently renovated at a cost of \$2.9 million. A second building occupied by PJM and used as one of PJM's control centers was purchased in July 1995 at a cost of \$4.8 million. Through December 31, 2000, the facilities' owners elected not to charge PJM rent for the use of these facilities. Effective January 1, 2001, PJM commenced paying a nominal rent of two dollars per year for the use of these facilities. PJM is responsible for facility maintenance, property taxes, insurance and other related costs associated with these two buildings. Estimated annual market rent for these two buildings is approximately \$1.6 million.