Sale of Hydroelectric (Hydro) Plants

In May 2018, Duke Energy Carolinas entered an agreement for the sale of five hydro plants with a combined 18.7-MW generation capacity in the Western Carolinas region to Northbrook Energy. The completion of the transaction is subject to approval from FERC for the four FERC-licensed plants, as well as other state regulatory agencies and is contingent upon regulatory approval from the NCUC and PSCSC to defer the total estimated loss on the sale of approximately $40 million. On July 5, 2018, Duke Energy Carolinas filed with NCUC for approval of the sale of the five hydro plants to Northbrook, to transfer the CPCNs for the four North Carolina hydro plants and to establish a regulatory asset for the North Carolina retail portion of the difference between sales proceeds and net book value. On September 4, 2018, the Public Staff filed comments supporting the CPCN transfer with conditions. On September 18, 2018, Duke Energy Carolinas filed reply comments opposing the Public Staff's proposed conditions. On November 29, 2018, the NCUC issued a procedural order and held an evidentiary hearing on this matter on February 5, 2019. On August 28, 2018, Duke Energy Carolinas filed with PSCSC its Application for Approval of Transfer and Sale of Hydroelectric Generation Facilities, Acceptance for Filing of a Power Purchase Agreement and an Accounting Order to Establish a Regulatory Asset. On September 10, 2018, the ORS provided a letter to the commission stating its position on the application and on September 18, 2018, Duke Energy Carolinas requested this matter be carried over to allow Duke Energy Carolinas time to discuss certain accounting issues with the ORS. On August 9, 2018, Duke Energy Carolinas and Northbrook filed a joint Application for Transfer of Licenses with the FERC. On December 27, 2018, the FERC issued its Order Approving Transfer of Licenses ("Order") for the four FERC-licensed hydro plants. On January 18, 2019, Duke Energy Carolinas and Northbrook Carolina Hydro II, LLC requested a six-month extension of time to comply with the requirement of the Order that Northbrook submit to FERC certified copies of all instruments of conveyance and signed acceptance sheets within 60 days of the date of the Order, given that compliance by the deadline set in the Order is not possible because the conveyance of the projects is contingent on the receipt of state regulatory approvals, which are not anticipated to be issued by February 25, 2019.

If commission approvals are not received, Duke Energy Carolinas can cancel the sales agreement and retain the hydro facilities. If commission approvals are received, the closing is expected to occur during the second quarter of 2019. After closing, Duke Energy Carolinas will purchase all the capacity and energy generated by these facilities at the avoided cost for five years through power purchase agreements. Duke Energy Carolinas cannot predict the outcome of this matter.

Duke Energy Progress

Regulatory Assets and Liabilities

The following tables present the regulatory assets and liabilities recorded on Duke Energy Progress' Consolidated Balance Sheets.

	December 31,		Earns/Pays	Recovery/Refund
(in millions)	2018	2017	a Return	Period Ends
Regulatory Assets[a]				
AROs – coal ash	$ 2,051	$ 1,975	(h)	(b)
AROs – nuclear and other	429	359		(c)
Accrued pension and OPEB	542	430		(k)
Retired generation facilities	148	170	X	(b)
Storm cost deferrals[d]	571	150	X	(b)
Hedge costs deferrals	54	64		(b)
DSM/EE[e]	235	264	(i)	(i)
Vacation accrual	41	42		2019
Deferred fuel and purchased power	397	130	(f)	2020
Nuclear deferral	46	35		2020
PISCC and deferred operating expenses	36	38	X	2054
AMI	67	75		(b)
NCEMPA deferrals	50	53	(g)	2042
Other	147	74		(b)
Total regulatory assets	4,814	3,859		
Less: current portion	703	352		
Total noncurrent regulatory assets	$ 4,111	$ 3,507		
Regulatory Liabilities[a]				
Costs of removal	$ 1,878	$ 2,122	X	(j)
Accrued pension and OPEB	93	—		(k)
Net regulatory liability related to income taxes[l]	1,863	1,854		(b)
Deferred fuel and purchased power	—	1	(f)	2020
Other	299	161		(b)
Total regulatory liabilities	4,133	4,138		
Less: current portion	178	139		
Total noncurrent regulatory liabilities	$ 3,955	$ 3,999		

(a) Regulatory assets and liabilities are excluded from rate base unless otherwise noted.
(b) The expected recovery or refund period varies or has not been determined.
(c) Recovery period for costs related to nuclear facilities runs through the decommissioning period of each unit.
(d) South Carolina storm costs are included in rate base.
(e) Included in rate base.
(f) Pays interest on over-recovered costs in North Carolina. Includes certain purchased power costs in North Carolina and South Carolina and costs of distributed energy in South Carolina.
(g) South Carolina retail allocated costs are earning a return.
(h) Earns a debt and equity return on coal ash expenditures for North Carolina and South Carolina retail customers as permitted by various regulatory orders.
(i) Includes incentives on DSM/EE investments and is recovered through an annual rider mechanism.
(j) Recovered over the life of the associated assets.
(k) Recovered primarily over the average remaining service periods or life expectancies of employees covered by the benefit plans. See Note 22 for additional detail.
(l) Includes regulatory liabilities related to the change in the federal tax rate as a result of the Tax Act and the change in the North Carolina tax rate, both discussed in Note 23.

2017 North Carolina Rate Case

On June 1, 2017, Duke Energy Progress filed an application with the NCUC for a rate increase for retail customers of approximately $477 million, which represented an approximate 14.9 percent increase in annual base revenues. Subsequent to the filing, Duke Energy Progress adjusted the requested amount to $420 million, representing an approximate 13 percent increase. The rate increase is driven by capital investments subsequent to the previous base rate case, costs of complying with CCR regulations and the Coal Ash Act, costs relating to storm recovery, investments in customer service technologies and recovery of costs associated with renewable purchased power.

On December 16, 2016, Duke Energy Progress filed a petition with the NCUC requesting an accounting order to defer certain costs incurred in connection with response to Hurricane Matthew and other significant storms in 2016. The final estimate of incremental operation and maintenance and capital costs of $116 million was filed with the NCUC in September 2017. On July 10, 2017, the NCUC consolidated Duke Energy Progress' storm deferral request into the Duke Energy Progress rate case docket for decision.

On November 22, 2017, Duke Energy Progress and the Public Staff filed an Agreement and Stipulation of Partial Settlement resolving certain portions of the proceeding. Terms of the settlement included a return on equity of 9.9 percent and a capital structure of 52 percent equity and 48 percent debt. As a result of the settlement, in 2017 Duke Energy Progress recorded pretax charges totaling approximately $25 million to Impairment charges and Operation, maintenance and other on the Consolidated Statements of Operations, principally related to disallowances from rate base of certain projects at the Mayo and Sutton plants. On February 23, 2018, the NCUC issued an order approving the stipulation. The order also included the following material components not covered in the stipulation:

- Recovery of the remaining $234 million of deferred coal ash basin closure costs over a five-year period with a return at Duke Energy Progress' WACC, excluding $10 million of retail deferred coal ash basin costs related to ash hauling at Duke Energy Progress' Asheville Plant;
- Assessment of a $30 million management penalty ratably over a five-year period by reducing the annual recovery of the deferred coal ash costs;
- Denial of Duke Energy Progress' request for recovery of future estimated ongoing annual coal ash costs of $129 million with approval to defer such costs with a return at Duke Energy Progress' WACC, to be considered for recovery in the next rate case; and
- Approval to recover $51 million of the approximately $80 million deferred storm costs over a five-year period with amortization beginning in October 2016. The order did not allow the deferral of the associated capital costs or a return on the deferred balance during the deferral period.

The order also impacted certain amounts that were similarly recorded on Duke Energy Carolinas' Consolidated Balance Sheets. As a result of the order, Duke Energy Progress and Duke Energy Carolinas recorded pretax charges of $68 million and $14 million, respectively, in the first quarter of 2018 to Impairment charges, Operation, maintenance and other and Interest Expense on the Consolidated Statements of Operations. These charges primarily related to the coal ash basin disallowance and previously recognized return impacted by the coal ash management penalty and deferred storm cost adjustments. Revised customer rates became effective on March 16, 2018.

On May 15, 2018, the Public Staff filed a Notice of Cross Appeal to the North Carolina Supreme Court from the February 23, 2018, Order Accepting Stipulation, Deciding Contested Issues and Granting Partial Rate Increase issued by the NCUC. The Public Staff contend the commission's order should be reversed and remanded, as it is affected by errors of law, and is unsupported by competent, material and substantial evidence in view of the entire record as submitted. The North Carolina Attorney General and Sierra Club have also filed Notices of Appeal to the North Carolina Supreme Court from the February 23, 2018, Order Accepting Stipulation, Deciding Contested Issues and Granting Partial Rate Increase. On November 29, 2018, the North Carolina Attorney General's Office filed a motion with the North Carolina Supreme Court requesting the court consolidate the Duke Energy Progress and Duke Energy Carolinas appeals and enter an order adopting the parties' proposed briefing schedule as set out in the filing. On November 29, 2018, the North Carolina Supreme Court adopted a schedule for briefing set forth in the motion to consolidate the Duke Energy Progress and Duke Energy Carolinas appeals. The Appellee response briefs are due July 29, 2019. Duke Energy Progress cannot predict the outcome of this matter.

2016 South Carolina Rate Case

In December 2016, the PSCSC approved a rate case settlement agreement among the ORS, intervenors and Duke Energy Progress. Terms of the settlement agreement included an approximate $56 million increase in revenues over a two-year period. An increase of approximately $38 million in revenues was effective January 1, 2017, and an additional increase of approximately $19 million in revenues was effective January 1, 2018. Duke Energy Progress amortized approximately $19 million from the cost of removal reserve in 2017. Other settlement terms included a rate of return on equity of 10.1 percent, recovery of coal ash costs incurred from January 1, 2015, through June 30, 2016, over a 15-year period and ongoing deferral of allocated ash basin closure costs from July 1, 2016, until the next base rate case. The settlement also provides that Duke Energy Progress will not seek an increase in rates in South Carolina to occur prior to 2019, with limited exceptions.

2018 South Carolina Rate Case

On November 8, 2018, Duke Energy Progress filed an application with the PSCSC for a rate increase for retail customers of approximately $59 million, which represents an approximate 10.3 percent increase in annual base revenues. The rate increase is driven by capital investments and environmental compliance progress made by Duke Energy Progress since its previous rate case, including the further implementation of Duke Energy Progress' generation modernization program, which consists of retiring, replacing and upgrading generation plants, investments in customer service technologies and continued investments in base work to maintain its transmission and distribution systems. The request includes net tax benefits of $15 million consisting of a $12 million increase due to the expiration of EDITs related to reductions in North Carolina state income taxes allocable to South Carolina and decreases resulting from the Tax Act of $17 million to reflect the change in ongoing tax expense, primarily the reduction in the federal income tax rate from 35 to 21 percent, and $10 million to return EDIT resulting from the federal tax rate change and deferred revenues since January 2018 related to the change.

Duke Energy Progress also requested approval of its proposed Grid Improvement Plan, approval of a Prepaid Advantage Program and a variety of accounting orders related to ongoing costs for environmental compliance, including recovery over a five-year period of $51 million of deferred coal ash related compliance costs, AMI deployment, grid investments between rate changes and regulatory asset treatment related to the retirement of a generating plant located in Asheville, North Carolina. Finally, Duke Energy Progress sought approval to establish a reserve and accrual for end of life nuclear costs for materials and supplies and nuclear fuel. An evidentiary hearing is scheduled to begin on April 11, 2019, and a decision and revised customer rates are expected by mid-2019. Duke Energy Progress cannot predict the outcome of this matter.

Western Carolinas Modernization Plan

On November 4, 2015, Duke Energy Progress announced a Western Carolinas Modernization Plan, which included retirement of the existing Asheville coal-fired plant, the construction of two 280-MW combined-cycle natural gas plants having dual-fuel capability, with the option to build a third natural gas simple cycle unit in 2023 based upon the outcome of initiatives to reduce the region's power demand. The plan also included upgrades to existing transmission lines and substations, installation of solar generation and a pilot battery storage project. These investments will be made within the next seven years. Duke Energy Progress is also working with the local natural gas distribution company to upgrade an existing natural gas pipeline to serve the natural gas plant.

On March 28, 2016, the NCUC issued an order approving a CPCN for the new combined-cycle natural gas plants, but denying the CPCN for the contingent simple cycle unit without prejudice to Duke Energy Progress to refile for approval in the future. On March 28, 2018, Duke Energy Progress filed an annual progress report for the construction of the combined-cycle plants with the NCUC, with an estimated cost of $893 million. Site preparation activities for the combined-cycle plants are complete and construction of these plants began in 2017, with an expected in-service date in late 2019.

On October 8, 2018, Duke Energy Progress filed an application with the NCUC for a CPCN to construct the Hot Springs Microgrid Solar and Battery Storage Facility. On November 30, 2018, the NCUC issued an order scheduling hearings, requiring filing of testimony, establishing discovery guidelines and requiring public notice. On February 7, 2019, Duke Energy Progress made a joint filing with the Public Staff, which accepted the Public Staff's proposed conditions and requested that the NCUC cancel the evidentiary hearing. Duke Energy Progress cannot predict the outcome of this matter.

The carrying value of the 376-MW Asheville coal-fired plant, including associated ash basin closure costs, of $327 million and $385 million is included in Generation facilities to be retired, net on Duke Energy Progress' Consolidated Balance Sheets as of December 31, 2018, and 2017, respectively. Duke Energy Progress' request for a regulatory asset at the time of retirement with amortization over a 10-year period was approved by the NCUC on February 23, 2018.

Shearon Harris Nuclear Plant Expansion

In 2006, Duke Energy Progress selected a site at Harris to evaluate for possible future nuclear expansion. On February 19, 2008, Duke Energy Progress filed its COL application with the NRC for two Westinghouse AP1000 reactors at Harris, which the NRC docketed for review. On May 2, 2013, Duke Energy Progress filed a letter with the NRC requesting the NRC to suspend its review activities associated with the COL at the Harris site. The NCUC and PSCSC approved deferral of retail costs. Total deferred costs are approximately $43 million as of December 31, 2018, and are recorded in Regulatory assets on Duke Energy Progress' Consolidated Balance Sheets. On November 17, 2016, the FERC approved Duke Energy Progress' rate recovery request filing for the wholesale ratepayers' share of the abandonment costs, including a debt-only return to be recovered through revised formula rates and amortized over a 15-year period beginning May 1, 2014. As part of the settlement agreement for the 2017 North Carolina Rate Case discussed above, Duke Energy Progress will amortize the regulatory asset over an eight-year period. NCUC approved the settlement on February 23, 2018.

South Carolina Petitions

On June 22, 2018, Duke Energy Progress filed a petition with the PSCSC seeking an accounting order authorizing Duke Energy Progress to adopt new depreciation rates, effective March 16, 2018, that reflect the results of Duke Energy Progress' most recent depreciation study. Also on June 22, 2018, Duke Energy Progress filed a petition with the PSCSC requesting an accounting order to defer certain costs incurred in connection with the deployment of AMI, the ongoing deployment of Duke Energy Progress' new billing and Customer Information System, new depreciation rates and costs incurred in connection with the return of certain excess deferred state income taxes from North Carolina. These requests totaling approximately $20 million were approved on July 25, 2018.

FERC Form 1 Reporting Matter

On October 18, 2017, Fayetteville Public Works Commission (FPWC) filed with FERC a complaint against Duke Energy Progress. In the complaint, FPWC alleges that Duke Energy Progress' change in its method of reporting materials and supplies inventory on FERC Form 1 for 2015 constituted a change in accounting practice that Duke Energy Progress was not permitted to implement without first obtaining FERC approval. On April 23, 2018, FERC issued an order finding that Duke Energy Progress' new reporting methodology was not proper and required Duke Energy Progress to revise its FERC Form 1s beginning in 2014 and to issue refunds to formula rate customers. Duke Energy Progress estimates that these refunds will total approximately $14 million. On May 23, 2018, Duke Energy Progress filed a request for rehearing alleging that FERC's order is incorrect. Duke Energy Progress revised its FERC Form 1 filings in June 2018. On August 31, 2018, Duke Energy Progress filed with FERC a refund report memorializing its payment of refunds to FPWC. Duke Energy Progress cannot predict the outcome of this matter.

Tax Act

As ordered by the NCUC on October 5, 2018, Duke Energy Progress filed a proposal on October 25, 2018, to adjust rates to reflect the reduction in federal corporate income tax rate from 35 to 21 percent for taxable years beginning after December 31, 2017, as outlined in the Tax Act. Duke Energy Progress proposed that this rate decrement be effective for service rendered on and after December 1, 2018. On November 28, 2018, the NCUC approved the proposal to implement the change in the federal corporate income tax rate and effective December 1, 2018, Duke Energy Progress implemented the rate reduction. Also, as ordered by the NCUC on October 5, 2018, Duke Energy Progress shall continue to hold in a deferred regulatory liability account the difference between revenues billed under the prior federal corporate income tax rate and the federal corporate income tax rate resulting from the Tax Act for the period January 1, 2018 through November 30, 2018. The disposition of such regulatory liability may be considered in Duke Energy Progress' next general rate case proceeding or in three years, whichever is sooner. EDIT related to the corporate income tax rate reduction shall be held in a deferred tax regulatory liability account until they can be addressed for ratemaking purposes in the next general rate case proceeding or in three years, whichever is sooner.

Duke Energy Florida

Regulatory Assets and Liabilities

The following tables present the regulatory assets and liabilities recorded on Duke Energy Florida's Consolidated Balance Sheets.

(in millions)	December 31, 2018	December 31, 2017	Earns/Pays a Return	Recovery/Refund Period Ends
Regulatory Assets[a]				
AROs – coal ash[c]	$ 10	$ 9		(b)
AROs – nuclear and other[c]	172	296		(b)
Accrued pension and OPEB[c]	532	476	X	(g)
Retired generation facilities[c]	219	216	X	(b)
Storm cost deferrals[c][h]	382	376	(e)	2021
Nuclear asset securitized balance, net	1,093	1,142		2036
Hedge costs deferrals	20	30		2020
DSM/EE[c]	21	17	X	2023
Deferred fuel and purchased power[c]	203	219	(f)	2020
AMI[c]	60	75	X	2032
Other	176	36	(d)	(b)
Total regulatory assets	2,888	2,892		
Less: current portion	434	389		
Total noncurrent regulatory assets	$ 2,454	$ 2,503		
Regulatory Liabilities[a]				
Costs of removal[c]	$ 257	$ 415	(d)	(b)
Net regulatory liability related to income taxes[c]	847	948		(b)
Accrued pension and OPEB	56	—	X	(g)
Deferred fuel and purchased power[c]	16	—	(f)	2020
Other	20	18	(d)	(b)
Total regulatory liabilities	1,196	1,381		
Less: current portion	102	74		
Total noncurrent regulatory liabilities	$ 1,094	$ 1,307		

(a) Regulatory assets and liabilities are excluded from rate base unless otherwise noted.
(b) The expected recovery or refund period varies or has not been determined.
(c) Included in rate base.
(d) Certain costs earn a return.
(e) Earns a debt return/interest once collections begin.
(f) Earns commercial paper rate.
(g) Recovered primarily over the average remaining service periods or life expectancies of employees covered by the benefit plans. See Note 22 for additional detail.
(h) Balance includes $165 million for Hurricane Michael. Duke Energy Florida expects to seek recovery of these costs in the first half of 2019.

Storm Restoration Cost Recovery

In September 2017, Duke Energy Florida's service territory suffered significant damage from Hurricane Irma, resulting in approximately 1 million customers experiencing outages. In the fourth quarter of 2017, Duke Energy Florida also incurred preparation costs related to Hurricane Nate. On December 28, 2017, Duke Energy Florida filed a petition with the FPSC to recover incremental storm restoration costs for Hurricane Irma and Hurricane Nate and to replenish the storm reserve. On February 6, 2018, the FPSC approved a stipulation that would apply tax savings resulting from the Tax Act toward storm costs effective January 2018 in lieu of implementing a storm surcharge. Storm costs are currently expected to be fully recovered by approximately mid-2021. On May 31, 2018, Duke Energy Florida filed a petition for approval of actual storm restoration costs and associated recovery process related to Hurricane Irma and Hurricane Nate. The petition is seeking the approval for the recovery in the amount of $510 million in actual recoverable storm restoration costs, including the replenishment of Duke Energy Florida's storm reserve of $132 million, and the process for recovering these recoverable storm costs. On August 20, 2018, the FPSC approved Duke Energy Florida's unopposed Motion for Continuance filed August 17, 2018, to allow for an evidentiary hearing in this matter. On January 28, 2019, Duke Energy Florida made a supplemental filing to reduce the total storm cost recovery from $510 million to $508 million. The commission has scheduled the hearing to begin on May 21, 2019. At December 31, 2018, Duke Energy Florida's Consolidated Balance Sheets included approximately $217 million of recoverable costs under the FPSC's storm rule in Regulatory assets within Current Assets and Other Noncurrent Assets related to storm recovery for Hurricane Irma and Hurricane Nate. Duke Energy Florida cannot predict the outcome of this matter.

In October 2018, Duke Energy Florida's service territory suffered damage when Hurricane Michael made landfall as a strong Category 4 hurricane with maximum sustained winds of 155 mph. The storm caused catastrophic damage from wind and storm surge, particularly from Panama City Beach to Mexico Beach, resulting in widespread outages and significant damage to transmission and distribution facilities across the central Florida Panhandle. In response to Hurricane Michael, Duke Energy Florida restored service to approximately 72,000 customers. Duke Energy Florida incurred approximately $200 million of costs resulting from the hurricane restoration efforts. Approximately $35 million of the costs are included in Net property, plant and equipment on the Consolidated Balance Sheets as of December 31, 2018. The remaining $165 million of costs represent recoverable costs under the FPSC's storm rule and Duke Energy Florida's Open Access Transmission Tariff formula rates and are included in Regulatory assets within Other Noncurrent Assets on the Consolidated Balance Sheets as of December 31, 2018. Duke Energy Florida anticipates filing a petition with the FPSC in the first half of 2019 to recover these costs, consistent with the provisions in the 2017 Settlement. Duke Energy Florida cannot predict the outcome of this matter.

Tax Act

Pursuant to Duke Energy Florida's 2017 Settlement, on May 31, 2018, Duke Energy Florida filed a petition related to the Tax Act, which included revenue requirement impacts of annual tax savings of $134 million and estimated annual amortization of EDIT of $67 million for a total of $201 million. Of this amount, $50 million would be offset by accelerated depreciation of Crystal River 4 and 5 coal units and an estimated $151 million would be offset by Hurricane Irma storm cost recovery as explained in the Storm Restoration Cost Recovery section above. On December 27, 2018, Duke Energy Florida filed actual EDIT balances and amortization based on its 2017 filed tax return. This increased the revenue requirement impact of the amortization of EDIT by $4 million, from $67 million to $71 million. On January 8, 2019, the FPSC approved a joint motion by Duke Energy Florida and the Office of Public Counsel resolving all stipulated positions. As part of that stipulation, Duke Energy Florida will seek a Private Letter Ruling from the IRS on its treatment of COR as mostly protected by tax normalization rules. If the IRS rules that COR is not protected by tax normalization rules, then Duke Energy Florida will make a final adjustment to the amortization of EDIT and an adjustment to the storm recovery amount retroactive to January 2018. Duke Energy Florida cannot predict the outcome of this matter.

Citrus County CC

On October 2, 2014, the FPSC granted Duke Energy Florida a Determination of Need for the construction of a 1,640-MW combined-cycle natural gas plant in Citrus County, Florida. At that time, the estimated cost of the facility was $1.5 billion, including AFUDC. On May 5, 2015, the Florida Department of Environmental Protection approved Duke Energy Florida's Site Certification Application and construction began in October 2015. On July 10, 2018, the FPSC approved Duke Energy Florida's request to include the annual revenue requirement of $200 million for the new Citrus County combined-cycle units in base rates. The first 820-MW power block came on-line on October 26, 2018, and the rate increase for this unit was effective in December 2018. The second 820-MW power block came on-line November 24, 2018. The rate increase for the second unit was effective in January 2019. The ultimate cost of the facility is estimated to be $1.6 billion, and Duke Energy Florida recorded Impairment charges on Duke Energy's Consolidated Statements of Operations of $60 million in the fourth quarter of 2018 for the overrun, which may change in light of recoveries from the EPC contractor. The plant began receiving natural gas from the Sabal Trail pipeline in August 2018. As a result of the combined-cycle natural gas plant coming on-line, Crystal River coal-fired units 1 and 2 were retired in December 2018. See Note 5 for additional information on Citrus.

Solar Base Rate Adjustment

On July 31, 2018, Duke Energy Florida petitioned the FPSC to include in base rates the revenue requirements for its first two solar generation projects, the Hamilton Project and the Columbia Project, as authorized by the 2017 Settlement. The Hamilton Project, which was placed into service on December 22, 2018, has an annual retail revenue requirement of $15 million and the increase was effective in January 2019. The Columbia Project has a projected annual revenue requirement of $14 million and a projected in-service date in early 2020; the associated rate increase would take place with the first month's billing cycle after the Columbia Project goes into service. At its October 30, 2018, Agenda Conference, the FPSC approved the rate increase related to the Hamilton Project to go into effect beginning with the first billing cycle in January 2019 under its file and suspend authority. Rates are subject to true up pending the outcome of the final hearing, which is scheduled to take place on April 2, 2019. Duke Energy Florida cannot predict the outcome of this matter.

Duke Energy Ohio

Regulatory Assets and Liabilities

The following tables present the regulatory assets and liabilities recorded on Duke Energy Ohio's Consolidated Balance Sheets.

(in millions)	December 31, 2018	December 31, 2017	Earns/Pays a Return	Recovery/Refund Period Ends
Regulatory Assets[a]				
AROs – coal ash	$ 20	$ 17	X	(b)
Accrued pension and OPEB	146	139		(g)
Storm cost deferrals	4	5		2023
Hedge costs deferrals	5	6		(b)
DSM/EE	10	18	(f)	(e)
Grid modernization	31	39	X	(e)
Vacation accrual	5	5		2019
Deferred fuel and purchased power	2	—		2019
PISCC and deferred operating expenses[c]	17	19	X	2083
Transmission expansion obligation	43	50		(e)
MGP	99	91		(b)
AMI	46	6		(b)
East Bend deferrals	47	45	X	(b)
Deferred pipeline integrity costs	14	12	X	(b)
Other	75	42		(b)
Total regulatory assets	564	494		
Less: current portion	33	49		
Total noncurrent regulatory assets	$ 531	$ 445		
Regulatory Liabilities[a]				
Costs of removal	$ 126	$ 189		(d)
Net regulatory liability related to income taxes	678	688		(b)
Accrued pension and OPEB	18	16		(g)
Other	75	34		(b)
Total regulatory liabilities	897	927		
Less: current portion	57	36		
Total noncurrent regulatory liabilities	$ 840	$ 891		

(a) Regulatory assets and liabilities are excluded from rate base unless otherwise noted.
(b) The expected recovery or refund period varies or has not been determined.
(c) Included in rate base.
(d) Recovery over the life of the associated assets.
(e) Recovered via a rider mechanism.
(f) Includes incentives on DSM/EE investments.
(g) Recovered primarily over the average remaining service periods or life expectancies of employees covered by the benefit plans. See Note 22 for additional detail.

2017 Electric Security Plan

On June 1, 2017, Duke Energy Ohio filed with the PUCO a request for a standard service offer in the form of an ESP. On February 15, 2018, the procedural schedule was suspended to facilitate ongoing settlement discussions. On April 13, 2018, Duke Energy Ohio filed a Motion to consolidate this proceeding with several other cases currently pending before the PUCO, including, but not limited to, its Electric Base Rate Case. Additionally, on April 13, 2018, Duke Energy Ohio, along with certain intervenors, filed a Stipulation and Recommendation (Stipulation) with the PUCO resolving certain issues in this proceeding. The term of the ESP would be from June 1, 2018, to May 31, 2025, and includes continuation of market-based customer rates through competitive procurement processes for generation, continuation and expansion of existing rider mechanisms and proposed new rider mechanisms relating to regulatory mandates, costs incurred to enhance the customer experience and transform the grid and a service reliability rider for vegetation management. The Stipulation establishes a regulatory model for the next seven years via the approval of the ESP and continues the current model for procuring supply for non-shopping customers, including recovery mechanisms. On December 19, 2018, the PUCO approved the Stipulation without material modification. Several parties have filed applications for rehearing. On February 6, 2019, the PUCO granted the parties rehearing. Duke Energy Ohio cannot predict the outcome of this matter.

Electric Base Rate Case

Duke Energy Ohio filed with the PUCO an electric distribution base rate case application and supporting testimony in March 2017. Duke Energy Ohio requested an estimated annual increase of approximately $15 million and a return on equity of 10.4 percent. The application also included requests to continue certain current riders and establish new riders. On September 26, 2017, the PUCO staff filed a report recommending a revenue decrease between approximately $18 million and $29 million and a return on equity between 9.22 percent and 10.24 percent. On April 13, 2018, Duke Energy Ohio filed a Motion to consolidate this proceeding with several other cases pending before the PUCO. On April 13, 2018, Duke Energy Ohio, along with certain intervenors, filed the Stipulation with the PUCO resolving numerous issues including those in this base rate proceeding. Major components of the Stipulation related to the base distribution rate case include a $19 million decrease in annual base distribution revenue with a return on equity unchanged from the current rate of 9.84 percent based upon a capital structure of 50.75 percent equity and 49.25 percent debt. Upon approval of new rates, Duke Energy Ohio's rider for recovering its initial SmartGrid implementation ends as these costs will be recovered through base rates. The Stipulation also renews 14 existing riders, some of which were included in the company's ESP, and adds two new riders including the Enhanced Service Reliability Rider to recover vegetation management costs not included in base rates, up to $10 million per year (operation and maintenance only) and the PowerForward Rider to recover costs incurred to enhance the customer experience and further transform the grid (operation and maintenance and capital). In addition to the changes in revenue attributable to the Stipulation, Duke Energy Ohio's capital-related riders, including the Distribution Capital Investments Rider, began to reflect the lower federal income tax rate associated with the Tax Act with updates to customers' bills beginning April 1, 2018. This change reduces electric revenue by approximately $20 million on an annualized basis. On December 19, 2018, the PUCO approved the Stipulation without material modification. New base rates were implemented effective January 2, 2019. Several parties have filed applications for rehearing. On February 6, 2019, the PUCO granted the parties rehearing. Duke Energy Ohio cannot predict the outcome of this matter.

Ohio Valley Electric Corporation

On March 31, 2017, Duke Energy Ohio filed for approval to adjust its existing price stabilization rider (Rider PSR), which is currently set at zero dollars, to pass through net costs related to its contractual entitlement to capacity and energy from the generating assets owned by OVEC. Duke Energy Ohio sought deferral authority for net costs incurred from April 1, 2017, until the new rates under Rider PSR are put into effect. On April 13, 2018, Duke Energy Ohio filed a Motion to consolidate this proceeding with several other cases currently pending before the PUCO. Also on April 13, 2018, Duke Energy Ohio, along with certain intervenors, filed a Stipulation with the PUCO resolving numerous issues including those related to Rider PSR. The Stipulation activates Rider PSR for recovery of net costs incurred from January 1, 2018 through May 2025. On December 19, 2018, the PUCO approved the Stipulation without material modification. Several parties have filed applications for rehearing. On February 6, 2019, the PUCO granted the parties rehearing. Duke Energy Ohio cannot predict the outcome of this matter. See Note 17 for additional discussion of Duke Energy Ohio's ownership interest in OVEC.

Tax Act – Ohio

On July 25, 2018, Duke Energy Ohio filed an application to establish a new rider to implement the benefits of the Tax Act for electric distribution customers. Duke Energy Ohio requested commission approval to implement the rider effective October 1, 2018, as a credit to all distribution customers based upon a percent reduction to Duke Energy Ohio's distribution rates. The new rider will flow through to customers the benefit of the lower statutory federal tax rate from 35 to 21 percent since January 1, 2018, all future benefits of the lower tax rates and a full refund of deferred income taxes collected at the higher tax rates in prior years. Deferred income taxes subject to normalization rules will be refunded consistent with federal law and deferred income taxes not subject to normalization rules will be refunded over a 10-year period. Duke Energy Ohio's transmission rates reflect lower federal income tax but guidance from FERC on amortization of both protected and unprotected transmission-related EDITs is still pending. On October 24, 2018, the PUCO issued a Finding and Order that, among other things, directed all utilities over which the commission has rate-making authority to file an application to pass the benefits of the Tax Act to customers by January 1, 2019, unless otherwise exempted or directed by the PUCO. Duke Energy Ohio's July 25, 2018, filing for electric distribution operations is consistent with the commission's October 24, 2018, Finding and Order and no further action is needed. On February 20, 2019, the PUCO approved the application without material modification. Rates will be effective March 1, 2019. On December 21, 2018, Duke Energy Ohio filed an application to change its base rates and establish a new rider to implement the benefits of the Tax Act for natural gas customers. Duke Energy Ohio requested commission approval to implement the changes and rider effective April 1, 2019. The new rider will flow through to customers the benefit of the lower statutory federal tax rate from 35 to 21 percent since January 1, 2018, all future benefits of the lower tax rates and a full refund of deferred income taxes collected at the higher tax rates in prior years. Deferred income taxes subject to normalization rules will be refunded consistent with federal law and deferred income taxes not subject to normalization rules will be refunded over a 10-year period. The PUCO has not yet ruled on the application for changes for natural gas customers. Duke Energy Ohio cannot predict the outcome of this matter.

Energy Efficiency Cost Recovery

On March 28, 2014, Duke Energy Ohio filed an application for recovery of program costs, lost distribution revenue and performance incentives related to its energy efficiency and peak demand reduction programs. These programs are undertaken to comply with environmental mandates set forth in Ohio law. The PUCO approved Duke Energy Ohio's application but found that Duke Energy Ohio was not permitted to use banked energy savings from previous years in order to calculate the amount of allowed incentive. This conclusion represented a change to the cost recovery mechanism that had been agreed upon by intervenors and approved by the PUCO in previous cases. The PUCO granted the applications for rehearing filed by Duke Energy Ohio and an intervenor. On January 6, 2016, Duke Energy Ohio and the PUCO Staff entered into a stipulation, pending the PUCO's approval, to resolve issues related to performance incentives and the PUCO Staff audit of 2013 costs, among other issues. In December 2015, based upon the stipulation, Duke Energy Ohio re-established approximately $20 million of the revenues that had been previously reversed. On October 26, 2016, the PUCO issued an order approving the stipulation without modification. In December 2016, the PUCO granted the intervenors request for rehearing for the purpose of further review. Duke Energy Ohio cannot predict the outcome of this matter.

On June 15, 2016, Duke Energy Ohio filed an application for approval of a three-year energy efficiency and peak demand reduction portfolio of programs. A stipulation and modified stipulation were filed on December 22, 2016, and January 27, 2017, respectively. Under the terms of the stipulations, which included support for deferral authority of all costs and a cap on shared savings incentives, Duke Energy Ohio has offered its energy efficiency and peak demand reduction programs throughout 2017. On February 3, 2017, Duke Energy Ohio filed for deferral authority of its costs incurred in 2017 in respect of its proposed energy efficiency and peak demand reduction portfolio. On September 27, 2017, the PUCO issued an order approving a modified stipulation. The modifications impose an annual cap of approximately $38 million on program costs and shared savings incentives combined, but allowed for Duke Energy Ohio to file for a waiver of costs in excess of the cap in 2017. The PUCO approved the waiver request for 2017 up to a total cost of $56 million. On November 21, 2017, the PUCO granted Duke Energy Ohio's and intervenor's applications for rehearing of the September 27, 2017, order. On January 10, 2018, the PUCO denied the Ohio Consumers' Counsel's application for rehearing of the PUCO order granting Duke Energy Ohio's waiver request; however, a decision on Duke Energy Ohio's application for rehearing remains pending. Duke Energy Ohio cannot predict the outcome of this matter.

2014 Electric Security Plan

In April 2015, the PUCO modified and approved Duke Energy Ohio's proposed ESP, with a three-year term and an effective date of June 1, 2015. The PUCO approved a competitive procurement process for SSO load, a distribution capital investment rider (Rider DCI) and a tracking mechanism for incremental distribution expenses caused by major storms. The PUCO also approved a placeholder tariff for a price stabilization rider, but denied Duke Energy Ohio's specific request to include Duke Energy Ohio's entitlement to generation from OVEC in the rider at this time; however, the order allows Duke Energy Ohio to submit additional information to request recovery in the future. On May 4, 2015, Duke Energy Ohio filed an application for rehearing requesting the PUCO to modify or amend certain aspects of the order. On May 28, 2015, the PUCO granted all applications for rehearing filed in the case for future consideration. On March 21, 2018, the PUCO issued an order denying Duke Energy Ohio's issues on rehearing. On April 20, 2018, Duke Energy Ohio filed a second application for rehearing based upon the commission's March 21, 2018, Order. On May 16, 2018, the commission issued its third Entry on Rehearing granting in part, and denying in part, Duke Energy Ohio's rehearing request.

On March 9, 2018, Duke Energy Ohio filed a motion to extend its then-current ESP, including all terms and conditions thereof, pending approval of a new ESP. On May 30, 2018, the PUCO granted the request, with modification. Specifically, the PUCO did not extend the cap applicable to Rider DCI beyond July 31, 2018. Duke Energy Ohio sought rehearing of this finding. On July 25, 2018, the PUCO granted the request and allowed a continuing cap on recovery under Rider DCI. On August 24, 2018, OMA and OCC filed an Application for Rehearing of the commission's decision. Duke Energy Ohio filed a Memorandum Contra OCC's request for rehearing of the commission's continuation of Rider DCI on September 4, 2018. On September 19, 2018, the PUCO issued an Order granting rehearing on the matter for further consideration. Duke Energy Ohio cannot predict the outcome of this matter.

On May 21, 2018, the Ohio Manufacturers' Association (OMA) filed a notice of appeal of PUCO's approval of Duke Energy Ohio's ESP with the Ohio Supreme Court, challenging PUCO's approval of Duke Energy Ohio's Price Stability Rider as a placeholder and its Rider DCI to recover incremental revenue requirement for distribution capital since Duke Energy Ohio's last base rate case. On July 16, 2018, the Office of the Ohio Consumers' Counsel (OCC) filed its own appeal of Duke Energy Ohio's ESP with the Ohio Supreme Court raising similar issues to that of the OMA. Duke Energy Ohio filed a Motion to Intervene in the two Ohio Supreme Court appeals. OMA's Supreme Court brief was filed on August 20, 2018. PUCO submitted its brief on October 26, 2018, and Duke Energy Ohio filed its brief on October 29, 2018. The OCC's Supreme Court brief was filed on October 15, 2018. Duke Energy Ohio filed its brief on December 20, 2018. The PUCO submitted its brief on December 21, 2018. Duke Energy Ohio cannot predict the outcome of this matter.

Natural Gas Pipeline Extension

Duke Energy Ohio is proposing to install a new natural gas pipeline (the Central Corridor Project) in its Ohio service territory to increase system reliability and enable the retirement of older infrastructure. Duke Energy Ohio currently estimates the pipeline development costs and construction activities will range from $163 million to $245 million in direct costs (excluding overheads and AFUDC). On January 20, 2017, Duke Energy Ohio filed an amended application with the Ohio Power Siting Board (OPSB) for approval of one of two proposed routes. A public hearing was held on June 15, 2017. In April 2018, Duke Energy Ohio filed a motion with OPSB to establish a procedural schedule and filed supplemental information supporting its application. On December 18, 2018, the OPSB established a procedural schedule that includes a local public hearing on March 21, 2019, and an evidentiary hearing starting on April 9, 2019. If approved, construction of the pipeline extension is expected to be completed before the 2021/2022 winter season. Duke Energy Ohio cannot predict the outcome of this matter.

2012 Natural Gas Rate Case/MGP Cost Recovery

On November 13, 2013, the PUCO issued an order approving a settlement of Duke Energy Ohio's natural gas base rate case and authorizing the recovery of costs incurred between 2008 and 2012 for environmental investigation and remediation of two former MGP sites. The PUCO order also authorized Duke Energy Ohio to continue deferring MGP environmental investigation and remediation costs incurred subsequent to 2012 and to submit annual filings to adjust the MGP rider for future costs. Intervening parties appealed this decision to the Ohio Supreme Court and on June 29, 2017, the Ohio Supreme Court issued its decision affirming the PUCO order. Appellants filed a request for reconsideration, which was denied on September 27, 2017. This matter is now final.

The PUCO order also contained conditional deadlines for completing the MGP environmental investigation and remediation costs at the MGP sites. As of December 31, 2018, Duke Energy Ohio had approximately $24 million for future remediation costs expected to be incurred at the East End site and approximately $23 million for future remediation costs expected to be incurred at the West End site included in Regulatory assets within Other Noncurrent Assets on the Consolidated Balance Sheets.

Duke Energy Kentucky Electric Rate Case

On September 1, 2017, Duke Energy Kentucky filed a rate case with the KPSC requesting an increase in electric base rates of approximately $49 million, which represents an approximate 15 percent increase on the average customer bill. Subsequent to the filing, Duke Energy Kentucky adjusted the requested amount to $30.1 million, in part to reflect the benefits of the Tax Act, representing an approximate 9 percent increase on the average customer bill. The rate increase was driven by increased investment in utility plant, increased operations and maintenance expenses and recovery of regulatory assets. The application also includes requests to implement an Environmental Surcharge Mechanism to recover environmental costs not recovered in base rates, to establish a Distribution Capital Investment Rider to recover incremental costs of specific programs, to establish a FERC Transmission Cost Reconciliation Rider to recover escalating transmission costs and to modify existing Profit Sharing Mechanism to increase customers' share of proceeds from the benefits of owning generation and to mitigate shareholder risks associated with that generation. An evidentiary hearing concluded on March 8, 2018, and the KPSC issued an order on April 13, 2018. Major components of the Order include approval of an $8 million increase in base rates with a return on equity at 9.725 percent based upon a capital structure of 49 percent equity on a total allocable capitalization of approximately $650 million. The Order approved the Environmental Surcharge Mechanism Rider and in June 2018 recovery began of capital-related environmental costs, including costs related to ash and ash disposal, and environmental operation and maintenance expenses formerly recovered in base rates, including expenses for environmental reagents and emission allowances. The incremental revenue from this rider will be approximately $13 million on an annualized basis. The order settles all issues associated with the Tax Act as it relates to the electric business by lowering the income tax component of the revenue requirement and refunding protected EDIT under allowable normalization rules and unprotected EDIT over 10 years. The Order denied requests to implement riders for certain transmission costs and distribution capital investments. Duke Energy Kentucky implemented new base rates on May 1, 2018. On May 3, 2018, Duke Energy Kentucky filed an application for rehearing on certain aspects of the order; on May 23, 2018, the KPSC granted a rehearing. On October 2, 2018, the KPSC issued its rehearing order correcting certain findings in its initial order and making additional changes that are immaterial to the company's earnings.

Duke Energy Kentucky Natural Gas Base Rate Case

On August 31, 2018, Duke Energy Kentucky filed an application with the KPSC requesting an increase in natural gas base rates of approximately $11 million, an approximate 11.1 percent average increase across all customer classes. The increase is net of approximately $5 million in annual savings as a result of the Tax Act. The drivers for this case are capital invested since Duke Energy Kentucky's last rate case in 2009. Duke Energy Kentucky is also seeking implementation of a Weather Normalization Adjustment Mechanism, amortization of regulatory assets and to implement the impacts of the Tax Act, prospectively. On January 30, 2019, Duke Energy Kentucky entered into a settlement agreement with the Attorney General of Kentucky, the only intervenor in the case, which if approved would resolve the matter. The settlement provides for an approximate $7 million increase and approval of the proposed Weather Normalization Mechanism. A hearing was held on February 5, 2019. A ruling is expected in late first quarter 2019. Duke Energy Kentucky cannot predict the outcome of this matter.

FERC 494 Refund of Regional Transmission Enhancement Projects

FERC Order No. 494 Settlement Agreement (FERC 494 Settlement Agreement) was entered into by most of the PJM transmission owners, including Duke Energy Ohio and Duke Energy Kentucky, and the PJM state regulatory commissions approximately two years ago and was planned to be effective on January 1, 2016; however, it was not approved by FERC until May 31, 2018. The FERC 494 Settlement Agreement was due to the Seventh Circuit Court of Appeals finding that FERC had failed to adequately justify the costs that the customers in the western part of PJM were being charged for high voltage transmission projects, or Regional Transmission Expansion Plan (RTEP) projects (500 kV and above) built in the east. These costs were being allocated to all PJM customers on a load-ratio share basis but the court determined that these costs were not justifiable to customers in the west, including Duke Energy Ohio and Duke Energy Kentucky, that did not benefit from the RTEP projects. Costs for the periods 2012 through 2015 are expected to be refunded to Duke Energy Ohio and Duke Energy Kentucky on a monthly basis through December 2025. The refund amount for similar costs incurred beginning in 2016 through June 30, 2018, prior to the change in cost allocation by PJM was determined in the third quarter of 2018 and these amounts will be refunded over a 12-month period beginning in July 2018. These refunds, totaling approximately $47 million for Duke Energy Ohio and Duke Energy Kentucky, have been recorded to Operation, maintenance and other on the Consolidated Statements of Operations for the year ended December 31, 2018.

Regional Transmission Organization Realignment

Duke Energy Ohio, including Duke Energy Kentucky, transferred control of its transmission assets from MISO to PJM, effective December 31, 2011. The PUCO approved a settlement related to Duke Energy Ohio's recovery of certain costs of the RTO realignment via a non-bypassable rider. Duke Energy Ohio is allowed to recover all MTEP costs directly or indirectly charged to Ohio customers. The KPSC also approved a request to effect the RTO realignment, subject to a commitment not to seek double recovery in a future rate case of the transmission expansion fees that may be charged by MISO and PJM in the same period or overlapping periods.

The following table provides a reconciliation of the beginning and ending balance of Duke Energy Ohio's recorded liability for its exit obligation and share of MTEP costs recorded in Other within Current Liabilities and Other Noncurrent Liabilities on the Consolidated Balance Sheets. The retail portions of MTEP costs billed by MISO are recovered by Duke Energy Ohio through a non-bypassable rider. As of December 31, 2018, and 2017, $43 million and $50 million, respectively, are recorded in Regulatory assets on Duke Energy Ohio's Consolidated Balance Sheets.

(in millions)	December 31, 2017	Provisions/ Adjustments	Cash Reductions	December 31, 2018
Duke Energy Ohio	$ 66	$ (4)	$ (4)	$ 58

Duke Energy Indiana

Regulatory Assets and Liabilities

The following tables present the regulatory assets and liabilities recorded on Duke Energy Indiana's Consolidated Balance Sheets.

	December 31,		Earns/Pays	Recovery/Refund
(in millions)	2018	2017	a Return	Period Ends
Regulatory Assets[a]				
AROs – coal ash	$ 450	$ 380		(b)
Accrued pension and OPEB	222	197		(f)
Retired generation facilities[c]	57	65	X	2026
Hedge costs deferrals	24	25		(b)
DSM/EE	14	21	(e)	(e)
Vacation accrual	11	11		2019
Deferred fuel and purchased power	40	18		2019
PISCC and deferred operating expenses[c]	233	274	X	(b)
AMI[c]	18	21	X	(b)
Other	88	131		(b)
Total regulatory assets	1,157	1,143		
Less: current portion	175	165		
Total noncurrent regulatory assets	$ 982	$ 978		
Regulatory Liabilities[a]				
Costs of removal	$ 628	$ 644		(d)
Net regulatory liability related to income taxes	1,009	998		(b)
Amounts to be refunded to customers	1	10		2019
Accrued pension and OPEB	67	64		(f)
Other	42	31		(b)
Total regulatory liabilities	1,747	1,747		
Less: current portion	25	24		
Total noncurrent regulatory liabilities	$ 1,722	$ 1,723		

(a) Regulatory assets and liabilities are excluded from rate base unless otherwise noted.
(b) The expected recovery or refund period varies or has not been determined.
(c) Included in rate base.
(d) Recovery over the life of the associated assets.
(e) Includes incentives on DSM/EE investments and is recovered through a tracker mechanism over a two-year period.
(f) Recovered primarily over the average remaining service periods or life expectancies of employees covered by the benefit plans. See Note 22 for additional detail.

FERC Transmission Return on Equity Complaint

Customer groups have filed with the FERC complaints against Midcontinent Independent System Operator, Inc. (MISO) and its transmission-owning members, including Duke Energy Indiana, alleging, among other things, that the current base rate of return on equity earned by MISO transmission owners of 12.38 percent is unjust and unreasonable. The complaints claim, among other things, that the current base rate of return on equity earned by MISO transmission owners should be reduced to 8.67 percent. On January 5, 2015, the FERC issued an order accepting the MISO transmission owners' adder of 0.50 percent to the base rate of return on equity based on participation in an RTO subject to it being applied to a return on equity that is shown to be just and reasonable in the pending return on equity complaints. On December 22, 2015, the presiding FERC ALJ in the first complaint issued an Initial Decision in which the base rate of return on equity was set at 10.32 percent. On September 28, 2016, the Initial Decision in the first complaint was affirmed by FERC, but is subject to rehearing requests. On June 30, 2016, the presiding FERC ALJ in the second complaint issued an Initial Decision setting the base rate of return on equity at 9.70 percent. The Initial Decision in the second complaint is pending FERC review. On April 14, 2017, the U.S. Court of Appeals for the District of Columbia Circuit, in *Emera Maine v. FERC*, reversed and remanded certain aspects of the methodology employed by FERC to establish rates of return on equity. On October 16, 2018, FERC issued an order in response to the Emera remand proceeding proposing a new method for determining whether an existing return on equity is unjust and unreasonable, and a new process for determining a just and reasonable return on equity. On November 14, 2018, FERC directed parties to the MISO complaints to file briefs on how the new process for determining return on equity proposed in the Emera proceeding should be applied to the complaints involving the MISO transmission owners' return on equity. Initial briefs were filed on February 13, 2019, and reply briefs will be due April 10, 2019. Duke Energy Indiana currently believes these matters will not have a material impact on its results of operations, cash flows and financial position.

Benton County Wind Farm Dispute

On December 16, 2013, BCWF filed a lawsuit against Duke Energy Indiana seeking damages for past generation losses alleging Duke Energy Indiana violated its obligations under a 2006 PPA by refusing to offer electricity to the market at negative prices. Damage claims continue to increase during times that BCWF is not dispatched. Under 2013 revised MISO market rules, Duke Energy Indiana is required to make a price offer to MISO for the power it proposes to sell into MISO markets and MISO determines whether BCWF is dispatched. Because market prices would have been negative due to increased market participation, Duke Energy Indiana determined it would not bid at negative prices in order to balance customer needs against BCWF's need to run. BCWF contends Duke Energy Indiana must bid at the lowest negative price to ensure dispatch, while Duke Energy Indiana contends it is not obligated to bid at any particular price, that it cannot ensure dispatch with any bid and that it has reasonably balanced the parties' interests. On July 6, 2015, the U.S. District Court for the Southern District of Indiana entered judgment against BCWF on all claims. BCWF appealed the decision and on December 9, 2016, the appeals court ruled in favor of BCWF. Duke Energy Indiana recorded an obligation and a regulatory asset related to the settlement amount in fourth quarter 2016. On June 30, 2017, the parties finalized a settlement agreement. Terms of the settlement included Duke Energy Indiana paying $29 million for back damages. Additionally, the parties agreed on the method by which the contract will be bid into the market in the future. The settlement amount was paid in June 2017. The IURC issued an order on September 27, 2017, approving recovery of the settlement amount through Duke Energy Indiana's fuel clause. The IURC order has been appealed to the Indiana Court of Appeals. On May 21, 2018, the Indiana Court of Appeals upheld the commission's decision. The appellants have requested rehearing at the Indiana Court of Appeals. The Indiana Court of Appeals denied the request for rehearing. The appellants have requested transfer to the Indiana Supreme Court, including briefs in support from environmental groups. The Indiana Supreme Court denied transfer concluding this matter in favor of Duke Energy Indiana.

Edwardsport Integrated Gasification Combined Cycle Plant

On September 20, 2018, Duke Energy Indiana, the Indiana Office of Utility Consumer Counselor, the Duke Industrial Group and Nucor Steel – Indiana entered into a settlement agreement to resolve IGCC ratemaking issues for calendar years 2018 and 2019. The agreement will remain in effect until new rates are established in Duke Energy Indiana's next base rate case, which is expected to be filed in mid-2019 with rates effective in mid-2020. It addresses the pending Edwardsport filing at the commission and eliminates the need for future filings until the overall rate case. This settlement includes caps on Duke Energy Indiana's retail operating expenses for 2018 and 2019, reduces Duke Energy Indiana's regulatory asset by $30 million (with a corresponding reduction of the amount of amortization of the regulatory asset included in rates by $10 million annually beginning with the implementation of final IGCC 17 rates), and provides funding for low-income assistance and clean energy projects. Duke Energy Indiana recognized pretax impairment and related charges of $32 million in the third quarter of 2018. The settlement is subject to IURC approval. An evidentiary hearing was held December 2018 and an IURC Order is expected in March 2019. Duke Energy Indiana cannot predict the outcome of this matter.

Tax Act

On June 27, 2018, Duke Energy Indiana, the Indiana Office of Utility Consumer Counselor, the Indiana Industrial Group and Nucor Steel – Indiana filed testimony consistent with their Stipulation and Settlement Agreement (Settlement Agreement) in the federal tax act proceeding with the IURC. The Settlement Agreement outlines how Duke Energy Indiana will implement the impacts of the Tax Act. Material components of the Settlement Agreement were as follows:

- Riders to reflect the change in the statutory federal tax rate from 35 to 21 percent as they are filed in 2018;
- Base rates to reflect the change in the statutory federal tax rate from 35 to 21 percent upon IURC approval, but no later than September 1, 2018;
- Duke Energy Indiana to continue to defer protected federal EDIT until January 1, 2020, at which time it will be returned to customers according to the Average Rate Assumption Method required by the Internal Revenue Service over approximately 26 years; and
- Duke Energy Indiana to begin returning unprotected federal EDIT upon IURC approval, over 10 years. In order to mitigate the negative impacts to cash flow and credit metrics, the Settlement Agreement allows Duke Energy Indiana to return $7 million per year over the first five years, with a step up to $35 million per year in the following five years.

On August 22, 2018, the IURC approved the settlement and rates were adjusted effective September 1, 2018.

Piedmont

Regulatory Assets and Liabilities

The following tables present the regulatory assets and liabilities recorded on Piedmont's Consolidated Balance Sheets.

(in millions)	December 31, 2018	December 31, 2017	Earns/Pays a Return	Recovery/Refund Period Ends
Regulatory Assets[a]				
AROs – other	$ 19	$ 15		(d)
Accrued pension and OPEB[c]	99	91	X	(f)
Derivatives – gas supply contracts[e]	141	142		
Vacation accrual	12	10		
Deferred pipeline integrity costs[c]	51	42	X	(b)
Amount due from customers	24	64	X	(b)
Other	11	14		(b)
Total regulatory assets	357	378		
Less: current portion	54	95		
Total noncurrent regulatory assets	$ 303	$ 283		
Regulatory Liabilities[a]				
Costs of removal	$ 564	$ 544		(d)
Net regulatory liability related to income taxes	579	597		(b)
Accrued pension and OPEB[c]	1	—	X	(f)
Amount due to customers	33	—	X	(b)
Other	41	3		(b)
Total regulatory liabilities	1,218	1,144		
Less: current portion	37	3		
Total noncurrent regulatory liabilities	$ 1,181	$ 1,141		

(a) Regulatory assets and liabilities are excluded from rate base unless otherwise noted.
(b) The expected recovery or refund period varies or has not been determined.
(c) Included in rate base.
(d) Recovery over the life of the associated assets.
(e) Balance will fluctuate with changes in the market. Current contracts extend into 2031.
(f) Recovered primarily over the average remaining service periods or life expectancies of employees covered by the benefit plans. See Note 22 for additional detail.

South Carolina Rate Stabilization Adjustment Filing

On June 15, 2018, Piedmont filed with the PSCSC under the South Carolina Rate Stabilization Act its quarterly monitoring report for the 12-month period ending March 31, 2018. The filing included a revenue deficiency calculation and tariff rates in order to permit Piedmont the opportunity to earn the rate of return on common equity established in its last general rate case. The filing also incorporated the impacts of the Tax Act by lowering the income tax component of the revenue requirement, refunding protected EDIT under allowable normalization rules, unprotected EDIT and amounts over collected from the customers from January 1, 2018, through the end of the review period for this proceeding. A settlement agreement reached between Piedmont and ORS was filed with the PSCSC on September 14, 2018, and approved by the PSCSC on October 3, 2018. Terms of the settlement include implementation of rates for the 12-month period beginning November 2018 with a return on equity of 10.2 percent.

North Carolina Integrity Management Rider Filing

In October 2018, Piedmont filed a petition under the IMR mechanism to collect an additional $10 million in annual revenues, effective December 2018, based on the eligible capital investments closed to integrity and safety projects over the six-month period ended September 30, 2018. On November 27, 2018, the NCUC approved the requested rate adjustment.

In May 2018, Piedmont filed, and the NCUC approved, a petition under the IMR mechanism to update rates, effective June 2018, based on the eligible capital investments closed to integrity and safety projects over the six-month period ending March 31, 2018, and the decrease in the corporate federal income tax rate effective January 1, 2018. The combined effect of the update was a reduction to annual revenues of approximately $6 million.

Tennessee Integrity Management Rider Filing

In November 2018, Piedmont filed a petition with the TPUC under the IMR mechanism to collect an additional $3 million in annual revenues, effective January 2019, based on the eligible capital investments closed to integrity and safety projects over the 12-month period ending October 31, 2018. A hearing on this matter is scheduled for March 2019.

2018 North Carolina Rate Case

On February 27, 2019, Piedmont filed a notice with the NCUC of its intent to file a base rate adjustment application no earlier than 30 days from the notice submittal date.

OTHER REGULATORY MATTERS

Progress Energy Merger FERC Mitigation

Since December 2014, the FERC Office of Enforcement has conducted an investigation of Duke Energy's market power filings in its application for approval of the Progress Energy merger submitted in 2012. On June 8, 2018, the FERC issued an order approving a settlement agreement under which Duke Energy paid a penalty of $3.5 million. The FERC Office of Enforcement stated in its conclusion that Duke Energy violated FERC regulations by failing to fully and accurately describe certain specific matters in its market power filings. Duke Energy neither admitted nor denied the alleged violations.

Atlantic Coast Pipeline, LLC

On September 2, 2014, Duke Energy, Dominion Resources (Dominion), Piedmont and Southern Company Gas announced the formation of Atlantic Coast Pipeline, LLC (ACP) to build and own the proposed Atlantic Coast Pipeline (ACP pipeline), an approximately 600-mile interstate natural gas pipeline running from West Virginia to North Carolina. The ACP pipeline is designed to meet, in part, the needs identified by Duke Energy Carolinas, Duke Energy Progress and Piedmont. Dominion will be responsible for building and operating the ACP pipeline and holds a leading ownership percentage in ACP of 48 percent. Duke Energy owns a 47 percent interest, which is accounted for as an equity method investment through its Gas Utilities and Infrastructure segment. Southern Company Gas maintains a 5 percent interest. See Notes 12 and 17 for additional information related to Duke Energy's ownership interest. Duke Energy Carolinas, Duke Energy Progress and Piedmont, among others, will be customers of the pipeline. Purchases will be made under several 20-year supply contracts, subject to state regulatory approval.

In 2018, the FERC issued a series of Notices to Proceed, which authorized the project to begin certain construction-related activities along the pipeline route, including supply header and compressors. On May 11, 2018, and October 19, 2018, FERC issued Notices to Proceed allowing full construction activities in all areas of West Virginia except in the Monongahela National Forest. On July 24, 2018, FERC issued a Notice to Proceed allowing full construction activities along the project route in North Carolina. On October 19, 2018, the conditions to effectiveness of the Virginia 401 water quality certification were satisfied. Immediately following receipt of the Virginia 401 certification, ACP filed a request for FERC to issue a Notice to Proceed with full construction activities in Virginia. We appreciate the professional and collaborative process by the permitting agencies designed to ensure that this critical energy infrastructure project will meet the stringent environmental standards required by law and regulation.

ACP is the subject of challenges in state and federal courts and agencies, including, among others, challenges of the project's incidental take statement (ITS), crossings of the Blue Ridge Parkway, the Appalachian Trail, and the Monongahela and George Washington National Forests, the project's U.S. Army Corps of Engineers (USACE) 404 permit, the Virginia conditional 401 water quality certification, the FERC Environmental Impact Statement order and the FERC order approving the Certificate of Public Convenience and Necessity. Each of these challenges alleges non-compliance on the part of federal and state permitting authorities and adverse ecological consequences if the project is permitted to proceed. ACP is vigorously defending these challenges and coordinating with the federal and state authorities which are the direct parties to the challenges. Since July 2018, notable developments in these challenges include a stay issued by the U.S. Court of Appeals for the Fourth Circuit (Fourth Circuit) on construction activities through the Monongahela and George Washington National Forests, a reissuance of the project's ITS and Blue Ridge Parkway right-of-way and renewed challenges of these reissued permits, a stay issued by the Fourth Circuit of the project's biological opinion and ITS (which stay has halted most project construction activity), a Fourth Circuit decision vacating the project's permits to cross the Monongahela and George Washington National Forests and the Appalachian Trail and the Fourth Circuit's remand to USACE of ACP's Huntington District 404 verification.

The delays resulting from the legal challenges described above have impacted the cost and schedule for the project. As a result, project cost estimates have increased to $7.0 billion to $7.8 billion, excluding financing costs. ACP expects to achieve a late 2020 in-service date for key segments of the project, while it expects the remainder to extend into 2021. Abnormal weather, work delays (including delays due to judicial or regulatory action) and other conditions may result in cost or schedule modifications in the future.

Sabal Trail Transmission, LLC

On May 4, 2015, Duke Energy acquired a 7.5 percent ownership interest in Sabal Trail, which is accounted for as an equity method investment, from Spectra Energy Partners, LP, a master limited partnership, formed by Enbridge Inc. (formerly Spectra Energy Corp.). Spectra Energy Partners, LP holds a 50 percent ownership interest in Sabal Trail and NextEra Energy has a 42.5 percent ownership interest. Sabal Trail is a joint venture to construct a 515-mile natural gas pipeline (Sabal Trail pipeline) to transport natural gas to Florida. Total estimated project costs are approximately $3.2 billion. The Sabal Trail pipeline traverses Alabama, Georgia and Florida. The primary customers of the Sabal Trail pipeline, Duke Energy Florida and FP&L have each contracted to buy pipeline capacity for 25-year initial terms. See Notes 12 and 17 for additional information related to Duke Energy's ownership interest.

On February 3, 2016, the FERC issued an order granting the request for a CPCN to construct and operate the pipeline. The Sabal Trail pipeline received other required regulatory approvals and the Phase 1 mainline was placed in service in July 2017. On October 12, 2017, Sabal Trail filed a request with FERC to place in-service a lateral line to Duke Energy Florida's Citrus County CC. This request is required to support commissioning and testing activities at the facility. On March 16, 2018, FERC approved the Citrus lateral and it was placed in service.

On September 21, 2016, intervenors filed an appeal of FERC's CPCN orders to the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit Court of Appeals). On August 22, 2017, the appeals court ruled against FERC in the case for failing to include enough information on the impact of greenhouse-gas emissions carried by the pipeline, vacated the CPCN order and remanded the case to FERC. In response to the August 2017 court decision, the FERC issued a draft Supplemental Environmental Impact Statement (SEIS) on September 27, 2017. On October 6, 2017, FERC and a group of industry intervenors, including Sabal Trail and Duke Energy Florida, filed separate petitions with the D.C. Circuit Court of Appeals requesting rehearing regarding the court's decision to vacate the CPCN order. On January 31, 2018, the D.C. Circuit Court of Appeals denied the requests for rehearing. On February 2, 2018, Sabal Trail filed a request with FERC for expedited issuance of its order on remand and reissuance of the CPCN. In the alternative, the pipeline requested that FERC issue a temporary emergency CPCN to allow for continued operations. On February 5, 2018, FERC issued the final SEIS. On February 6, 2018, FERC and the intervenors in this case each filed motions for stay with the D.C. Circuit Court to stay the court's mandate. On March 7, 2018, the D.C. Circuit Court of Appeals granted FERC and Sabal Trail's stay request. On March 14, 2018, FERC issued its final order on remand, which recertified the project. On August 10, 2018, FERC denied requests for rehearing of the final order on remand.

Constitution Pipeline Company, LLC

Duke Energy owns a 24 percent ownership interest in Constitution, which is accounted for as an equity method investment. Constitution is a natural gas pipeline project slated to transport natural gas supplies from the Marcellus supply region in northern Pennsylvania to major northeastern markets. The pipeline will be constructed and operated by Williams Partners L.P., which has a 41 percent ownership share. The remaining interest is held by Cabot Oil and Gas Corporation and WGL Holdings, Inc. Before the permitting delays discussed below, Duke Energy's total anticipated contributions were approximately $229 million. As a result of the permitting delays and project uncertainty, total anticipated contributions by Duke Energy can no longer be reasonably estimated. Since April 2016, with the actions of the New York State Department of Environmental Conservation (NYSDEC), Constitution stopped construction and discontinued capitalization of future development costs until the project's uncertainty is resolved.

In December 2014, Constitution received approval from the FERC to construct and operate the proposed pipeline. However, on April 22, 2016, the NYSDEC denied Constitution's application for a necessary water quality certification for the New York portion of the Constitution pipeline. Constitution filed legal actions in the U.S. Court of Appeals for the Second Circuit (U.S. Court of Appeals) challenging the legality and appropriateness of the NYSDEC's decision and on August 18, 2017, the petition was denied in part and dismissed in part. In September 2017, Constitution filed a petition for a rehearing of portions of the decision unrelated to the water quality certification, which was denied by the U.S. Court of Appeals. In January 2018, Constitution petitioned the Supreme Court of the United States to review the U.S. Court of Appeals decision, and on April 30, 2018, the Supreme Court denied Constitution's petition. In October 2017, Constitution filed a petition for declaratory order requesting FERC to find that the NYSDEC waived its rights to issue a Section 401 water quality certification by not acting on Constitution's application within a reasonable period of time as required by statute. This petition was based on precedent established by another pipeline's successful petition with FERC following a District of Columbia Circuit Court ruling. On January 11, 2018, FERC denied Constitution's petition. In February 2018, Constitution filed a rehearing request with FERC of its finding that the NYSDEC did not waive the Section 401 certification requirement. On July 19, 2018, FERC denied Constitution's rehearing request. Constitution is currently unable to approximate an in-service date for the project due to the NYSDEC's denial of the water quality certification. The Constitution partners remain committed to the project and are evaluating next steps to move the project forward. On June 25, 2018, Constitution filed with FERC a Request for Extension of Time until December 2, 2020, for construction of the project. On November 5, 2018, FERC issued an Order Granting Extension of Time.

See Notes 12 and 17 for additional information related to ownership interest and carrying value of the investment.

Potential Coal Plant Retirements

The Subsidiary Registrants periodically file IRPs with their state regulatory commissions. The IRPs provide a view of forecasted energy needs over a long term (10 to 20 years) and options being considered to meet those needs. IRPs filed by the Subsidiary Registrants included planning assumptions to potentially retire certain coal-fired generating facilities in North Carolina and Indiana earlier than their current estimated useful lives primarily because facilities do not have the requisite emission control equipment to meet regulatory requirements expected to apply in the near future. Duke Energy continues to evaluate the potential need to retire these coal-fired generating facilities earlier than the current estimated useful lives and plans to seek regulatory recovery for amounts that would not be otherwise recovered when any of these assets are retired.

The table below contains the net carrying value of generating facilities planned for retirement or included in recent IRPs as evaluated for potential retirement due to a lack of requisite environmental control equipment. Dollar amounts in the table below are included in Net property, plant and equipment on the Consolidated Balance Sheets as of December 31, 2018, and exclude capitalized asset retirement costs.

	Capacity (in MW)	Remaining Net Book Value (in millions)
Duke Energy Carolinas		
Allen Steam Station Units 1-3[(a)]	585	$ 162
Duke Energy Indiana		
Gallagher Units 2 and 4[(b)]	280	121
Total Duke Energy	865	$ 283

(a) Duke Energy Carolinas will retire Allen Steam Station Units 1 through 3 by December 31, 2024, as part of the resolution of a lawsuit involving alleged New Source Review violations.

(b) Duke Energy Indiana committed to either retire or stop burning coal at Gallagher Units 2 and 4 by December 31, 2022, as part of the 2016 settlement of Edwardsport IGCC matters.

Refer to the "Western Carolinas Modernization Plan" discussion above for details of Duke Energy Progress' planned retirements.

5. COMMITMENTS AND CONTINGENCIES

INSURANCE

General Insurance

The Duke Energy Registrants have insurance and reinsurance coverage either directly or through indemnification from Duke Energy's captive insurance company, Bison, and its affiliates, consistent with companies engaged in similar commercial operations with similar type properties. The Duke Energy Registrants' coverage includes (i) commercial general liability coverage for liabilities arising to third parties for bodily injury and property damage; (ii) workers' compensation; (iii) automobile liability coverage; and (iv) property coverage for all real and personal property damage. Real and personal property damage coverage excludes electric transmission and distribution lines, but includes damages arising from boiler and machinery breakdowns, earthquakes, flood damage and extra expense, but not outage or replacement power coverage. All coverage is subject to certain deductibles or retentions, sublimits, exclusions, terms and conditions common for companies with similar types of operations. The Duke Energy Registrants self-insure their electric transmission and distribution lines against loss due to storm damage and other natural disasters. As discussed further in Note 4, Duke Energy Florida maintains a storm damage reserve and has a regulatory mechanism to recover the cost of named storms on an expedited basis.

The cost of the Duke Energy Registrants' coverage can fluctuate from year to year reflecting claims history and conditions of the insurance and reinsurance markets.

In the event of a loss, terms and amounts of insurance and reinsurance available might not be adequate to cover claims and other expenses incurred. Uninsured losses and other expenses, to the extent not recovered by other sources, could have a material effect on the Duke Energy Registrants' results of operations, cash flows or financial position. Each company is responsible to the extent losses may be excluded or exceed limits of the coverage available.

Nuclear Insurance

Duke Energy Carolinas owns and operates McGuire and Oconee and operates and has a partial ownership interest in Catawba. McGuire and Catawba each have two reactors. Oconee has three reactors. The other joint owners of Catawba reimburse Duke Energy Carolinas for certain expenses associated with nuclear insurance per the Catawba joint owner agreements.

Duke Energy Progress owns and operates Robinson, Brunswick and Harris. Robinson and Harris each have one reactor. Brunswick has two reactors.

Duke Energy Florida owns Crystal River Unit 3, which permanently ceased operation in 2013 and reached a SAFSTOR condition in January 2018 after the successful transfer of all used nuclear fuel assemblies to an on-site dry cask storage facility.

In the event of a loss, terms and amounts of insurance available might not be adequate to cover property damage and other expenses incurred. Uninsured losses and other expenses, to the extent not recovered by other sources, could have a material effect on Duke Energy Carolinas', Duke Energy Progress' and Duke Energy Florida's results of operations, cash flows or financial position. Each company is responsible to the extent losses may be excluded or exceed limits of the coverage available.

Nuclear Liability Coverage

The Price-Anderson Act requires owners of nuclear reactors to provide for public nuclear liability protection per nuclear incident up to a maximum total financial protection liability. The maximum total financial protection liability, which is approximately $14.1 billion, is subject to change every five years for inflation and for the number of licensed reactors. Total nuclear liability coverage consists of a combination of private primary nuclear liability insurance coverage and a mandatory industry risk-sharing program to provide for excess nuclear liability coverage above the maximum reasonably available private primary coverage. The U.S. Congress could impose revenue-raising measures on the nuclear industry to pay claims.

Primary Liability Insurance

Duke Energy Carolinas and Duke Energy Progress have purchased the maximum reasonably available private primary nuclear liability insurance as required by law, which is $450 million per station. Duke Energy Florida has purchased $100 million primary nuclear liability insurance in compliance with the law.

Excess Liability Program

This program provides $13.6 billion of coverage per incident through the Price-Anderson Act's mandatory industrywide excess secondary financial protection program of risk pooling. This amount is the product of potential cumulative retrospective premium assessments of $138 million times the current 99 licensed commercial nuclear reactors in the U.S. Under this program, licensees could be assessed retrospective premiums to compensate for public nuclear liability damages in the event of a nuclear incident at any licensed facility in the U.S. Retrospective premiums may be assessed at a rate not to exceed $20.5 million per year per licensed reactor for each incident. The assessment may be subject to state premium taxes.

Nuclear Property and Accidental Outage Coverage

Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida are members of NEIL, an industry mutual insurance company, which provides property damage, nuclear accident decontamination and premature decommissioning insurance for each station for losses resulting from damage to its nuclear plants, either due to accidents or acts of terrorism. Additionally, NEIL provides accidental outage coverage for each station for losses in the event of a major accidental outage at an insured nuclear station.

Pursuant to regulations of the NRC, each company's property damage insurance policies provide that all proceeds from such insurance be applied, first, to place the plant in a safe and stable condition after a qualifying accident and second, to decontaminate the plant before any proceeds can be used for decommissioning, plant repair or restoration.

Losses resulting from acts of terrorism are covered as common occurrences, such that if terrorist acts occur against one or more commercial nuclear power plants insured by NEIL within a 12-month period, they would be treated as one event and the owners of the plants where the act occurred would share one full limit of liability. The full limit of liability is currently $3.2 billion. NEIL sublimits the total aggregate for all of their policies for non-nuclear terrorist events to approximately $1.8 billion.

Each nuclear facility has accident property damage, nuclear accident decontamination and premature decommissioning liability insurance from NEIL with limits of $1.5 billion, except for Crystal River Unit 3. Crystal River Unit 3's limit is $50 million and is on an actual cash value basis. All nuclear facilities except for Catawba and Crystal River Unit 3 also share an additional $1.25 billion nuclear accident insurance limit above their dedicated underlying limit. This shared additional excess limit is not subject to reinstatement in the event of a loss. Catawba has a dedicated $1.25 billion of additional nuclear accident insurance limit above its dedicated underlying limit. Catawba and Oconee also have an additional $750 million of non-nuclear accident property damage limit. All coverages are subject to sublimits and significant deductibles.

NEIL's Accidental Outage policy provides some coverage, such as business interruption, for losses in the event of a major accident property damage outage of a nuclear unit. Coverage is provided on a weekly limit basis after a significant waiting period deductible and at 100 percent of the available weekly limits for 52 weeks and 80 percent of the available weekly limits for the next 110 weeks. Coverage is provided until these available weekly periods are met where the accidental outage policy limit will not exceed $490 million for McGuire, Catawba and Harris, $476 million for Brunswick, $462 million for Oconee and $392 million for Robinson. NEIL sublimits the accidental outage recovery to the first 104 weeks of coverage not to exceed $328 million from non-nuclear accidental property damage. Coverage amounts decrease in the event more than one unit at a station is out of service due to a common accident. All coverages are subject to sublimits and significant deductibles.

Potential Retroactive Premium Assessments

In the event of NEIL losses, NEIL's board of directors may assess member companies' retroactive premiums of amounts up to 10 times their annual premiums for up to six years after a loss. NEIL has never exercised this assessment. The maximum aggregate annual retrospective premium obligations for Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida are $159 million, $97 million and $1 million, respectively. Duke Energy Carolinas' maximum assessment amount includes 100 percent of potential obligations to NEIL for jointly owned reactors. Duke Energy Carolinas would seek reimbursement from the joint owners for their portion of these assessment amounts.

ENVIRONMENTAL

The Duke Energy Registrants are subject to federal, state and local regulations regarding air and water quality, hazardous and solid waste disposal and other environmental matters. These regulations can be changed from time to time, imposing new obligations on the Duke Energy Registrants. The following environmental matters impact all of the Duke Energy Registrants.

Remediation Activities

In addition to the ARO recorded as a result of various environmental regulations, discussed in Note 9, the Duke Energy Registrants are responsible for environmental remediation at various sites. These include certain properties that are part of ongoing operations and sites formerly owned or used by Duke Energy entities. These sites are in various stages of investigation, remediation and monitoring. Managed in conjunction with relevant federal, state and local agencies, remediation activities vary based upon site conditions and location, remediation requirements, complexity and sharing of responsibility. If remediation activities involve joint and several liability provisions, strict liability, or cost recovery or contribution actions, the Duke Energy Registrants could potentially be held responsible for environmental impacts caused by other potentially responsible parties and may also benefit from insurance policies or contractual indemnities that cover some or all cleanup costs. Liabilities are recorded when losses become probable and are reasonably estimable. The total costs that may be incurred cannot be estimated because the extent of environmental impact, allocation among potentially responsible parties, remediation alternatives and/or regulatory decisions have not yet been determined at all sites. Additional costs associated with remediation activities are likely to be incurred in the future and could be significant. Costs are typically expensed as Operation, maintenance and other in the Consolidated Statements of Operations unless regulatory recovery of the costs is deemed probable.

The following tables contain information regarding reserves for probable and estimable costs related to the various environmental sites. These reserves are recorded in Accounts payable within Current Liabilities and Other within Other Noncurrent Liabilities on the Consolidated Balance Sheets.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Balance at December 31, 2015	$ 94	$ 10	$ 17	$ 3	$ 14	$ 54	$ 12
Provisions/adjustments	19	4	7	2	4	7	1
Cash reductions	(15)	(4)	(6)	(2)	(4)	(2)	(3)
Balance at December 31, 2016	98	10	18	3	14	59	10
Provisions/adjustments	8	3	3	2	2	3	(4)
Cash reductions	(25)	(3)	(6)	(2)	(4)	(15)	(1)
Balance at December 31, 2017	81	10	15	3	12	47	5
Provisions/adjustments	**26**	**3**	**2**	**3**	**(2)**	**21**	**1**
Cash reductions	**(30)**	**(2)**	**(6)**	**(2)**	**(4)**	**(20)**	**(1)**
Balance at December 31, 2018	**$ 77**	**$ 11**	**$ 11**	**$ 4**	**$ 6**	**$ 48**	**$ 5**

As of December 31, 2016, and October 31, 2016 and 2015, Piedmont's environmental reserve was $1 million. As of December 31, 2018, and 2017, the reserve was $2 million.

Additional losses in excess of recorded reserves that could be incurred for the stages of investigation, remediation and monitoring for environmental sites that have been evaluated at this time are not material except as presented in the table below.

(in millions)	
Duke Energy	**$ 46**
Duke Energy Carolinas	**17**
Duke Energy Ohio	**19**
Piedmont	**2**

North Carolina and South Carolina Ash Basins

In February 2014, a break in a stormwater pipe beneath an ash basin at Duke Energy Carolinas' retired Dan River Steam Station caused a release of ash basin water and ash into the Dan River. In July 2014, Duke Energy completed remediation work identified by the EPA and continues to cooperate with the EPA's civil enforcement process. The NCDEQ has historically assessed Duke Energy Carolinas and Duke Energy Progress with NOVs for violations that were most often resolved through satisfactory corrective actions and minor, if any, fines or penalties. Subsequent to the Dan River ash release, Duke Energy Carolinas and Duke Energy Progress have been served with a higher level of NOVs, including assessed penalties for violations at Sutton and Dan River Steam Station. Duke Energy Carolinas and Duke Energy Progress continue to resolve violations through corrective actions, and associated penalties related to existing unresolved NOVs are not expected to be material.

LITIGATION

Duke Energy Carolinas and Duke Energy Progress

Coal Ash Insurance Coverage Litigation

In March 2017, Duke Energy Carolinas and Duke Energy Progress filed a civil action in the North Carolina Superior Court against various insurance providers. The lawsuit seeks payment for coal ash-related liabilities covered by third-party liability insurance policies. The insurance policies were issued between 1971 and 1986 and provide third-party liability insurance for property damage. The civil action seeks damages for breach of contract and indemnification for costs arising from the Coal Ash Act and the EPA CCR rule at 15 coal-fired plants in North Carolina and South Carolina. On January 23, 2019, the court granted the parties' joint motion for a four month stay of the proceedings, until June 3, 2019, to allow the parties to discuss potential resolution. If the case is not fully resolved at that time, litigation will resume. The trial remains scheduled for August 2020. Duke Energy Carolinas and Duke Energy Progress cannot predict the outcome of this matter.

NCDEQ State Enforcement Actions

In the first quarter of 2013, SELC sent notices of intent to sue Duke Energy Carolinas and Duke Energy Progress related to alleged CWA violations from coal ash basins at two coal-fired power plants in North Carolina. The NCDEQ filed enforcement actions against Duke Energy Carolinas and Duke Energy Progress alleging violations of water discharge permits and North Carolina groundwater standards. The cases have been consolidated and are being heard before a single judge in the North Carolina Superior Court.

On August 16, 2013, the NCDEQ filed an enforcement action against Duke Energy Carolinas and Duke Energy Progress related to the remaining coal-fired power plants in North Carolina, alleging violations of the CWA and violations of the North Carolina groundwater standards. Both of these cases have been assigned to the judge handling the enforcement actions discussed above. SELC is representing several environmental groups who have been permitted to intervene in these cases.

The court issued orders in 2016 granting Motions for Partial Summary Judgment for seven of the 14 North Carolina plants with coal ash basins named in the enforcement actions. On February 13, 2017, the court issued an order denying motions for partial summary judgment brought by both the environmental groups and Duke Energy Carolinas and Duke Energy Progress for the remaining seven plants. On March 15, 2017, Duke Energy Carolinas and Duke Energy Progress filed a Notice of Appeal with the North Carolina Court of Appeals to challenge the trial court's order. The parties were unable to reach an agreement at mediation in April 2017 and submitted briefs to the trial court on remaining issues to be tried. On August 1, 2018, the Court of Appeals dismissed the appeal and the matter is proceeding before the trial court. No trial date has been scheduled. Duke Energy Carolinas and Duke Energy Progress cannot predict the outcome of this matter.

Federal Citizens Suits

On June 13, 2016, RRBA filed a federal citizen suit in the Middle District of North Carolina alleging unpermitted discharges to surface water and groundwater violations at the Mayo Plant. On August 19, 2016, Duke Energy Progress filed a Motion to Dismiss. On April 26, 2017, the court entered an order dismissing four of the claims in the federal citizen suit. Two claims relating to alleged violations of NPDES permit provisions survived the motion to dismiss, and Duke Energy Progress filed its response on May 10, 2017. Duke Energy Progress and RRBA each filed motions for summary judgment on March 23, 2018. The court has not yet ruled on these motions.

On May 16, 2017, RRBA filed a federal citizen suit in the U.S. District Court for the Middle District of North Carolina, which asserts two claims relating to alleged violations of NPDES permit provisions at the Roxboro Plant and one claim relating to the use of nearby water bodies. Duke Energy Progress and RRBA each filed motions for summary judgment on April 17, 2018, and the court has not yet ruled on these motions.

On May 8, 2018, on motion from Duke Energy Progress, the court ordered trial in both of the above matters to be consolidated. Trial is currently scheduled to begin July 15, 2019.

On June 20, 2017, RRBA filed a federal citizen suit in the U.S. District Court for the Middle District of North Carolina challenging the closure plans at the Mayo Plant under the EPA CCR Rule. Duke Energy Progress filed a motion to dismiss, which was granted by the court on March 30, 2018. RRBA had until April 30, 2018, to file an appeal to the Fourth Circuit but did not do so.

On August 2, 2017, RRBA filed a federal citizen suit in the U.S. District Court for the Middle District of North Carolina challenging the closure plans at the Roxboro Plant under the EPA CCR Rule. Duke Energy Progress filed a motion to dismiss on October 2, 2017, which was granted by the court on May 29, 2018. RRBA had until June 28, 2018, to file an appeal to the Fourth Circuit but did not do so.

On December 5, 2017, various parties filed a federal citizen suit in the U.S. District Court for the Middle District of North Carolina for alleged violations at Duke Energy Carolinas' Belews Creek under the CWA. Duke Energy Carolinas' answer to the complaint was filed on August 27, 2018. On October 10, 2018, Duke Energy Carolinas filed Motions to Dismiss for lack of standing, Motion for Judgment on the Pleadings and Motion to Stay Discovery. On January 9, 2019, the court entered an order denying Duke Energy Carolinas' motion to stay discovery. There has been no ruling on the other pending motions.

Duke Energy Carolinas and Duke Energy Progress cannot predict the outcome of these matters.

Groundwater Contamination Claims

Beginning in May 2015, a number of residents living in the vicinity of the North Carolina facilities with ash basins received letters from the NCDEQ advising them not to drink water from the private wells on their land tested by the NCDEQ as the samples were found to have certain substances at levels higher than the criteria set by the DHHS. Results of CSAs testing performed by Duke Energy under the Coal Ash Act have been consistent with historical data provided to state regulators over many years. The DHHS and NCDEQ sent follow-up letters on October 15, 2015, to residents near coal ash basins who have had their wells tested, stating that private well samplings at a considerable distance from coal ash basins, as well as some municipal water supplies, contain similar levels of vanadium and hexavalent chromium, which led investigators to believe these constituents are naturally occurring. In March 2016, DHHS rescinded the advisories.

Duke Energy Carolinas and Duke Energy Progress have received formal demand letters from residents near Duke Energy Carolinas' and Duke Energy Progress' coal ash basins. The residents claim damages for nuisance and diminution in property value, among other things. The parties held three days of mediation discussions, which ended at impasse. On January 6, 2017, Duke Energy Carolinas and Duke Energy Progress received the plaintiffs' notice of their intent to file suits should the matter not settle. The NCDEQ preliminarily approved Duke Energy's permanent water solution plans on January 13, 2017, and as a result shortly thereafter, Duke Energy issued a press release, providing additional details regarding the homeowner compensation package. This package consists of three components: (i) a $5,000 goodwill payment to each eligible well owner to support the transition to a new water supply, (ii) where a public water supply is available and selected by the eligible well owner, a stipend to cover 25 years of water bills and (iii) the Property Value Protection Plan. The Property Value Protection Plan is a program offered by Duke Energy designed to guarantee eligible plant neighbors the fair market value of their residential property should they decide to sell their property during the time that the plan is offered. Payments are being made and the remaining reserves are not material.

On August 23, 2017, a class-action suit was filed in Wake County Superior Court, North Carolina, against Duke Energy Carolinas and Duke Energy Progress on behalf of certain property owners living near coal ash impoundments at Allen, Asheville, Belews Creek, Buck, Cliffside, Lee, Marshall, Mayo and Roxboro. The class is defined as those who are well-eligible under the Coal Ash Act or those to whom Duke Energy has promised a permanent replacement water supply and seeks declaratory and injunctive relief, along with compensatory damages. Plaintiffs allege that Duke Energy's improper maintenance of coal ash impoundments caused harm, particularly through groundwater contamination. Despite NCDEQ's preliminary approval, Plaintiffs contend that Duke Energy's proposed permanent water solutions plan fails to comply with the Coal Ash Act. On September 28, 2017, Duke Energy Carolinas and Duke Energy Progress filed a Motion to Dismiss and Motion to Strike the class designation. The parties entered into a Settlement Agreement on January 24, 2018, which resulted in the dismissal of the underlying class action on January 25, 2018.

On September 14, 2017, a complaint was filed against Duke Energy Progress in New Hanover County Superior Court by a group of homeowners residing approximately 1 mile from Duke Energy Progress' Sutton Steam Plant. The homeowners allege that coal ash constituents have been migrating from ash impoundments at Sutton into their groundwater for decades and that in 2015, Duke Energy Progress discovered these releases of coal ash, but failed to notify any officials or neighbors and failed to take remedial action. The homeowners claim unspecified physical and mental injuries as a result of consuming their well water and seek actual damages for personal injury, medical monitoring and punitive damages. On March 6, 2018, Plaintiffs' counsel voluntarily dismissed the action without prejudice.

Duke Energy Carolinas

Asbestos-related Injuries and Damages Claims

Duke Energy Carolinas has experienced numerous claims for indemnification and medical cost reimbursement related to asbestos exposure. These claims relate to damages for bodily injuries alleged to have arisen from exposure to or use of asbestos in connection with construction and maintenance activities conducted on its electric generation plants prior to 1985. As of December 31, 2018, there were 164 asserted claims for non-malignant cases with the cumulative relief sought of up to $42 million and 87 asserted claims for malignant cases with the cumulative relief sought of up to $21 million. Based on Duke Energy Carolinas' experience, it is expected that the ultimate resolution of most of these claims likely will be less than the amount claimed.

Duke Energy Carolinas has recognized asbestos-related reserves of $630 million and $489 million at December 31, 2018, and 2017, respectively. These reserves are classified in Other within Other Noncurrent Liabilities and Other within Current Liabilities on the Consolidated Balance Sheets. These reserves are based upon Duke Energy Carolinas' best estimate for current and future asbestos claims through 2038 and are recorded on an undiscounted basis. In light of the uncertainties inherent in a longer-term forecast, management does not believe they can reasonably estimate the indemnity and medical costs that might be incurred after 2038 related to such potential claims. It is possible Duke Energy Carolinas may incur asbestos liabilities in excess of the recorded reserves.

Duke Energy Carolinas has third-party insurance to cover certain losses related to asbestos-related injuries and damages above an aggregate self-insured retention. Duke Energy Carolinas' cumulative payments began to exceed the self-insurance retention in 2008. Future payments up to the policy limit will be reimbursed by the third-party insurance carrier. The insurance policy limit for potential future insurance recoveries indemnification and medical cost claim payments is $764 million in excess of the self-insured retention. Receivables for insurance recoveries were $739 million and $585 million at December 31, 2018, and 2017, respectively. These amounts are classified in Other within Other Noncurrent Assets and Receivables within Current Assets on the Consolidated Balance Sheets. Duke Energy Carolinas is not aware of any uncertainties regarding the legal sufficiency of insurance claims. Duke Energy Carolinas believes the insurance recovery asset is probable of recovery as the insurance carrier continues to have a strong financial strength rating.

Duke Energy Progress and Duke Energy Florida

Spent Nuclear Fuel Matters

On October 16, 2014, Duke Energy Progress and Duke Energy Florida sued the U.S. in the U.S. Court of Federal Claims. The lawsuit claimed the Department of Energy breached a contract in failing to accept spent nuclear fuel under the Nuclear Waste Policy Act of 1982 and asserted damages for the cost of on-site storage. Duke Energy Progress and Duke Energy Florida asserted damages for the period January 1, 2011, through December 31, 2013, of $48 million and $25 million, respectively. On November 17, 2017, the Court awarded Duke Energy Progress and Duke Energy Florida $48 million and $21 million, respectively, subject to appeal. No appeals were filed and Duke Energy Progress and Duke Energy Florida recognized the recoveries in the first quarter of 2018. Claims for all periods through 2013 have been resolved. On June 22, 2018, Duke Energy Progress and Duke Energy Florida filed a complaint for damages incurred for 2014 through first quarter 2018.

Duke Energy Progress

Gypsum Supply Agreements Matter

On June 30, 2017, CertainTeed filed a declaratory judgment action against Duke Energy Progress in the North Carolina Business Court relating to a gypsum supply agreement. In its complaint, CertainTeed sought an order from the court declaring that the minimum amount of gypsum Duke Energy Progress must provide to CertainTeed under the supply agreement was 50,000 tons per month through 2029. Trial in this matter was completed on July 16, 2018. On August 29, 2018, the court issued an order and opinion finding that Duke Energy Progress is required to supply 50,000 tons of gypsum/month, but that CertainTeed's sole remedy for Duke Energy Progress' long-term discontinuance under the agreement is liquidated damages. On November 14, 2018, the parties reached a settlement agreement. The amount owed under the liquidated damages provision is approximately $90 million on an undiscounted basis over 10 years. Approximately $3 million was paid in 2018. As of December 31, 2018, $9 million is recorded in Accounts payable within Current Liabilities and $63 million in Other within Other Noncurrent Liabilities on the Consolidated Balance Sheets. The liability is recorded on a discounted basis at a rate of approximately 4 percent. These costs are probable of recovery from customers and are recorded in Regulatory Assets within Other Noncurrent Assets on the Consolidated Balance Sheets.

Duke Energy Florida

Fluor Contract Litigation

On January 29, 2019, Fluor filed a breach of contract lawsuit in the U.S. District Court for the Middle District of Florida against Duke Energy Florida related to an EPC agreement for the combined-cycle natural gas plant in Citrus County, Florida. Fluor filed an amended complaint on February, 13, 2019. Fluor's multicount complaint seeks civil, statutory and contractual remedies related to Duke Energy Florida's $67 million draw in early 2019, on Fluor's letter of credit and offset of invoiced amounts. Duke Energy Florida is attempting to recover from Fluor $110 million in additional costs incurred by Duke Energy Florida. Duke Energy Florida cannot predict the outcome of this matter. See Note 4 for additional information.

Class-Action Lawsuit

On February 22, 2016, a lawsuit was filed in the U.S. District Court for the Southern District of Florida on behalf of a class of Duke Energy Florida and FP&L's customers in Florida. The suit alleges the State of Florida's NCRS are unconstitutional and pre-empted by federal law. Plaintiffs claim they are entitled to repayment of all money paid by customers of Duke Energy Florida and FP&L as a result of the NCRS, as well as an injunction against any future charges under those statutes. The constitutionality of the NCRS has been challenged unsuccessfully in a number of prior cases on alternative grounds. Duke Energy Florida and FP&L filed motions to dismiss the complaint on May 5, 2016. On September 21, 2016, the Court granted the motions to dismiss with prejudice. Plaintiffs filed a motion for reconsideration, which was denied. On January 4, 2017, plaintiffs filed a notice of appeal to the Eleventh Circuit U.S. Court of Appeals (Eleventh Circuit). On July 11, 2018, the Eleventh Circuit affirmed the U.S. District Court's dismissal of the lawsuit. The deadline to file a petition for cert was October 9, 2018, and no petition was filed; therefore, the dismissal of the lawsuit is final.

Westinghouse Contract Litigation

On March 28, 2014, Duke Energy Florida filed a lawsuit against Westinghouse in the U.S. District Court for the Western District of North Carolina. The lawsuit seeks recovery of $54 million in milestone payments in excess of work performed under an EPC for Levy as well as a determination by the court of the amounts due to Westinghouse as a result of the termination of an EPC contract. Duke Energy Florida recognized an exit obligation as a result of the termination of the EPC. On March 31, 2014, Westinghouse filed a separate lawsuit against Duke Energy Florida in U.S. District Court for the Western District of Pennsylvania alleging damages under the same EPC contract in excess of $510 million for engineering and design work, costs to end supplier contracts and an alleged termination fee. On June 9, 2014, the judge in the North Carolina case ruled that the litigation will proceed in the Western District of North Carolina.

On July 11, 2016, Duke Energy Florida and Westinghouse filed separate Motions for Summary Judgment. On September 29, 2016, the court issued its ruling, granting Westinghouse a $30 million termination fee claim and dismissing Duke Energy Florida's $54 million refund claim. Westinghouse's claim for termination costs continued to trial. Following a trial on the matter, the court issued an order in December 2016 denying Westinghouse's claim for termination costs and reaffirming its earlier ruling in favor of Westinghouse on the $30 million termination fee. Judgment was entered against Duke Energy Florida in the amount of approximately $34 million, which includes prejudgment interest. Westinghouse appealed the trial court's order to the Fourth Circuit and Duke Energy Florida cross-appealed.

On March 29, 2017, Westinghouse filed Chapter 11 bankruptcy in the Southern District of New York, which automatically stayed the appeal. On May 23, 2017, the bankruptcy court entered an order lifting the stay with respect to the appeal. Westinghouse and Duke Energy Florida executed a settlement agreement resolving this matter on April 5, 2018. The bankruptcy court approved the settlement and Duke Energy Florida paid approximately $34 million to Westinghouse in July 2018 pursuant to this agreement. At the request of the parties, the Fourth Circuit has dismissed the appeal.

MGP Cost Recovery Action

On December 30, 2011, Duke Energy Florida filed a lawsuit against FirstEnergy to recover investigation and remediation costs incurred by Duke Energy Florida in connection with the restoration of two former MGP sites in Florida. Duke Energy Florida alleged that FirstEnergy, as the successor to Associated Gas & Electric Co., owes past and future contribution and response costs of up to $43 million for the investigation and remediation of MGP sites. On December 6, 2016, the trial court entered judgment against Duke Energy Florida in the case. In January 2017, Duke Energy Florida appealed the decision to the U.S. Court of Appeals for the Sixth Circuit, which affirmed the trial court's ruling on April 10, 2018. The dismissal of the lawsuit is therefore final.

Other Litigation and Legal Proceedings

The Duke Energy Registrants are involved in other legal, tax and regulatory proceedings arising in the ordinary course of business, some of which involve significant amounts. The Duke Energy Registrants believe the final disposition of these proceedings will not have a material effect on their results of operations, cash flows or financial position.

The table below presents recorded reserves based on management's best estimate of probable loss for legal matters, excluding asbestos-related reserves, the CertainTeed liquidated damages obligation and the exit obligation in 2017 related to the termination of an EPC contract. Reserves are classified on the Consolidated Balance Sheets in Other within Other Noncurrent Liabilities and Other within Current Liabilities. The reasonably possible range of loss in excess of recorded reserves is not material, other than as described above.

	December 31,	
(in millions)	2018	2017
Reserves for Legal Matters		
Duke Energy	$ 65	$ 88
Duke Energy Carolinas	9	30
Progress Energy	54	55
Duke Energy Progress	12	13
Duke Energy Florida	24	24
Piedmont	1	2

OTHER COMMITMENTS AND CONTINGENCIES

General

As part of their normal business, the Duke Energy Registrants are party to various financial guarantees, performance guarantees and other contractual commitments to extend guarantees of credit and other assistance to various subsidiaries, investees and other third parties. These guarantees involve elements of performance and credit risk, which are not fully recognized on the Consolidated Balance Sheets and have unlimited maximum potential payments. However, the Duke Energy Registrants do not believe these guarantees will have a material effect on their results of operations, cash flows or financial position.

Purchase Obligations

Purchased Power

Duke Energy Progress, Duke Energy Florida and Duke Energy Ohio have ongoing purchased power contracts, including renewable energy contracts, with other utilities, wholesale marketers, co-generators and qualified facilities. These purchased power contracts generally provide for capacity and energy payments. In addition, Duke Energy Progress and Duke Energy Florida have various contracts to secure transmission rights.

The following table presents executory purchased power contracts with terms exceeding one year, excluding contracts classified as leases.

		Minimum Purchase Amount at December 31, 2018						
(in millions)	Contract Expiration	2019	2020	2021	2022	2023	Thereafter	Total
Duke Energy Progress[a]	2022-2031	$ 51	$ 52	$ 53	$ 30	$ 25	$ 215	$ 426
Duke Energy Florida[b]	2021-2025	363	380	365	363	382	361	2,214
Duke Energy Ohio[c][d]	2020-2022	146	117	53	11	—	—	327

(a) Contracts represent 100 percent of net plant output.
(b) Contracts represent between 81 percent and 100 percent of net plant output.
(c) Contracts represent between 1 percent and 8 percent of net plant output.
(d) Excludes PPA with OVEC. See Note 17 for additional information.

Gas Supply and Capacity Contracts

Duke Energy Ohio and Piedmont routinely enter into long-term natural gas supply commodity and capacity commitments and other agreements that commit future cash flows to acquire services needed in their businesses. These commitments include pipeline and storage capacity contracts and natural gas supply contracts to provide service to customers. Costs arising from the natural gas supply commodity and capacity commitments, while significant, are pass-through costs to customers and are generally fully recoverable through the fuel adjustment or PGA procedures and prudence reviews in North Carolina and South Carolina and under the Tennessee Incentive Plan in Tennessee. In the Midwest, these costs are recovered via the Gas Cost Recovery Rate in Ohio or the Gas Cost Adjustment Clause in Kentucky. The time periods for fixed payments under pipeline and storage capacity contracts are up to 16 years. The time periods for fixed payments under natural gas supply contracts are up to seven years. The time period for the natural gas supply purchase commitments is up to 12 years.

Certain storage and pipeline capacity contracts require the payment of demand charges that are based on rates approved by the FERC in order to maintain rights to access the natural gas storage or pipeline capacity on a firm basis during the contract term. The demand charges that are incurred in each period are recognized in the Consolidated Statements of Operations and Comprehensive Income as part of natural gas purchases and are included in Cost of natural gas.

The following table presents future unconditional purchase obligations under natural gas supply and capacity contracts as of December 31, 2018.

(in millions)	Duke Energy	Duke Energy Ohio	Piedmont
2019	$ 314	$ 38	$ 276
2020	287	30	257
2021	255	29	226
2022	225	11	214
2023	148	4	144
Thereafter	1,067	—	1,067
Total	$ 2,296	$ 112	$ 2,184

Operating and Capital Lease Commitments

The Duke Energy Registrants lease office buildings, railcars, vehicles and other property and equipment with various terms and expiration dates. Additionally, Duke Energy Carolinas and Duke Energy Progress have capital leases related to firm natural gas pipeline transportation capacity. Duke Energy Progress and Duke Energy Florida have entered into certain purchased power agreements, which are classified as leases. Consolidated capitalized lease obligations are classified as Long-Term Debt or Other within Current Liabilities on the Consolidated Balance Sheets. Amortization of assets recorded under capital leases is included in Depreciation and amortization and Fuel used in electric generation and purchased power on the Consolidated Statements of Operations.

The following tables present rental expense for operating leases. These amounts are included in Operation, maintenance and other and Fuel used in electric generation and purchased power on the Consolidated Statements of Operations.

	Years Ended December 31,		
(in millions)	2018	2017	2016
Duke Energy	$ 268	$ 241	$ 242
Duke Energy Carolinas	49	44	45
Progress Energy	143	130	140
Duke Energy Progress	75	75	68
Duke Energy Florida	68	55	72
Duke Energy Ohio	13	15	16
Duke Energy Indiana	21	23	23

	Years Ended December 31,		Two Months Ended December 31,	Year Ended October 31,
(in millions)	2018	2017	2016	2016
Piedmont	$ 11	$ 7	$ 1	$ 5

The following table presents future minimum lease payments under operating leases, which at inception had a non-cancelable term of more than one year.

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
2019	$ 239	$ 33	$ 97	$ 49	$ 48	$ 2	$ 6	$ 5
2020	219	29	90	46	44	2	5	5
2021	186	19	79	37	42	2	4	5
2022	170	19	76	34	42	2	4	5
2023	160	17	77	35	42	2	5	6
Thereafter	1,017	68	455	314	141	23	66	11
Total	$ 1,991	$ 185	$ 874	$ 515	$ 359	$ 33	$ 90	$ 37

The following table presents future minimum lease payments under capital leases.

	December 31, 2018						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
2019	$ 170	$ 20	$ 45	$ 20	$ 25	$ 2	$ 1
2020	174	20	46	21	25	—	1
2021	177	15	45	20	25	—	1
2022	165	15	45	21	24	—	1
2023	165	15	45	21	24	—	1
Thereafter	577	204	230	209	21	—	27
Minimum annual payments	1,428	289	456	312	144	2	32
Less: amount representing interest	(487)	(180)	(205)	(175)	(30)	—	(22)
Total	$ 941	$ 109	$ 251	$ 137	$ 114	$ 2	$ 10

6. DEBT AND CREDIT FACILITIES

Summary of Debt and Related Terms

The following tables summarize outstanding debt.

		December 31, 2018							
(in millions)	Weighted Average Interest Rate	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Unsecured debt, maturing 2019-2078	4.26%	$ 20,955	$ 1,150	$ 3,800	$ 50	$ 350	$ 1,000	$ 408	$ 2,150
Secured debt, maturing 2020-2037	3.69%	4,297	450	1,703	300	1,403	—	—	—
First mortgage bonds, maturing 2019-2048[a]	4.32%	25,628	8,759	13,100	7,574	5,526	1,099	2,670	—
Capital leases, maturing 2019-2051[b]	5.06%	941	109	251	137	114	2	10	—
Tax-exempt bonds, maturing 2019-2041[c]	3.40%	941	243	48	48	—	77	572	—
Notes payable and commercial paper[d]	2.73%	4,035	—	—	—	—	—	—	—
Money pool/intercompany borrowings		—	739	1,385	444	108	299	317	198
Fair value hedge carrying value adjustment		5	5	—	—	—	—	—	—
Unamortized debt discount and premium, net[e]		1,434	(23)	(29)	(15)	(11)	(31)	(8)	(1)
Unamortized debt issuance costs[f]		(297)	(54)	(112)	(40)	(61)	(7)	(20)	(11)
Total debt	4.13%	$ 57,939	$ 11,378	$ 20,146	$ 8,498	$ 7,429	$ 2,439	$ 3,949	$ 2,336
Short-term notes payable and commercial paper		(3,410)	—	—	—	—	—	—	—
Short-term money pool/intercompany borrowings		—	(439)	(1,235)	(294)	(108)	(274)	(167)	(198)
Current maturities of long-term debt[g]		(3,406)	(6)	(1,672)	(603)	(270)	(551)	(63)	(350)
Total long-term debt[g]		$ 51,123	$ 10,933	$ 17,239	$ 7,601	$ 7,051	$ 1,614	$ 3,719	$ 1,788

(a) Substantially all electric utility property is mortgaged under mortgage bond indentures.
(b) Duke Energy includes $63 million and $531 million of capital lease purchase accounting adjustments related to Duke Energy Progress and Duke Energy Florida, respectively, related to power purchase agreements that are not accounted for as capital leases in their respective financial statements because of grandfathering provisions in GAAP.
(c) Substantially all tax-exempt bonds are secured by first mortgage bonds, letters of credit or the Master Credit Facility.
(d) Includes $625 million that was classified as Long-Term Debt on the Consolidated Balance Sheets due to the existence of long-term credit facilities that backstop these commercial paper balances, along with Duke Energy's ability and intent to refinance these balances on a long-term basis. The weighted average days to maturity for Duke Energy's commercial paper program was 16 days.
(e) Duke Energy includes $1,380 million and $156 million in purchase accounting adjustments related to Progress Energy and Piedmont, respectively.
(f) Duke Energy includes $41 million in purchase accounting adjustments primarily related to the merger with Progress Energy.
(g) Refer to Note 17 for additional information on amounts from consolidated VIEs.

	December 31, 2017								
(in millions)	Weighted Average Interest Rate	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Unsecured debt, maturing 2018-2073	4.17%	$20,409	$ 1,150	$ 3,950	$ —	$ 550	$ 900	$ 411	$ 2,050
Secured debt, maturing 2018-2037	3.15%	4,458	450	1,757	300	1,457	—	—	—
First mortgage bonds, maturing 2018-2047[a]	4.51%	23,529	7,959	11,801	6,776	5,025	1,100	2,669	—
Capital leases, maturing 2018-2051[b]	4.55%	1,000	61	269	139	129	5	11	—
Tax-exempt bonds, maturing 2019-2041[c]	3.23%	941	243	48	48	—	77	572	—
Notes payable and commercial paper[d]	1.57%	2,788	—	—	—	—	—	—	—
Money pool/intercompany borrowings		—	404	955	390	—	54	311	364
Fair value hedge carrying value adjustment		6	6	—	—	—	—	—	—
Unamortized debt discount and premium, net[e]		1,582	(19)	(30)	(16)	(10)	(33)	(9)	(1)
Unamortized debt issuance costs[f]		(271)	(47)	(108)	(40)	(56)	(7)	(21)	(12)
Total debt	4.09%	$54,442	$ 10,207	$ 18,642	$ 7,597	$ 7,095	$ 2,096	$ 3,944	$ 2,401
Short-term notes payable and commercial paper		(2,163)	—	—	—	—	—	—	—
Short-term money pool/intercompany borrowings		—	(104)	(805)	(240)	—	(29)	(161)	(364)
Current maturities of long-term debt[g]		(3,244)	(1,205)	(771)	(3)	(768)	(3)	(3)	(250)
Total long-term debt[g]		$49,035	$ 8,898	$ 17,066	$ 7,354	$ 6,327	$ 2,064	$ 3,780	$ 1,787

(a) Substantially all electric utility property is mortgaged under mortgage bond indentures.
(b) Duke Energy includes $81 million and $603 million of capital lease purchase accounting adjustments related to Duke Energy Progress and Duke Energy Florida, respectively, related to power purchase agreements that are not accounted for as capital leases in their respective financial statements because of grandfathering provisions in GAAP.
(c) Substantially all tax-exempt bonds are secured by first mortgage bonds, letters of credit or the Master Credit Facility.
(d) Includes $625 million that was classified as Long-Term Debt on the Consolidated Balance Sheets due to the existence of long-term credit facilities that backstop these commercial paper balances, along with Duke Energy's ability and intent to refinance these balances on a long-term basis. The weighted average days to maturity for Duke Energy's commercial paper programs was 14 days.
(e) Duke Energy includes $1,509 million and $176 million purchase accounting adjustments related to the mergers with Progress Energy and Piedmont, respectively.
(f) Duke Energy includes $47 million in purchase accounting adjustments primarily related to the merger with Progress Energy.
(g) Refer to Note 17 for additional information on amounts from consolidated VIEs.

Current Maturities of Long-Term Debt

The following table shows the significant components of Current maturities of Long-Term Debt on the Consolidated Balance Sheets. The Duke Energy Registrants currently anticipate satisfying these obligations with cash on hand and proceeds from additional borrowings.

(in millions)	Maturity Date	Interest Rate	December 31, 2018
Unsecured Debt			
Progress Energy	March 2019	7.050%	$ 450
Duke Energy (Parent)	September 2019	5.050%	500
Piedmont	September 2019	3.155% [b]	350
Duke Energy Kentucky	October 2019	4.65%	100
Progress Energy	December 2019	4.875%	350
First Mortgage Bonds			
Duke Energy Progress	January 2019	5.300%	600
Duke Energy Ohio	April 2019	5.450%	450
Other[a]			606
Current maturities of long-term debt			$ 3,406

(a) Includes capital lease obligations, amortizing debt and small bullet maturities.
(b) Debt has a floating interest rate.

Maturities and Call Options

The following table shows the annual maturities of long-term debt for the next five years and thereafter. Amounts presented exclude short-term notes payable and commercial paper and money pool borrowings for the Subsidiary Registrants.

	December 31, 2018							
(in millions)	Duke Energy[a]	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
2019	$ 3,408	$ 6	$ 1,674	$ 603	$ 270	552	$ 63	$ 350
2020	3,765	907	926	354	572	—	503	—
2021	4,803	503	2,004	904	600	50	70	160
2022	2,745	353	1,032	505	77	—	94	—
2023	3,375	1,303	535	456	79	350	153	45
Thereafter	35,288	7,940	12,880	5,437	5,793	1,251	2,925	1,595
Total long-term debt, including current maturities	$ 53,384	$ 11,012	$ 19,051	$ 8,259	$ 7,391	$ 2,203	$ 3,808	$ 2,150

(a) Excludes $1,578 million in purchase accounting adjustments related to the Progress Energy merger and the Piedmont acquisition.

The Duke Energy Registrants have the ability under certain debt facilities to call and repay the obligation prior to its scheduled maturity. Therefore, the actual timing of future cash repayments could be materially different than as presented above.

Short-Term Obligations Classified as Long-Term Debt

Tax-exempt bonds that may be put to the Duke Energy Registrants at the option of the holder and certain commercial paper issuances and money pool borrowings are classified as Long-Term Debt on the Consolidated Balance Sheets. These tax-exempt bonds, commercial paper issuances and money pool borrowings, which are short-term obligations by nature, are classified as long term due to Duke Energy's intent and ability to utilize such borrowings as long-term financing. As Duke Energy's Master Credit Facility and other bilateral letter of credit agreements have non-cancelable terms in excess of one year as of the balance sheet date, Duke Energy has the ability to refinance these short-term obligations on a long-term basis. The following tables show short-term obligations classified as long-term debt.

	December 31, 2018				
(in millions)	Duke Energy	Duke Energy Carolinas	Duke Energy Progress	Duke Energy Ohio	Duke Energy Indiana
Tax-exempt bonds	$ 312	$ —	$ —	$ 27	$ 285
Commercial paper[(a)]	625	300	150	25	150
Total	$ 937	$ 300	$ 150	$ 52	$ 435

	December 31, 2017				
(in millions)	Duke Energy	Duke Energy Carolinas	Duke Energy Progress	Duke Energy Ohio	Duke Energy Indiana
Tax-exempt bonds	$ 312	$ —	$ —	$ 27	$ 285
Commercial paper[(a)]	625	300	150	25	150
Total	$ 937	$ 300	$ 150	$ 52	$ 435

(a) Progress Energy amounts are equal to Duke Energy Progress amounts.

Summary of Significant Debt Issuances

In January 2019, Duke Energy Ohio issued $800 million of first mortgage bonds. The issuance was split between a $400 million, 10-year tranche at 3.65 percent and a $400 million, 30-year tranche at 4.30 percent. The net proceeds will be used to refinance $450 million of Duke Energy Ohio bonds maturing in April 2019, to pay down short-term debt and for general corporate purposes.

The following tables summarize significant debt issuances (in millions).

			Year Ended December 31, 2018				
Issuance Date	Maturity Date	Interest Rate	Duke Energy	Duke Energy (Parent)	Duke Energy Carolinas	Duke Energy Progress	Duke Energy Florida
Unsecured Debt							
March 2018[a]	April 2025	3.950%	$ 250	$ 250	$ —	$ —	$ —
May 2018[b]	May 2021	3.114%	500	500	—	—	—
September 2018[c]	September 2078	5.625%	500	500	—	—	—
First Mortgage Bonds							
March 2018[d]	March 2023	3.050%	500	—	500	—	—
March 2018[d]	March 2048	3.950%	500	—	500	—	—
June 2018[e]	July 2028	3.800%	600	—	—	—	600
June 2018[e]	July 2048	4.200%	400	—	—	—	400
August 2018[f]	September 2023	3.375%	300	—	—	300	—
August 2018[f]	September 2028	3.700%	500	—	—	500	—
November 2018[g]	May 2022	3.350%	350	—	350	—	—
November 2018[g]	November 2028	3.950%	650	—	650	—	—
Total issuances			$ 5,050	$ 1,250	$ 2,000	$ 800	$ 1,000

(a) Debt issued to pay down short-term debt.
(b) Debt issued to pay down short-term debt. Debt issuance has a floating debt rate.
(c) Callable after September 2023 at par. Junior subordinated hybrid debt issued to pay down short-term debt and for general corporate purposes.
(d) Debt issued to repay at maturity a $300 million first mortgage bond due April 2018, pay down intercompany short-term debt and for general corporate purposes.
(e) Debt issued to repay a portion of intercompany short-term debt under the money pool borrowing arrangement and for general corporate purposes.
(f) Debt issued to repay short-term debt and for general corporate purposes.
(g) Debt issued to fund eligible green energy projects, including zero-carbon solar and energy storage, in the Carolinas.

			Year Ended December 31, 2017					
Issuance Date	Maturity Date	Interest Rate	Duke Energy	Duke Energy (Parent)	Duke Energy Carolinas	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio
Unsecured Debt								
April 2017[a]	April 2025	3.364%	$ 420	$ 420	$ —	$ —	$ —	$ —
June 2017[b]	June 2020	2.100%	330	330	—	—	—	—
August 2017[c]	August 2022	2.400%	500	500	—	—	—	—
August 2017[c]	August 2027	3.150%	750	750	—	—	—	—
August 2017[c]	August 2047	3.950%	500	500	—	—	—	—
December 2017[d]	December 2019 [k]	2.100%	400	—	—	—	400	—
Secured Debt								
February 2017[e]	June 2034	4.120%	587	—	—	—	—	—
August 2017[f]	December 2036	4.110%	233	—	—	—	—	—
First Mortgage Bonds								
January 2017[g]	January 2020	1.850%	250	—	—	—	250	—
January 2017[g]	January 2027	3.200%	650	—	—	—	650	—
March 2017[h]	June 2046	3.700%	100	—	—	—	—	100
September 2017[i]	September 2020	1.500% [l]	300	—	—	300	—	—
September 2017[i]	September 2047	3.600%	500	—	—	500	—	—
November 2017[j]	December 2047	3.700%	550	—	550	—	—	—
Total issuances			$ 6,070	$ 2,500	$ 550	$ 800	$ 1,300	$ 100

(a) Proceeds were used to refinance $400 million of unsecured debt at maturity and to repay a portion of outstanding commercial paper.
(b) Debt issued to repay a portion of outstanding commercial paper.
(c) Debt issued to repay at maturity $700 million of unsecured debt, to repay outstanding commercial paper and for general corporate purposes.
(d) Debt issued to fund storm restoration costs related to Hurricane Irma and for general corporate purposes.
(e) Portfolio financing of four Texas and Oklahoma wind facilities. Duke Energy pledged substantially all of the assets of these wind facilities and is nonrecourse to Duke Energy. Proceeds were used to reimburse Duke Energy for a portion of previously funded construction expenditures.
(f) Portfolio financing of eight solar facilities located in California, Colorado and New Mexico. Duke Energy pledged substantially all of the assets of these solar facilities and is nonrecourse to Duke Energy. Proceeds were used to reimburse Duke Energy for a portion of previously funded construction expenditures.
(g) Debt issued to fund capital expenditures for ongoing construction and capital maintenance, to repay a $250 million aggregate principal amount of bonds at maturity and for general corporate purposes.
(h) Proceeds were used to fund capital expenditures for ongoing construction, capital maintenance and for general corporate purposes.
(i) Debt issued to repay at maturity a $200 million aggregate principal amount of bonds at maturity, pay down intercompany short-term debt and for general corporate purposes, including capital expenditures.
(j) Debt issued to refinance $400 million aggregate principal amount of bonds due January 2018, pay down intercompany short-term debt and for general corporate purposes.
(k) Principal balance will be repaid in equal quarterly installments beginning in March 2018.
(l) Debt issuance has a floating interest rate.

Available Credit Facilities

In January 2018, Duke Energy extended the termination date of substantially all of its existing $8 billion Master Credit Facility capacity from March 16, 2022, to March 16, 2023. In May 2018, Duke Energy completed the extension process with 100 percent of all commitments to the Master Credit Facility extending to March 16, 2023. The Duke Energy Registrants, excluding Progress Energy (Parent), have borrowing capacity under the Master Credit Facility up to specified sublimits for each borrower. Duke Energy has the unilateral ability at any time to increase or decrease the borrowing sublimits of each borrower, subject to a maximum sublimit for each borrower. The amount available under the Master Credit Facility has been reduced to backstop issuances of commercial paper, certain letters of credit and variable-rate demand tax-exempt bonds that may be put to the Duke Energy Registrants at the option of the holder. Duke Energy Carolinas and Duke Energy Progress are also required to each maintain $250 million of available capacity under the Master Credit Facility as security to meet obligations under plea agreements reached with the U.S. Department of Justice in 2015 related to violations at North Carolina facilities with ash basins.

The table below includes the current borrowing sublimits and available capacity under these credit facilities.

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy (Parent)	Duke Energy Carolinas	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Facility size[a]	$ 8,000	$ 2,650	$ 1,750	$ 1,400	$ 650	$ 450	$ 600	$ 500
Reduction to backstop issuances								
Commercial paper[b]	(3,022)	(917)	(739)	(444)	(108)	(299)	(317)	(198)
Outstanding letters of credit	(53)	(45)	(4)	(2)	—	—	—	(2)
Tax-exempt bonds	(81)	—	—	—	—	—	(81)	—
Coal ash set-aside	(500)	—	(250)	(250)	—	—	—	—
Available capacity	$ 4,344	$ 1,688	$ 757	$ 704	$ 542	$ 151	$ 202	$ 300

(a) Represents the sublimit of each borrower.
(b) Duke Energy issued $625 million of commercial paper and loaned the proceeds through the money pool to Duke Energy Carolinas, Duke Energy Progress, Duke Energy Ohio and Duke Energy Indiana. The balances are classified as Long-Term Debt Payable to Affiliated Companies in the Consolidated Balance Sheets.

Three-Year Revolving Credit Facility

Duke Energy (Parent) has a $1.0 billion revolving credit facility through June 2020. Borrowings under this facility will be used for general corporate purposes. As of December 31, 2018, $500 million has been drawn under the Three Year Revolver. This balance is classified as Long-term debt on Duke Energy's Consolidated Balance Sheets. Any undrawn commitments can be drawn, and borrowings can be prepaid, at any time throughout the term of the facility. The terms and conditions of the Three Year Revolver are generally consistent with those governing Duke Energy's Master Credit Facility.

Duke Energy Progress Term Loan Facility

In December 2018, Duke Energy Progress entered into a two-year term loan facility with commitments totaling $700 million. Borrowings under the facility will be used to pay storm-related costs, pay down commercial paper and to partially finance an upcoming bond maturity. As of December 31, 2018, $50 million has been drawn under the term loan. The balance is classified as Long-term debt on Duke Energy Progress' Consolidated Balance Sheets. In January and February 2019, the remaining $650 million was drawn under the term loan.

Piedmont Term Loan Facility

In September 2018, Piedmont executed an amendment to its existing senior unsecured term loan facility. The amendment increased commitments from $250 million to $350 million and extended the maturity date to September 2019. Borrowings under the facility will be used for general corporate purposes. As of December 31, 2018, the entire $350 million has been drawn under the Piedmont Term Loan. This balance is classified as Current maturities of long-term debt on Piedmont's Consolidated Balance Sheets. The terms and conditions of the Piedmont Term Loan are generally consistent with those governing Duke Energy's Master Credit Facility.

Other Debt Matters

In September 2016, Duke Energy filed a Form S-3 with the SEC. Under this Form S-3, which is uncapped, the Duke Energy Registrants, excluding Progress Energy, may issue debt and other securities in the future at amounts, prices and with terms to be determined at the time of future offerings. The registration statement was filed to replace a similar prior filing upon expiration of its three-year term and also allows for the issuance of common stock by Duke Energy.

Duke Energy has an effective Form S-3 with the SEC to sell up to $3 billion of variable denomination floating-rate demand notes, called PremierNotes. The Form S-3 states that no more than $1.5 billion of the notes will be outstanding at any particular time. The notes are offered on a continuous basis and bear interest at a floating rate per annum determined by the Duke Energy PremierNotes Committee, or its designee, on a weekly basis. The interest rate payable on notes held by an investor may vary based on the principal amount of the investment. The notes have no stated maturity date, are non-transferable and may be redeemed in whole or in part by Duke Energy or at the investor's option at any time. The balance as of December 31, 2018, and 2017 was $1,010 million and $986 million, respectively. The notes are short-term debt obligations of Duke Energy and are reflected as Notes payable and commercial paper on Duke Energy's Consolidated Balance Sheets.

In January 2017, Duke Energy amended its Form S-3 to add Piedmont as a registrant and included in the amendment a prospectus for Piedmont under which it may issue debt securities in the same manner as other Duke Energy Registrants.

Money Pool

The Subsidiary Registrants, excluding Progress Energy (Parent), are eligible to receive support for their short-term borrowing needs through participation with Duke Energy and certain of its subsidiaries in a money pool arrangement. Under this arrangement, those companies with short-term funds may provide short-term loans to affiliates participating in this arrangement. The money pool is structured such that the Subsidiary Registrants, excluding Progress Energy (Parent), separately manage their cash needs and working capital requirements. Accordingly, there is no net settlement of receivables and payables between money pool participants. Duke Energy (Parent), may loan funds to its participating subsidiaries, but may not borrow funds through the money pool. Accordingly, as the money pool activity is between Duke Energy and its wholly owned subsidiaries, all money pool balances are eliminated within Duke Energy's Consolidated Balance Sheets.

Money pool receivable balances are reflected within Notes receivable from affiliated companies on the Subsidiary Registrants' Consolidated Balance Sheets. Money pool payable balances are reflected within either Notes payable to affiliated companies or Long-Term Debt Payable to Affiliated Companies on the Subsidiary Registrants' Consolidated Balance Sheets.

Restrictive Debt Covenants

The Duke Energy Registrants' debt and credit agreements contain various financial and other covenants. Duke Energy's Master Credit Facility contains a covenant requiring the debt-to-total capitalization ratio not to exceed 65 percent for each borrower, excluding Piedmont, and 70 percent for Piedmont. Failure to meet those covenants beyond applicable grace periods could result in accelerated due dates and/or termination of the agreements. As of December 31, 2018, each of the Duke Energy Registrants was in compliance with all covenants related to their debt agreements. In addition, some credit agreements may allow for acceleration of payments or termination of the agreements due to nonpayment, or acceleration of other significant indebtedness of the borrower or some of its subsidiaries. None of the debt or credit agreements contain material adverse change clauses.

Other Loans

As of December 31, 2018, and 2017, Duke Energy had loans outstanding of $741 million, including $37 million at Duke Energy Progress and $701 million, including $38 million at Duke Energy Progress, respectively, against the cash surrender value of life insurance policies it owns on the lives of its executives. The amounts outstanding were carried as a reduction of the related cash surrender value that is included in Other within Other Noncurrent Assets on the Consolidated Balance Sheets.

7. GUARANTEES AND INDEMNIFICATIONS

Duke Energy and Progress Energy have various financial and performance guarantees and indemnifications, which are issued in the normal course of business. As discussed below, these contracts include performance guarantees, standby letters of credit, debt guarantees, surety bonds and indemnifications. Duke Energy and Progress Energy enter into these arrangements to facilitate commercial transactions with third parties by enhancing the value of the transaction to the third party. At December 31, 2018, Duke Energy and Progress Energy do not believe conditions are likely for significant performance under these guarantees. To the extent liabilities are incurred as a result of the activities covered by the guarantees, such liabilities are included on the accompanying Consolidated Balance Sheets.

On January 2, 2007, Duke Energy completed the spin-off of its natural gas businesses to shareholders. Guarantees issued by Duke Energy or its affiliates, or assigned to Duke Energy prior to the spin-off, remained with Duke Energy subsequent to the spin-off. Guarantees issued by Spectra Capital or its affiliates prior to the spin-off remained with Spectra Capital subsequent to the spin-off, except for guarantees that were later assigned to Duke Energy. Duke Energy has indemnified Spectra Capital against any losses incurred under certain of the guarantee obligations that remain with Spectra Capital. At December 31, 2018, the maximum potential amount of future payments associated with these guarantees was $205 million, the majority of which expires by 2028.

Duke Energy has issued performance guarantees to customers and other third parties that guarantee the payment and performance of other parties, including certain non-wholly owned entities, as well as guarantees of debt of certain non-consolidated entities and less than wholly owned consolidated entities. If such entities were to default on payments or performance, Duke Energy would be required under the guarantees to make payments on the obligations of the less than wholly owned entity. The maximum potential amount of future payments required under these guarantees as of December 31, 2018, was $296 million. Of this amount, $11 million relates to guarantees issued on behalf of less than wholly owned consolidated entities, with the remainder related to guarantees issued on behalf of third parties and unconsolidated affiliates of Duke Energy. Of the guarantees noted above, $248 million of the guarantees expire between 2019 and 2030, with the remaining performance guarantees having no contractual expiration.

In October 2017, ACP executed a $3.4 billion revolving credit facility with a stated maturity date of October 2021. Duke Energy entered into a guarantee agreement to support its share of the ACP revolving credit facility. Duke Energy's maximum exposure to loss under the terms of the guarantee is $677 million as of December 31, 2018. This amount represents 47 percent of the outstanding borrowings under the credit facility.

Duke Energy guaranteed debt issued by Duke Energy Carolinas of $650 million as of December 31, 2018, and 2017.

Duke Energy has guaranteed certain issuers of surety bonds, obligating itself to make payment upon the failure of a wholly owned and former non-wholly owned entity to honor its obligations to a third party. Under these arrangements, Duke Energy has payment obligations that are triggered by a draw by the third party or customer due to the failure of the wholly owned or former non-wholly owned entity to perform according to the terms of its underlying contract. At December 31, 2018, Duke Energy had guaranteed $63 million of outstanding surety bonds, most of which have no set expiration.

Duke Energy uses bank-issued standby letters of credit to secure the performance of wholly owned and non-wholly owned entities to a third party or customer. Under these arrangements, Duke Energy has payment obligations to the issuing bank that are triggered by a draw by the third party or customer due to the failure of the wholly owned or non-wholly owned entity to perform according to the terms of its underlying contract. At December 31, 2018, Duke Energy had issued a total of $454 million in letters of credit, which expire between 2019 and 2022. The unused amount under these letters of credit was $60 million.

Duke Energy recognized $23 million and $21 million, as of December 31, 2018, and 2017, respectively, primarily in Other within Other Noncurrent Liabilities on the Consolidated Balance Sheets, for the guarantees discussed above. As current estimates change, additional losses related to guarantees and indemnifications to third parties, which could be material, may be recorded by the Duke Energy Registrants in the future.

8. JOINT OWNERSHIP OF GENERATING AND TRANSMISSION FACILITIES

The Duke Energy Registrants maintain ownership interests in certain jointly owned generating and transmission facilities. The Duke Energy Registrants are entitled to a share of the generating capacity and output of each unit equal to their respective ownership interests. The Duke Energy Registrants pay their ownership share of additional construction costs, fuel inventory purchases and operating expenses. The Duke Energy Registrants share of revenues and operating costs of the jointly owned facilities is included within the corresponding line in the Consolidated Statements of Operations. Each participant in the jointly owned facilities must provide its own financing.

The following table presents the Duke Energy Registrants' interest of jointly owned plant or facilities and amounts included on the Consolidated Balance Sheets. All facilities are operated by the Duke Energy Registrants and are included in the Electric Utilities and Infrastructure segment.

	December 31, 2018			
(in millions except for ownership interest)	Ownership Interest	Property, Plant and Equipment	Accumulated Depreciation	Construction Work in Progress
Duke Energy Carolinas				
Catawba (units 1 and 2)[(a)]	19.25%	$ 989	$ 483	$ 17
W.S. Lee CC[(b)]	86.67%	593	12	4
Duke Energy Indiana				
Gibson (unit 5)[(c)]	50.05%	390	173	3
Vermillion[(d)]	62.50%	168	135	—
Transmission and local facilities[(c)]	Various	5,037	1,769	—

(a) Jointly owned with North Carolina Municipal Power Agency Number 1, NCEMC and PMPA.
(b) Jointly owned with NCEMC.
(c) Jointly owned with WVPA and Indiana Municipal Power Agency.
(d) Jointly owned with WVPA.

Effective June 30, 2018, Duke Energy Ohio, Ohio Power Company, and The Dayton Power and Light Company, completed an asset exchange that reallocated their ownership interest in certain jointly owned transmission facilities. This transaction was approved by FERC and PUCO. The transaction eliminated the joint owner relationships for these assets. Assets were exchanged at net book value and the net increase in Duke Energy Ohio's assets are shown within Capital expenditures in Duke Energy Ohio's Consolidated Statements of Cash Flows.

9. ASSET RETIREMENT OBLIGATIONS

Duke Energy records an ARO when it has a legal obligation to incur retirement costs associated with the retirement of a long-lived asset and the obligation can be reasonably estimated. Certain assets of the Duke Energy Registrants have an indeterminate life, such as transmission and distribution facilities, and thus the fair value of the retirement obligation is not reasonably estimable. A liability for these AROs will be recorded when a fair value is determinable.

The Duke Energy Registrants' regulated operations accrue costs of removal for property that does not have an associated legal retirement obligation based on regulatory orders from state commissions. These costs of removal are recorded as a regulatory liability in accordance with regulatory accounting treatment. The Duke Energy Registrants do not accrue the estimated cost of removal for any nonregulated assets. See Note 4 for the estimated cost of removal for assets without an associated legal retirement obligation, which are included in Regulatory liabilities on the Consolidated Balance Sheets.

The following table presents the AROs recorded on the Consolidated Balance Sheets.

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Decommissioning of nuclear power facilities[(a)]	$ 5,696	$ 2,335	$ 3,209	$ 2,679	$ 530	$ —	$ —	$ —
Closure of ash impoundments	4,446	1,568	2,123	2,103	20	52	702	—
Other[(b)]	325	46	79	38	41	41	20	19
Total asset retirement obligation	$ 10,467	$ 3,949	$ 5,411	$ 4,820	$ 591	$ 93	$ 722	$ 19
Less: current portion	919	290	514	509	5	6	109	—
Total noncurrent asset retirement obligation	$ 9,548	$ 3,659	$ 4,897	$ 4,311	$ 586	$ 87	$ 613	$ 19

(a) Duke Energy amount includes purchase accounting adjustments related to the merger with Progress Energy.
(b) Primarily includes obligations related to asbestos removal. Duke Energy Ohio and Piedmont also include AROs related to the retirement of natural gas mains and services. Duke Energy includes AROs related to the removal of renewable energy generation assets.

Nuclear Decommissioning Liability

AROs related to nuclear decommissioning are based on site-specific cost studies. The NCUC, PSCSC and FPSC require updated cost estimates for decommissioning nuclear plants every five years.

The following table summarizes information about the most recent site-specific nuclear decommissioning cost studies. Decommissioning costs are stated in 2018 dollars for Duke Energy Carolinas, 2017 dollars for Duke Energy Florida and 2014 dollars for Duke Energy Progress, and include costs to decommission plant components not subject to radioactive contamination.

(in millions)	Annual Funding Requirement[a]	Decommissioning Costs[a]	Year of Cost Study
Duke Energy	$ 24	$ 8,737	2014 and 2018
Duke Energy Carolinas[b][c]	—	4,291	2018
Duke Energy Progress	24	3,550	2014
Duke Energy Florida[d]	—	896	2018

(a) Amounts for Progress Energy equal the sum of Duke Energy Progress and Duke Energy Florida.
(b) Decommissioning cost for Duke Energy Carolinas reflects its ownership interest in jointly owned reactors. Other joint owners are responsible for decommissioning costs related to their interest in the reactors.
(c) Duke Energy Carolinas' site-specific nuclear decommissioning cost study completed in 2018 is expected to be filed with the NCUC and PSCSC by the second quarter 2019. Duke Energy Carolinas will also complete a new funding study, which will be completed and filed with the NCUC and PSCSC in 2019.
(d) Duke Energy Florida's site-specific nuclear decommissioning cost study and a new funding study were completed and filed with the FPSC in 2018.

Nuclear Decommissioning Trust Funds

Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida each maintain NDTFs that are intended to pay for the decommissioning costs of their respective nuclear power plants. The NDTF investments are managed and invested in accordance with applicable requirements of various regulatory bodies including the NRC, FERC, NCUC, PSCSC, FPSC and the IRS.

Use of the NDTF investments is restricted to nuclear decommissioning activities including license termination, spent fuel and site restoration. The license termination and spent fuel obligations relate to contaminated decommissioning and are recorded as AROs. The site restoration obligation relates to non-contaminated decommissioning and is recorded to cost of removal within Regulatory liabilities on the Consolidated Balance Sheets.

The following table presents the fair value of NDTF assets legally restricted for purposes of settling AROs associated with nuclear decommissioning. Duke Energy Florida is actively decommissioning Crystal River Unit 3 and was granted an exemption from the NRC, which allows for use of the NDTF for all aspects of nuclear decommissioning. The entire balance of Duke Energy Florida's NDTF may be applied toward license termination, spent fuel and site restoration costs incurred to decommission Crystal River Unit 3 and is excluded from the table below. See Note 16 for additional information related to the fair value of the Duke Energy Registrants' NDTFs.

(in millions)	December 31, 2018	2017
Duke Energy	$ 5,579	$ 5,864
Duke Energy Carolinas	3,133	3,321
Duke Energy Progress	2,446	2,543

Nuclear Operating Licenses

Operating licenses for nuclear units are potentially subject to extension. The following table includes the current expiration of nuclear operating licenses.

Unit	Year of Expiration
Duke Energy Carolinas	
Catawba Units 1 and 2	2043
McGuire Unit 1	2041
McGuire Unit 2	2043
Oconee Units 1 and 2	2033
Oconee Unit 3	2034
Duke Energy Progress	
Brunswick Unit 1	2036
Brunswick Unit 2	2034
Harris	2046
Robinson	2030

The NRC has acknowledged permanent cessation of operation and permanent removal of fuel from the reactor vessel at Crystal River Unit 3. Therefore, the license no longer authorizes operation of the reactor. In January 2018, Crystal River Unit 3 reached a SAFSTOR status.

Closure of Ash Impoundments

The Duke Energy Registrants are subject to state and federal regulations covering the closure of coal ash impoundments, including the EPA CCR rule and the Coal Ash Act, and other agreements. AROs recorded on the Duke Energy Registrants' Consolidated Balance Sheets include the legal obligation for closure of coal ash basins and the disposal of related ash as a result of these regulations and agreements.

The ARO amount recorded on the Consolidated Balance Sheets is based upon estimated closure costs for impacted ash impoundments. The amount recorded represents the discounted cash flows for estimated closure costs based upon either specific closure plans or the probability weightings of the potential closure methods as evaluated on a site-by-site basis. Actual costs to be incurred will be dependent upon factors that vary from site to site. The most significant factors are the method and time frame of closure at the individual sites. Closure methods considered include removing the water from ash basins, consolidating material as necessary and capping the ash with a synthetic barrier, excavating and relocating the ash to a lined structural fill or lined landfill or recycling the ash for concrete or some other beneficial use. The ultimate method and timetable for closure will be in compliance with standards set by federal and state regulations and other agreements. The ARO amount will be adjusted as additional information is gained through the closure and post-closure process, including acceptance and approval of compliance approaches, which may change management assumptions, and may result in a material change to the balance. See ARO Liability Rollforward section below for information on revisions made to the coal ash liability during 2018 and 2017.

Asset retirement costs associated with the AROs for operating plants and retired plants are included in Net property, plant and equipment and Regulatory assets, respectively, on the Consolidated Balance Sheets. See Note 4 for additional information on Regulatory assets related to AROs.

Cost recovery for future expenditures will be pursued through the normal ratemaking process with federal and state utility commissions, which permit recovery of necessary and prudently incurred costs associated with Duke Energy's regulated operations. See Note 4 for additional information on recovery of coal ash costs.

ARO Liability Rollforward

The following tables present changes in the liability associated with AROs.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Balance at December 31, 2016	$ 10,611	$ 3,895	$ 5,475	$ 4,697	$ 778	$ 77	$ 866	$ 14
Accretion expense[a]	435	184	228	195	33	3	32	1
Liabilities settled[b]	(619)	(282)	(270)	(204)	(65)	(7)	(49)	(8)
Liabilities incurred in the current year[c]	51	5	—	—	—	7	29	8
Revisions in estimates of cash flows	(303)	(192)	(19)	(15)	(4)	4	(97)	—
Balance at December 31, 2017	10,175	3,610	5,414	4,673	742	84	781	15
Accretion expense[a]	**427**	**179**	**225**	**196**	**29**	**4**	**29**	**1**
Liabilities settled[b]	**(638)**	**(281)**	**(272)**	**(227)**	**(45)**	**(5)**	**(79)**	**—**
Liabilities incurred in the current year[c]	**39**	**8**	**5**	**—**	**5**	**—**	**25**	**—**
Revisions in estimates of cash flows[d]	**464**	**433**	**39**	**178**	**(140)**	**10**	**(34)**	**3**
Balance at December 31, 2018	**$ 10,467**	**$ 3,949**	**$ 5,411**	**$ 4,820**	**$ 591**	**$ 93**	**$ 722**	**$ 19**

(a) Substantially all accretion expense for the years ended December 31, 2018, and 2017 relates to Duke Energy's regulated operations and has been deferred in accordance with regulatory accounting treatment.
(b) Amounts primarily relate to ash impoundment closures and nuclear decommissioning of Crystal River Unit 3.
(c) Amounts primarily relate to AROs recorded as a result of state agency closure requirements at Duke Energy Indiana.
(d) Amounts primarily relate to increases in groundwater monitoring estimates for closure of ash impoundments and an increase for nuclear decommissioning costs at Duke Energy Carolinas' nuclear sites compared to original estimates, partially offset by a reduction for nuclear decommissioning at Crystal River Unit 3 compared to original estimates and modifications to the timing of expected cash flows for coal ash AROs.

10. PROPERTY, PLANT AND EQUIPMENT

The following tables summarize the property, plant and equipment for Duke Energy and its subsidiary registrants.

		December 31, 2018							
(in millions)	Estimated Useful Life (Years)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Land		$ 2,072	$ 472	$ 868	$ 445	$ 423	$ 136	$ 116	$ 448
Plant – Regulated									
Electric generation, distribution and transmission	15-100	100,706	38,468	42,760	26,147	16,613	5,182	14,292	—
Natural gas transmission and distribution	12-80	8,808	—	—	—	—	2,719	—	6,089
Other buildings and improvements	24-90	1,966	681	636	295	341	270	253	126
Plant – Nonregulated									
Electric generation, distribution and transmission	5-30	4,410	—	—	—	—	—	—	—
Other buildings and improvements	25-35	494	—	—	—	—	—	—	—
Nuclear fuel		3,460	1,898	1,562	1,562	—	—	—	—
Equipment	3-55	2,141	467	565	399	166	384	178	141
Construction in process		5,726	1,678	2,515	1,659	856	412	325	382
Other	3-40	4,675	1,077	1,354	952	393	257	279	300
Total property, plant and equipment[(a)(d)]		134,458	44,741	50,260	31,459	18,792	9,360	15,443	7,486
Total accumulated depreciation – regulated[(b)(c)(d)]		(41,079)	(15,496)	(16,398)	(11,423)	(4,968)	(2,717)	(4,914)	(1,575)
Total accumulated depreciation – nonregulated[(c)(d)]		(2,047)	—	—	—	—	—	—	—
Generation facilities to be retired, net		362	—	362	362	—	—	—	—
Total net property, plant and equipment		$ 91,694	$ 29,245	$ 34,224	$ 20,398	$ 13,824	$ 6,643	$ 10,529	$ 5,911

(a) Includes capitalized leases of $1,237 million, $135 million, $257 million, $137 million, $120 million, $73 million and $35 million at Duke Energy, Duke Energy Carolinas, Progress Energy, Duke Energy Progress, Duke Energy Florida, Duke Energy Ohio and Duke Energy Indiana, respectively, primarily within Plant – Regulated. The Progress Energy, Duke Energy Progress and Duke Energy Florida amounts are net of $131 million, $14 million and $117 million, respectively, of accumulated amortization of capitalized leases.

(b) Includes $1,947 million, $1,087 million, $860 million and $860 million of accumulated amortization of nuclear fuel at Duke Energy, Duke Energy Carolinas, Progress Energy and Duke Energy Progress, respectively.

(c) Includes accumulated amortization of capitalized leases of $61 million, $12 million, $20 million and $10 million at Duke Energy, Duke Energy Carolinas, Duke Energy Ohio and Duke Energy Indiana, respectively.

(d) Includes gross property, plant and equipment cost of consolidated VIEs of $4,007 million and accumulated depreciation of consolidated VIEs of $698 million at Duke Energy.

		December 31, 2017							
(in millions)	Estimated Useful Life (Years)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Land		$ 1,559	$ 467	$ 767	$ 424	$ 343	$ 134	$ 111	$ 41
Plant – Regulated									
Electric generation, distribution and transmission	8-100	93,687	35,657	39,419	24,502	14,917	4,870	13,741	—
Natural gas transmission and distribution	12-80	8,292	—	—	—	—	2,559	—	5,733
Other buildings and improvements	15-100	1,936	647	652	316	336	243	240	154
Plant – Nonregulated									
Electric generation, distribution and transmission[a]	5-30	4,273	—	—	—	—	—	—	—
Other buildings and improvements	25-35	465	—	—	—	—	—	—	—
Nuclear fuel		3,680	2,120	1,560	1,560	—	—	—	—
Equipment	3-55	2,122	402	555	416	139	348	169	266
Construction in process		6,995	2,614	3,059	1,434	1,625	350	416	231
Other	3-40	4,498	1,032	1,311	931	370	228	271	300
Total property, plant and equipment[b][e]		127,507	42,939	47,323	29,583	17,730	8,732	14,948	6,725
Total accumulated depreciation – regulated[c][d][e]		(39,742)	(15,063)	(15,857)	(10,903)	(4,947)	(2,691)	(4,662)	(1,479)
Total accumulated depreciation – nonregulated[d][e]		(1,795)	—	—	—	—	—	—	—
Generation facilities to be retired, net		421	—	421	421	—	—	—	—
Total net property, plant and equipment		$ 86,391	$ 27,876	$ 31,887	$ 19,101	$ 12,783	$ 6,041	$ 10,286	$ 5,246

(a) Includes a pretax impairment charge of $58 million on a wholly owned non-contracted wind project. See discussion below.
(b) Includes capitalized leases of $1,294 million, $81 million, $272 million, $139 million, $133 million, $80 million and $35 million at Duke Energy, Duke Energy Carolinas, Progress Energy, Duke Energy Progress, Duke Energy Florida, Duke Energy Ohio and Duke Energy Indiana, respectively, primarily within Plant – Regulated. The Progress Energy, Duke Energy Progress and Duke Energy Florida amounts are net of $114 million, $11 million and $103 million, respectively, of accumulated amortization of capitalized leases.
(c) Includes $2,113 million, $1,283 million, $831 million and $831 million of accumulated amortization of nuclear fuel at Duke Energy, Duke Energy Carolinas, Progress Energy and Duke Energy Progress, respectively.
(d) Includes accumulated amortization of capitalized leases of $57 million, $11 million, $21 million and $9 million at Duke Energy, Duke Energy Carolinas, Duke Energy Ohio and Duke Energy Indiana, respectively.
(e) Includes gross property, plant and equipment cost of consolidated VIEs of $3,941 million and accumulated depreciation of consolidated VIEs of $598 million at Duke Energy.

During the year ended December 31, 2017, Duke Energy recorded a pretax impairment charge of $69 million on a wholly owned non-contracted wind project. The impairment was recorded within Impairment charges on Duke Energy's Consolidated Statements of Operations. $58 million of the impairment related to property, plant and equipment and $11 million of the impairment related to a net intangible asset; see Note 11 for additional information. The charge represents the excess carrying value over the estimated fair value of the project, which was based on a Level 3 Fair Value measurement that was determined from the income approach using discounted cash flows. The impairment was primarily due to the non-contracted wind project being located in a market that has experienced continued declining market pricing during 2017 and declining long-term forecasted energy and capacity prices, driven by low natural gas prices, additional renewable generation placed in service and lack of significant load growth.

The following tables present capitalized interest, which includes the debt component of AFUDC.

	Years Ended December 31,		
(in millions)	2018	2017	2016
Duke Energy	$ 161	$ 128	$ 100
Duke Energy Carolinas	35	45	38
Progress Energy	51	45	31
Duke Energy Progress	26	21	17
Duke Energy Florida	25	24	14
Duke Energy Ohio	17	10	8
Duke Energy Indiana	27	9	7

	Years Ended December 31,		Two Months Ended December 31,	Year Ended October 31,
(in millions)	2018	2017	2016	2016
Piedmont	$ 17	$ 12	$ 2	$ 12

Operating Leases

Duke Energy's Commercial Renewables segment operates various renewable energy projects and sells the generated output to utilities, electric cooperatives, municipalities and commercial and industrial customers through long-term contracts. In certain situations, these long-term contracts and the associated renewable energy projects qualify as operating leases. Rental income from these leases is accounted for as Operating Revenues in the Consolidated Statements of Operations. There are no minimum lease payments as all payments are contingent based on actual electricity generated by the renewable energy projects. Contingent lease payments were $268 million, $262 million, and $216 million for the years ended December 31, 2018, 2017 and 2016. As of December 31, 2018, renewable energy projects owned by Duke Energy and accounted for as operating leases had a cost basis of $3,358 million and accumulated depreciation of $602 million. These assets are principally classified as nonregulated electric generation and transmission assets.

11. GOODWILL AND INTANGIBLE ASSETS

Goodwill

Duke Energy

The following table presents goodwill by reportable segment for Duke Energy included on Duke Energy's Consolidated Balance Sheets at December 31, 2018, and 2017.

(in millions)	Electric Utilities and Infrastructure	Gas Utilities and Infrastructure	Commercial Renewables	Total
Goodwill Balance at December 31, 2017	$ 17,379	$ 1,924	$ 122	$ 19,425
Accumulated impairment charges[(a)]	—	—	(29)	(29)
Goodwill balance at December 31, 2017, adjusted for accumulated impairment charges	$ 17,379	$ 1,924	$ 93	$ 19,396
Goodwill Balance at December 31, 2018	$ 17,379	$ 1,924	$ 122	$ 19,425
Accumulated impairment charges[(a)]	$ —	$ —	$ (122)	$ (122)
Goodwill balance at December 31, 2018, adjusted for accumulated impairment charges	$ 17,379	$ 1,924	$ —	$ 19,303

(a) Duke Energy evaluated the recoverability of goodwill during 2017 and recorded impairment charges of $29 million related to the Energy Management Solutions reporting unit within the Commercial Renewables segment. The fair value of the reporting unit was determined based on the market approach. See "Goodwill Impairment Testing" below for the results of the 2018 goodwill impairment test.

Duke Energy Ohio

Duke Energy Ohio's Goodwill balance of $920 million, allocated $596 million to Electric Utilities and Infrastructure and $324 million to Gas Utilities and Infrastructure, is presented net of accumulated impairment charges of $216 million on the Consolidated Balance Sheets at December 31, 2018, and 2017.

Progress Energy

Progress Energy's Goodwill is included in the Electric Utilities and Infrastructure segment and there are no accumulated impairment charges.

Piedmont

Piedmont's Goodwill is included in the Gas Utilities and Infrastructure segment and there are no accumulated impairment charges.

Goodwill Impairment Testing

Duke Energy, Progress Energy, Duke Energy Ohio and Piedmont are required to perform an annual goodwill impairment test as of the same date each year and, accordingly, perform their annual impairment testing of goodwill as of August 31. Duke Energy, Progress Energy, Duke Energy Ohio and Piedmont update their test between annual tests if events or circumstances occur that would more likely than not reduce the fair value of a reporting unit below its carrying value.

In the third quarter of 2018, based on the results of the annual quantitative goodwill impairment test, management determined that the fair value of the Commercial Renewables reporting unit was below its respective carrying value, including goodwill. Determination of the Commercial Renewables reporting unit fair value was based on an income approach, which estimates the fair value based on discounted future cash flows. The fair value of the Commercial Renewables reporting unit is impacted by several factors, including forecasted tax credit utilization, the cost of capital, current and forecasted solar and wind volumes, and legislative developments. Certain assumptions used in determining the fair value of the reporting unit in the 2018 impairment test changed from those used in the 2017 annual impairment test including the cost of capital as a result of rising interest rates and the timing of tax credit utilization due to tax reform and IRS clarification on bonus depreciation in August 2018. Based on the quantitative impairment test, the estimated fair value of the Commercial Renewables reporting unit was below its carrying value by an immaterial amount but still more than the goodwill balance assigned to the reporting unit. As such, the entire remaining goodwill balance of approximately $93 million was impaired during the third quarter of 2018.

The fair value of all other reporting units for Duke Energy, Progress Energy, Duke Energy Ohio and Piedmont exceeded their respective carrying values at the date of the annual impairment analysis.

Intangible Assets

The following tables show the carrying amount and accumulated amortization of intangible assets included in Other within Other Noncurrent Assets on the Consolidated Balance Sheets of the Duke Energy Registrants at December 31, 2018, and 2017.

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Emission allowances	$ 18	$ —	$ 5	$ 2	$ 3	$ —	$ 12	$ —
Renewable energy certificates	168	46	120	120	—	2	—	—
Natural gas, coal and power contracts	24	—	—	—	—	—	24	—
Renewable operating and development projects	84	—	—	—	—	—	—	—
Other	6	—	—	—	—	—	—	3
Total gross carrying amounts	300	46	125	122	3	2	36	3
Accumulated amortization – natural gas, coal and power contracts	(20)	—	—	—	—	—	(20)	—
Accumulated amortization – renewable operating and development projects	(29)	—	—	—	—	—	—	—
Accumulated amortization – other	(5)	—	—	—	—	—	—	(3)
Total accumulated amortization	(54)	—	—	—	—	—	(20)	(3)
Total intangible assets, net	$ 246	$ 46	$ 125	$ 122	$ 3	$ 2	$ 16	$ —

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Emission allowances	$ 19	$ 1	$ 5	$ 2	$ 3	$ —	$ 13	$ —
Renewable energy certificates	148	38	107	107	—	3	—	—
Natural gas, coal and power contracts	24	—	—	—	—	—	24	—
Renewable operating and development projects	79	—	—	—	—	—	—	—
Other	6	—	—	—	—	—	—	3
Total gross carrying amounts	276	39	112	109	3	3	37	3
Accumulated amortization – natural gas, coal and power contracts	(19)	—	—	—	—	—	(19)	—
Accumulated amortization – renewable operating and development projects	(22)	—	—	—	—	—	—	—
Accumulated amortization – other	(5)	—	—	—	—	—	—	(3)
Total accumulated amortization	(46)	—	—	—	—	—	(19)	(3)
Total intangible assets, net	$ 230	$ 39	$ 112	$ 109	$ 3	$ 3	$ 18	$ —

During the year ended December 31, 2017, Duke Energy recorded a pretax impairment charge of $69 million on a wholly owned non-contracted wind project. The impairment was recorded within Impairment charges on Duke Energy's Consolidated Statements of Operations. $58 million of the impairment related to property, plant and equipment and $11 million of the impairment related to a net intangible asset that was recorded in 2007 when the project was acquired. Prior to the impairment, the gross amount of the intangible asset was $18 million and the accumulated amortization was $7 million. The intangible asset was fully impaired. See Note 10 for additional information.

Amortization Expense

Amortization expense amounts for natural gas, coal and power contracts, renewable operating projects and other intangible assets are immaterial for the years ended December 31, 2018, 2017 and 2016, and are expected to be immaterial for the next five years as of December 31, 2018.

12. INVESTMENTS IN UNCONSOLIDATED AFFILIATES

EQUITY METHOD INVESTMENTS

Investments in affiliates that are not controlled by Duke Energy, but over which it has significant influence, are accounted for using the equity method.

The following table presents Duke Energy's investments in unconsolidated affiliates accounted for under the equity method, as well as the respective equity in earnings, by segment.

	Years Ended December 31,					
	2018		2017		2016	
(in millions)	Investments	Equity in earnings	Investments	Equity in earnings	Investments	Equity in earnings
Electric Utilities and Infrastructure	**$ 97**	**$ 6**	$ 89	$ 5	$ 93	$ 5
Gas Utilities and Infrastructure	**1,003**	**27**	763	62	566	19
Commercial Renewables	**201**	**(1)**	190	(5)	185	(82)
Other	**108**	**51**	133	57	81	43
Total	**$ 1,409**	**$ 83**	$ 1,175	$ 119	$ 925	$ (15)

During the years ended December 31, 2018, 2017 and 2016, Duke Energy received distributions from equity investments of $108 million, $13 million and $31 million, respectively, which are included in Other assets within Cash Flows from Operating Activities on the Consolidated Statements of Cash Flows. During the years ended December 31, 2018, and 2017, Duke Energy received distributions from equity investments of $137 million and $281 million, respectively, which are included in Return of investment capital within Cash Flows from Investing Activities on the Consolidated Statements of Cash Flows.

During the years ended December 31, 2018, and 2017, and the two months ended December 31, 2016, and the year ended October 31, 2016, Piedmont received distributions from equity investments of $1 million, $4 million, $1 million and $26 million, respectively, which are included in Other assets within Cash Flows from Operating Activities and $3 million, $2 million, $1 million and $18 million, respectively, which are included within Cash Flows from Investing Activities on the Consolidated Statements of Cash Flows.

Significant investments in affiliates accounted for under the equity method are discussed below.

Electric Utilities and Infrastructure

Duke Energy owns a 50 percent interest in DATC and in Pioneer, which build, own and operate electric transmission facilities in North America.

Gas Utilities and Infrastructure

The table below outlines Duke Energy's ownership interests in natural gas pipeline companies and natural gas storage facilities.

		Investment Amount (in millions)	
Entity Name	Ownership Interest	December 31, 2018	December 31, 2017
Pipeline Investments			
Atlantic Coast Pipeline, LLC[a]	47%	$ 797	$ 397
Sabal Trail Transmission, LLC	7.5%	112 [d]	219
Constitution Pipeline, LLC[a]	24%	25	81
Cardinal Pipeline Company, LLC[b]	21.49%	10	11
Storage Facilities			
Pine Needle LNG Company, LLC[b]	45%	13	13
Hardy Storage Company, LLC[b]	50%	46	42
Total Investments[c]		$ 1,003	$ 763

(a) During the year ended December 31, 2017, Piedmont transferred its share of ownership interest in ACP and Constitution to a wholly owned subsidiary of Duke Energy at book value.
(b) Piedmont owns the Cardinal, Pine Needle and Hardy Storage investments.
(c) Duke Energy includes purchase accounting adjustments related to Piedmont.
(d) Sabal Trail returned capital of $112 million during the year ended December 31, 2018.

In October 2017, Duke Energy entered into a guarantee agreement to support its share of the ACP revolving credit facility. See Note 7 for additional information. As a result of the financing, ACP returned capital of $265 million to Duke Energy.

Piedmont sold its 15 percent membership interest in SouthStar on October 3, 2016, for $160 million resulting in an after tax gain of $81 million during the year ended October 31, 2016. Piedmont's Equity in Earnings in SouthStar was $19 million for the year ended October 31, 2016.

During the fourth quarter of 2018, ACP received several adverse court rulings as described in Note 4. As a result, Duke Energy evaluated this investment for impairment and determined that fair value approximated carrying value and therefore no impairment was necessary.

For regulatory matters and other information on the ACP, Sabal Trail and Constitution investments, see Notes 4 and 17.

Commercial Renewables

Duke Energy has a 50 percent interest in DS Cornerstone, LLC, which owns wind farm projects in the U.S.

Impairment of Equity Method Investments

During the year ended December 31, 2018, Duke Energy recorded an OTTI of the Constitution investment of $55 million within Equity in earnings of unconsolidated affiliates on Duke Energy's Consolidated Statements of Operations. The charge represents the excess carrying value over the estimated fair value of the project, which was based on a Level 3 Fair Value measurement that was determined from the income approach using discounted cash flows. The impairment was primarily due to the recent actions taken by the courts and regulators to uphold the NYSDEC's denial of the certification and uncertainty associated with the remaining legal and regulatory challenges. For additional information on the Constitution investment, see Note 4.

During the year ended December 31, 2016, Duke Energy recorded an OTTI of certain wind project investments. The $71 million pretax impairment was recorded within Equity in earnings (losses) of unconsolidated affiliates on Duke Energy's Consolidated Statements of Operations. The other-than-temporary decline in value of these investments was primarily attributable to a sustained decline in market pricing where the wind investments are located, projected net losses for the projects and a reduction in the projected cash distribution to the class of investment owned by Duke Energy.

Other

Duke Energy owns a 17.5 percent indirect interest in NMC, which owns and operates a methanol and MTBE business in Jubail, Saudi Arabia. Duke Energy's economic ownership interest decreased from 25 to 17.5 percent with the successful startup of NMC's polyacetal production facility in 2017. Duke Energy retains 25 percent of the board representation and voting rights of NMC.

13. RELATED PARTY TRANSACTIONS

The Subsidiary Registrants engage in related party transactions in accordance with the applicable state and federal commission regulations. Refer to the Consolidated Balance Sheets of the Subsidiary Registrants for balances due to or due from related parties. Material amounts related to transactions with related parties included in the Consolidated Statements of Operations and Comprehensive Income are presented in the following table.

	Years Ended December 31,		
(in millions)	2018	2017	2016
Duke Energy Carolinas			
Corporate governance and shared service expenses[a]	$ 985	$ 858	$ 831
Indemnification coverages[b]	22	23	22
JDA revenue[c]	84	49	38
JDA expense[c]	207	145	156
Intercompany natural gas purchases[d]	15	9	2
Progress Energy			
Corporate governance and shared service expenses[a]	$ 906	$ 736	$ 710
Indemnification coverages[b]	34	38	35
JDA revenue[c]	207	145	156
JDA expense[c]	84	49	38
Intercompany natural gas purchases[d]	78	77	19
Duke Energy Progress			
Corporate governance and shared service expenses[a]	$ 577	$ 438	$ 397
Indemnification coverages[b]	13	15	14
JDA revenue[c]	207	145	156
JDA expense[c]	84	49	38
Intercompany natural gas purchases[d]	78	77	19
Duke Energy Florida			
Corporate governance and shared service expenses[a]	$ 329	$ 298	$ 313
Indemnification coverages[b]	21	23	21
Duke Energy Ohio			
Corporate governance and shared service expenses[a]	$ 374	$ 363	$ 356
Indemnification coverages[b]	5	5	5
Duke Energy Indiana			
Corporate governance and shared service expenses[a]	$ 405	$ 370	$ 366
Indemnification coverages[b]	7	8	8
Piedmont			
Corporate governance and shared service expenses[a]	$ 170	$ 50	
Indemnification coverages[b]	2	2	
Intercompany natural gas sales[d]	93	86	
Natural gas storage and transportation costs[e]	25	25	

(a) The Subsidiary Registrants are charged their proportionate share of corporate governance and other shared services costs, primarily related to human resources, employee benefits, information technology, legal and accounting fees, as well as other third-party costs. These amounts are primarily recorded in Operation, maintenance and other on the Consolidated Statements of Operations and Comprehensive Income.

(b) The Subsidiary Registrants incur expenses related to certain indemnification coverages through Bison, Duke Energy's wholly owned captive insurance subsidiary. These expenses are recorded in Operation, maintenance and other on the Consolidated Statements of Operations and Comprehensive Income.

(c) Duke Energy Carolinas and Duke Energy Progress participate in a JDA, which allows the collective dispatch of power plants between the service territories to reduce customer rates. Revenues from the sale of power and expenses from the purchase of power pursuant to the JDA are recorded in Operating Revenues and Fuel used in electric generation and purchased power, respectively, on the Consolidated Statements of Operations and Comprehensive Income.

(d) Piedmont provides long-term natural gas delivery service to certain Duke Energy Carolinas and Duke Energy Progress natural gas-fired generation facilities. Piedmont records the sales in Operating Revenues, and Duke Energy Carolinas and Duke Energy Progress record the related purchases as a component of Fuel used in electric generation and purchased power on their respective Consolidated Statements of Operations and Comprehensive Income. These intercompany revenues and expenses are eliminated in consolidation. For the two months ended December 31, 2016, and for sales made subsequent to the acquisition for the year ended October 31, 2016, Piedmont recorded $14 million and $7 million, respectively, of natural gas sales with Duke Energy. For sales made prior to the acquisition for the year ended October 31, 2016, Piedmont recorded $74 million of natural gas sales with Duke Energy.

(e) Piedmont has related party transactions as a customer of its equity method investments in Pine Needle, Hardy Storage, and Cardinal natural gas storage and transportation facilities. These expenses are included in Cost of natural gas on Piedmont's Consolidated Statements of Operations and Comprehensive Income. For the two months ended December 31, 2016, and for the year ended October 31, 2016, Piedmont recorded $6 million and $29 million, respectively, of natural gas storage and transportation costs.

In addition to the amounts presented above, the Subsidiary Registrants have other affiliate transactions, including rental of office space, participation in a money pool arrangement, other operational transactions and their proportionate share of certain charged expenses. See Note 6 for more information regarding money pool. These transactions of the Subsidiary Registrants are incurred in the ordinary course of business and are eliminated in consolidation.

As discussed in Note 17, certain trade receivables have been sold by Duke Energy Ohio and Duke Energy Indiana to CRC, an affiliate formed by a subsidiary of Duke Energy. The proceeds obtained from the sales of receivables are largely cash but do include a subordinated note from CRC for a portion of the purchase price.

Intercompany Income Taxes

Duke Energy and the Subsidiary Registrants file a consolidated federal income tax return and other state and jurisdictional returns. The Subsidiary Registrants have a tax sharing agreement with Duke Energy for the allocation of consolidated tax liabilities and benefits. Income taxes recorded represent amounts the Subsidiary Registrants would incur as separate C-Corporations. The following table includes the balance of intercompany income tax receivables and payables for the Subsidiary Registrants.

(in millions)	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
December 31, 2018							
Intercompany income tax receivable	$ 52	$ 47	$ 29	$ —	$ —	$ 8	$ —
Intercompany income tax payable	—	—	—	16	3	—	45
December 31, 2017							
Intercompany income tax receivable	$ —	$ 168	$ —	$ 44	$ 22	$ —	$ 7
Intercompany income tax payable	44	—	21	—	—	35	—

14. DERIVATIVES AND HEDGING

The Duke Energy Registrants use commodity and interest rate contracts to manage commodity price risk and interest rate risk. The primary use of commodity derivatives is to hedge the generation portfolio against changes in the prices of electricity and natural gas. Piedmont enters into natural gas supply contracts to provide diversification, reliability and natural gas cost benefits to its customers. Interest rate swaps are used to manage interest rate risk associated with borrowings.

All derivative instruments not identified as NPNS are recorded at fair value as assets or liabilities on the Consolidated Balance Sheets. Cash collateral related to derivative instruments executed under master netting arrangements is offset against the collateralized derivatives on the Consolidated Balance Sheets. The cash impacts of settled derivatives are recorded as operating activities on the Consolidated Statements of Cash Flows.

INTEREST RATE RISK

The Duke Energy Registrants are exposed to changes in interest rates as a result of their issuance or anticipated issuance of variable-rate and fixed-rate debt and commercial paper. Interest rate risk is managed by limiting variable-rate exposures to a percentage of total debt and by monitoring changes in interest rates. To manage risk associated with changes in interest rates, the Duke Energy Registrants may enter into interest rate swaps, U.S. Treasury lock agreements and other financial contracts. In anticipation of certain fixed-rate debt issuances, a series of forward-starting interest rate swaps or Treasury locks may be executed to lock in components of current market interest rates. These instruments are later terminated prior to or upon the issuance of the corresponding debt.

Cash Flow Hedges

For a derivative designated as hedging the exposure to variable cash flows of a future transaction, referred to as a cash flow hedge, the effective portion of the derivative's gain or loss is initially reported as a component of other comprehensive income and subsequently reclassified into earnings once the future transaction impacts earnings. Amounts for interest rate contracts are reclassified to earnings as interest expense over the term of the related debt. Gains and losses reclassified out of AOCI for the years ended December 31, 2018, 2017 and 2016 were not material. Duke Energy's interest rate derivatives designated as hedges include interest rate swaps used to hedge existing debt within the Commercial Renewables business.

Undesignated Contracts

Undesignated contracts primarily include contracts not designated as a hedge because they are accounted for under regulatory accounting or contracts that do not qualify for hedge accounting.

Duke Energy's interest rate swaps for its regulated operations employ regulatory accounting. With regulatory accounting, the mark-to-market gains or losses on the swaps are deferred as regulatory liabilities or regulatory assets, respectively. Regulatory assets and liabilities are amortized consistent with the treatment of the related costs in the ratemaking process. The accrual of interest on the swaps is recorded as Interest Expense on the Duke Energy Registrant's Consolidated Statements of Operations and Comprehensive Income.

In August 2016, Duke Energy unwound $1.4 billion of forward-starting interest rate swaps associated with the Piedmont acquisition financing. The swaps were considered undesignated as they did not qualify for hedge accounting. Losses on the swaps of $190 million are included within Interest Expense on the Consolidated Statements of Operations for the year ended December 31, 2016. See Note 2 for additional information related to the Piedmont acquisition.

The following tables show notional amounts of outstanding derivatives related to interest rate risk.

	December 31, 2018					
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio
Cash flow hedges	$ 923	$ —	$ —	$ —	$ —	$ —
Undesignated contracts	1,721	300	1,200	650	550	27
Total notional amount[a]	$ 2,644	$ 300	$ 1,200	$ 650	$ 550	$ 27

	December 31, 2017					
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio
Cash flow hedges[a]	$ 660	$ —	$ —	$ —	$ —	$ —
Undesignated contracts	927	400	500	250	250	27
Total notional amount	$ 1,587	$ 400	$ 500	$ 250	$ 250	$ 27

(a) Duke Energy includes amounts related to consolidated VIEs of $422 million in cash flow hedges and $194 million in undesignated contracts as of December 31, 2018, and $660 million in cash flow hedges as of December 31, 2017.

COMMODITY PRICE RISK

The Duke Energy Registrants are exposed to the impact of changes in the prices of electricity purchased and sold in bulk power markets and coal and natural gas purchases, including Piedmont's natural gas supply contracts. Exposure to commodity price risk is influenced by a number of factors including the term of contracts, the liquidity of markets and delivery locations. For the Subsidiary Registrants, bulk power electricity and coal and natural gas purchases flow through fuel adjustment clauses, formula based contracts or other cost sharing mechanisms. Differences between the costs included in rates and the incurred costs, including undesignated derivative contracts, are largely deferred as regulatory assets or regulatory liabilities. Piedmont policies allow for the use of financial instruments to hedge commodity price risks. The strategy and objective of these hedging programs are to use the financial instruments to reduce gas cost volatility for customers.

Volumes

The tables below include volumes of outstanding commodity derivatives. Amounts disclosed represent the absolute value of notional volumes of commodity contracts excluding NPNS. The Duke Energy Registrants have netted contractual amounts where offsetting purchase and sale contracts exist with identical delivery locations and times of delivery. Where all commodity positions are perfectly offset, no quantities are shown.

	December 31, 2018							
	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Electricity (gigawatt-hours)	15,286	—	—	—	—	1,786	13,500	—
Natural gas (millions of dekatherms)	739	121	169	166	3	—	1	448

	December 31, 2017						
	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Indiana	Piedmont
Electricity (gigawatt-hours)	34	—	—	—	—	34	—
Natural gas (millions of dekatherms)	770	105	183	133	50	2	480

LOCATION AND FAIR VALUE OF DERIVATIVE ASSETS AND LIABILITIES RECOGNIZED IN THE CONSOLIDATED BALANCE SHEETS

The following tables show the fair value and balance sheet location of derivative instruments. Although derivatives subject to master netting arrangements are netted on the Consolidated Balance Sheets, the fair values presented below are shown gross and cash collateral on the derivatives has not been netted against the fair values shown.

Derivative Assets	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Commodity Contracts								
Not Designated as Hedging Instruments								
Current	$ 35	$ 2	$ 2	$ 2	$ —	$ 6	$ 23	$ 3
Noncurrent	4	1	2	2	—	—	—	—
Total Derivative Assets – Commodity Contracts	$ 39	$ 3	$ 4	$ 4	$ —	$ 6	$ 23	$ 3
Interest Rate Contracts								
Designated as Hedging Instruments								
Current	$ 1	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Noncurrent	3	—	—	—	—	—	—	—
Not Designated as Hedging Instruments								
Current	2	—	—	—	—	—	—	—
Noncurrent	12	—	—	—	—	—	—	—
Total Derivative Assets – Interest Rate Contracts	$ 18	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Total Derivative Assets	$ 57	$ 3	$ 4	$ 4	$ —	$ 6	$ 23	$ 3

Derivative Liabilities	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Commodity Contracts								
Not Designated as Hedging Instruments								
Current	$ 33	$ 14	$ 10	$ 5	$ 6	$ —	$ —	$ 8
Noncurrent	158	10	15	6	—	—	—	133
Total Derivative Liabilities – Commodity Contracts	$ 191	$ 24	$ 25	$ 11	$ 6	$ —	$ —	$ 141
Interest Rate Contracts								
Designated as Hedging Instruments								
Current	$ 12	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Noncurrent	6	—	—	—	—	—	—	—
Not Designated as Hedging Instruments								
Current	23	9	13	11	2	1	—	—
Noncurrent	10	—	6	5	1	4	—	—
Total Derivative Liabilities – Interest Rate Contracts	$ 51	$ 9	$ 19	$ 16	$ 3	$ 5	$ —	$ —
Total Derivative Liabilities	$ 242	$ 33	$ 44	$ 27	$ 9	$ 5	$ —	$ 141

Derivative Assets	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Commodity Contracts								
Not Designated as Hedging Instruments								
Current	$ 34	$ 2	$ 2	$ 1	$ 1	$ 1	$ 27	$ 2
Noncurrent	1	—	1	1	—	—	—	—
Total Derivative Assets – Commodity Contracts	$ 35	$ 2	$ 3	$ 2	$ 1	$ 1	$ 27	$ 2
Interest Rate Contracts								
Designated as Hedging Instruments								
Current	$ 1	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Noncurrent	15	—	—	—	—	—	—	—
Total Derivative Assets – Interest Rate Contracts	$ 16	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Total Derivative Assets	$ 51	$ 2	$ 3	$ 2	$ 1	$ 1	$ 27	$ 2

Derivative Liabilities	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Commodity Contracts								
Not Designated as Hedging Instruments								
Current	$ 36	$ 6	$ 18	$ 8	$ 10	$ —	$ —	$ 11
Noncurrent	146	4	10	4	—	—	—	131
Total Derivative Liabilities – Commodity Contracts	$ 182	$ 10	$ 28	$ 12	$ 10	$ —	$ —	$ 142
Interest Rate Contracts								
Designated as Hedging Instruments								
Current	$ 29	$ 25	$ —	$ —	$ —	$ —	$ —	$ —
Noncurrent	6	—	—	—	—	—	—	—
Not Designated as Hedging Instruments								
Current	1	—	1	—	—	1	—	—
Noncurrent	12	—	7	6	2	4	—	—
Total Derivative Liabilities – Interest Rate Contracts	$ 48	$ 25	$ 8	$ 6	$ 2	$ 5	$ —	$ —
Total Derivative Liabilities	$ 230	$ 35	$ 36	$ 18	$ 12	$ 5	$ —	$ 142

OFFSETTING ASSETS AND LIABILITIES

The following tables present the line items on the Consolidated Balance Sheets where derivatives are reported. Substantially all of Duke Energy's outstanding derivative contracts are subject to enforceable master netting arrangements. The gross amounts offset in the tables below show the effect of these netting arrangements on financial position and include collateral posted to offset the net position. The amounts shown are calculated by counterparty. Accounts receivable or accounts payable may also be available to offset exposures in the event of bankruptcy. These amounts are not included in the tables below.

Derivative Assets	December 31, 2018								
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current								
Gross amounts recognized	$ 38	$ 2	$ 2	$ 2	$ —	$ 6	$ 23	$ 3
Gross amounts offset	(3)	(2)	(2)	(2)	—	—	—	—
Net amounts presented in Current Assets: Other	$ 35	$ —	$ —	$ —	$ —	$ 6	$ 23	$ 3
Noncurrent								
Gross amounts recognized	$ 19	$ 1	$ 2	$ 2	$ —	$ —	$ —	$ —
Gross amounts offset	(3)	(1)	(2)	(2)	—	—	—	—
Net amounts presented in Other Noncurrent Assets: Other	$ 16	$ —	$ —	$ —	$ —	$ —	$ —	$ —

Derivative Liabilities	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current								
Gross amounts recognized	$ 68	$ 23	$ 23	$ 16	$ 8	$ 1	$ —	$ 8
Gross amounts offset	(4)	(2)	(2)	(2)	—	—	—	—
Net amounts presented in Current Liabilities: Other	$ 64	$ 21	$ 21	$ 14	$ 8	$ 1	$ —	$ 8
Noncurrent								
Gross amounts recognized	$ 174	$ 10	$ 21	$ 11	$ 1	$ 4	$ —	$ 133
Gross amounts offset	(3)	(1)	(2)	(2)	—	—	—	—
Net amounts presented in Other Noncurrent Liabilities: Other	$ 171	$ 9	$ 19	$ 9	$ 1	$ 4	$ —	$ 133

Derivative Assets	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current								
Gross amounts recognized	$ 35	$ 2	$ 2	$ 1	$ 1	$ 1	$ 27	$ 2
Gross amounts offset	—	—	—	—	—	—	—	—
Net amounts presented in Current Assets: Other	$ 35	$ 2	$ 2	$ 1	$ 1	$ 1	$ 27	$ 2
Noncurrent								
Gross amounts recognized	$ 16	$ —	$ 1	$ 1	$ —	$ —	$ —	$ —
Gross amounts offset	—	—	—	—	—	—	—	—
Net amounts presented in Other Noncurrent Assets: Other	$ 16	$ —	$ 1	$ 1	$ —	$ —	$ —	$ —

Derivative Liabilities	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current								
Gross amounts recognized	$ 66	$ 31	$ 19	$ 8	$ 10	$ 1	$ —	$ 11
Gross amounts offset	(3)	(2)	(2)	(2)	—	—	—	—
Net amounts presented in Current Liabilities: Other	$ 63	$ 29	$ 17	$ 6	$ 10	$ 1	$ —	$ 11
Noncurrent								
Gross amounts recognized	$ 164	$ 4	$ 17	$ 10	$ 2	$ 4	$ —	$ 131
Gross amounts offset	(1)	—	(1)	(1)	—	—	—	—
Net amounts presented in Other Noncurrent Liabilities: Other	$ 163	$ 4	$ 16	$ 9	$ 2	$ 4	$ —	$ 131

OBJECTIVE CREDIT CONTINGENT FEATURES

Certain derivative contracts contain objective credit contingent features. These features include the requirement to post cash collateral or letters of credit if specific events occur, such as a credit rating downgrade below investment grade. The following tables show information with respect to derivative contracts that are in a net liability position and contain objective credit-risk-related payment provisions.

	December 31, 2018				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Aggregate fair value of derivatives in a net liability position	$ 44	$ 19	$ 25	$ 25	$ —
Fair value of collateral already posted	—	—	—	—	—
Additional cash collateral or letters of credit in the event credit-risk-related contingent features were triggered	44	19	25	25	—

	December 31, 2017				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Aggregate fair value of derivatives in a net liability position	$ 59	$ 35	$ 25	$ 15	$ 10
Fair value of collateral already posted	—	—	—	—	—
Additional cash collateral or letters of credit in the event credit-risk-related contingent features were triggered	59	35	25	15	10

The Duke Energy Registrants have elected to offset cash collateral and fair values of derivatives. For amounts to be netted, the derivative and cash collateral must be executed with the same counterparty under the same master netting arrangement.

15. INVESTMENTS IN DEBT AND EQUITY SECURITIES

Duke Energy's investments in debt and equity securities are primarily comprised of investments held in (i) the NDTF at Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida, (ii) the grantor trusts at Duke Energy Progress, Duke Energy Florida and Duke Energy Indiana related to OPEB plans and (iii) Bison. The Duke Energy Registrants classify investments in debt securities as AFS and investments in equity securities as FV-NI.

For investments in debt securities classified as AFS, the unrealized gains and losses are included in other comprehensive income until realized, at which time, they are reported though net income. For investments in equity securities classified as FV-NI, both realized and unrealized gains and losses are reported through net income. Substantially all of Duke Energy's investments in debt and equity securities qualify for regulatory accounting, and accordingly, all associated realized and unrealized gains and losses on these investments are deferred as a regulatory asset or liability.

Duke Energy classifies the majority of investments in debt and equity securities as long term, unless otherwise noted.

Investment Trusts

The investments within the NDTF and the Investment Trusts are managed by independent investment managers with discretion to buy, sell and invest pursuant to the objectives set forth by the trust agreements. The Duke Energy Registrants have limited oversight of the day-to-day management of these investments. As a result, the ability to hold investments in unrealized loss positions is outside the control of the Duke Energy Registrants. Accordingly, all unrealized losses associated with debt securities within the Investment Trusts are considered OTTIs and are recognized immediately and deferred to regulatory accounts where appropriate.

Other AFS Securities

Unrealized gains and losses on all other AFS securities are included in other comprehensive income until realized, unless it is determined the carrying value of an investment is other-than-temporarily impaired. The Duke Energy Registrants analyze all investment holdings each reporting period to determine whether a decline in fair value should be considered other-than-temporary. If an OTTI exists, the unrealized credit loss is included in earnings. There were no material credit losses as of December 31, 2018, and 2017.

Other Investments amounts are recorded in Other within Other Noncurrent Assets on the Consolidated Balance Sheets.

DUKE ENERGY

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are classified as FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
NDTF						
Cash and cash equivalents	$ —	$ —	$ 88	$ —	$ —	$ 115
Equity securities	2,402	95	4,475	2,805	27	4,914
Corporate debt securities	4	13	566	17	2	570
Municipal bonds	1	4	353	4	3	344
U.S. government bonds	14	12	1,076	11	7	1,027
Other debt securities	—	2	148	—	1	118
Total NDTF Investments	$ 2,421	$ 126	$ 6,706	$ 2,837	$ 40	$ 7,088
Other Investments						
Cash and cash equivalents	$ —	$ —	$ 22	$ —	$ —	$ 15
Equity securities	36	1	99	59	—	123
Corporate debt securities	—	2	60	1	—	57
Municipal bonds	—	1	85	2	1	83
U.S. government bonds	1	—	45	—	—	41
Other debt securities	—	1	58	—	1	44
Total Other Investments	$ 37	$ 5	$ 369	$ 62	$ 2	$ 363
Total Investments	$ 2,458	$ 131	$ 7,075	$ 2,899	$ 42	$ 7,451

The table below summarizes the maturity date for debt securities.

(in millions)	December 31, 2018
Due in one year or less	$ 98
Due after one through five years	501
Due after five through 10 years	570
Due after 10 years	1,222
Total	$ 2,391

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were as follows.

	Year Ended December 31,
(in millions)	2018
FV-NI:	
Realized gains	$ 168
Realized losses	126
AFS:	
Realized gains	22
Realized losses	51

	Years Ended December 31,	
(in millions)	2017	2016
Realized gains	$ 202	$ 246
Realized losses	160	187

DUKE ENERGY CAROLINAS

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are classified as FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
NDTF						
Cash and cash equivalents	$ —	$ —	$ 29	$ —	$ —	$ 32
Equity securities	1,309	54	2,484	1,531	12	2,692
Corporate debt securities	2	9	341	9	2	359
Municipal bonds	—	1	81	—	1	60
U.S. government bonds	5	8	475	3	4	503
Other debt securities	—	2	143	—	1	112
Total NDTF Investments	$ 1,316	$ 74	$ 3,553	$ 1,543	$ 20	$ 3,758

The table below summarizes the maturity date for debt securities.

(in millions)	December 31, 2018
Due in one year or less	$ 6
Due after one through five years	142
Due after five through 10 years	303
Due after 10 years	589
Total	$ 1,040

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were as follows.

	Year Ended December 31,
(in millions)	**2018**
FV-NI:	
Realized gains	**$ 89**
Realized losses	**73**
AFS:	
Realized gains	**19**
Realized losses	**35**

	Years Ended December 31,	
(in millions)	2017	2016
Realized gains	$ 135	$ 157
Realized losses	103	121

PROGRESS ENERGY

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are classified as FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	**Gross Unrealized Holding Gains**	**Gross Unrealized Holding Losses**	**Estimated Fair Value**	**Gross Unrealized Holding Gains**	**Gross Unrealized Holding Losses**	**Estimated Fair Value**
NDTF						
Cash and cash equivalents	**$ —**	**$ —**	**$ 59**	$ —	$ —	$ 83
Equity securities	**1,093**	**41**	**1,991**	1,274	15	2,222
Corporate debt securities	**2**	**4**	**225**	8	—	211
Municipal bonds	**1**	**3**	**272**	4	2	284
U.S. government bonds	**9**	**4**	**601**	8	3	524
Other debt securities	**—**	**—**	**5**	—	—	6
Total NDTF Investments	**$ 1,105**	**$ 52**	**$ 3,153**	$ 1,294	$ 20	$ 3,330
Other Investments						
Cash and cash equivalents	**$ —**	**$ —**	**$ 17**	$ —	$ —	$ 12
Municipal bonds	**—**	**—**	**47**	2	—	47
Total Other Investments	**$ —**	**$ —**	**$ 64**	$ 2	$ —	$ 59
Total Investments	**$ 1,105**	**$ 52**	**$ 3,217**	$ 1,296	$ 20	$ 3,389

The table below summarizes the maturity date for debt securities.

(in millions)	**December 31, 2018**
Due in one year or less	**$ 87**
Due after one through five years	**306**
Due after five through 10 years	**216**
Due after 10 years	**541**
Total	**$ 1,150**

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were as follows.

	Year Ended December 31,
(in millions)	**2018**
FV-NI:	
Realized gains	**$ 79**
Realized losses	**53**
AFS:	
Realized gains	**3**
Realized losses	**15**

	Years Ended December 31,	
(in millions)	2017	2016
Realized gains	$ 65	$ 84
Realized losses	56	64

DUKE ENERGY PROGRESS

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are classified as FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	**Gross Unrealized Holding Gains**	**Gross Unrealized Holding Losses**	**Estimated Fair Value**	**Gross Unrealized Holding Gains**	**Gross Unrealized Holding Losses**	**Estimated Fair Value**
NDTF						
Cash and cash equivalents	**$ —**	**$ —**	**$ 46**	$ —	$ —	$ 50
Equity securities	**833**	**30**	**1,588**	980	12	1,795
Corporate debt securities	**2**	**3**	**171**	6	—	149
Municipal bonds	**1**	**3**	**271**	4	2	283
U.S. government bonds	**6**	**3**	**415**	5	2	310
Other debt securities	**—**	**—**	**3**	—	—	4
Total NDTF Investments	**$ 842**	**$ 39**	**$ 2,494**	$ 995	$ 16	$ 2,591
Other Investments						
Cash and cash equivalents	**$ —**	**$ —**	**$ 6**	$ —	$ —	$ 1
Total Other Investments	**$ —**	**$ —**	**$ 6**	$ —	$ —	$ 1
Total Investments	**$ 842**	**$ 39**	**$ 2,500**	$ 995	$ 16	$ 2,592

The table below summarizes the maturity date for debt securities.

(in millions)	**December 31, 2018**
Due in one year or less	**$ 49**
Due after one through five years	**231**
Due after five through 10 years	**161**
Due after 10 years	**419**
Total	**$ 860**

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were as follows.

(in millions)	Year Ended December 31, 2018
FV-NI:	
Realized gains	$ 68
Realized losses	48
AFS:	
Realized gains	$ 2
Realized losses	10

(in millions)	Years Ended December 31, 2017	2016
Realized gains	$ 54	$ 71
Realized losses	48	55

DUKE ENERGY FLORIDA

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are classified as FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
NDTF						
Cash and cash equivalents	$ —	$ —	$ 13	$ —	$ —	$ 33
Equity securities	260	11	403	294	3	427
Corporate debt securities	—	1	54	2	—	62
Municipal bonds	—	—	1	—	—	1
U.S. government bonds	3	1	186	3	1	214
Other debt securities	—	—	2	—	—	2
Total NDTF Investments[(a)]	$ 263	$ 13	$ 659	$ 299	$ 4	$ 739
Other Investments						
Cash and cash equivalents	$ —	$ —	$ 1	$ —	$ —	$ 1
Municipal bonds	—	—	47	2	—	47
Total Other Investments	$ —	$ —	$ 48	$ 2	$ —	$ 48
Total Investments	$ 263	$ 13	$ 707	$ 301	$ 4	$ 787

(a) During the year ended December 31, 2018, Duke Energy Florida continued to receive reimbursements from the NDTF for costs related to ongoing decommissioning activity of the Crystal River Unit 3 nuclear plant.

The table below summarizes the maturity date for debt securities.

(in millions)	December 31, 2018
Due in one year or less	$ 38
Due after one through five years	75
Due after five through 10 years	55
Due after 10 years	122
Total	$ 290

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were as follows.

	Year Ended December 31,
(in millions)	2018
FV-NI:	
Realized gains	$ 11
Realized losses	5
AFS:	
Realized gains	1
Realized losses	5

	Years Ended December 31,	
(in millions)	2017	2016
Realized gains	$ 11	$ 13
Realized losses	8	9

DUKE ENERGY INDIANA

The following table presents the estimated fair value of investments in debt and equity securities; equity investments are measured at FV-NI and debt investments are classified as AFS.

	December 31, 2018			December 31, 2017		
(in millions)	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Investments						
Equity securities	$ 29	$ —	$ 67	$ 49	$ —	$ 97
Corporate debt securities	—	—	8	—	—	3
Municipal bonds	—	1	33	—	1	28
Total Investments	$ 29	$ 1	$ 108	$ 49	$ 1	$ 128

The table below summarizes the maturity date for debt securities.

(in millions)	December 31, 2018
Due in one year or less	$ 3
Due after one through five years	20
Due after five through 10 years	4
Due after 10 years	14
Total	$ 41

Realized gains and losses, which were determined on a specific identification basis, from sales of FV-NI and AFS securities for the year ended December 31, 2018, and from sales of AFS securities for the years ended December 31, 2017, and 2016, were insignificant.

16. FAIR VALUE MEASUREMENTS

Fair value is the exchange price to sell an asset or transfer a liability in an orderly transaction between market participants at the measurement date. The fair value definition focuses on an exit price versus the acquisition cost. Fair value measurements use market data or assumptions 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. These inputs may be readily observable, corroborated by market data, or generally unobservable. Valuation techniques maximize the use of observable inputs and minimize use of unobservable inputs. A midmarket pricing convention (the midpoint price between bid and ask prices) is permitted for use as a practical expedient.

Fair value measurements are classified in three levels based on the fair value hierarchy as defined by GAAP. Certain investments are not categorized within the fair value hierarchy. These investments are measured at fair value using the NAV per share practical expedient. The NAV is derived based on the investment cost, less any impairment, plus or minus changes resulting from observable price changes for an identical or similar investment of the same issuer.

Fair value accounting guidance permits entities to elect to measure certain financial instruments that are not required to be accounted for at fair value, such as equity method investments or the company's own debt, at fair value. The Duke Energy Registrants have not elected to record any of these items at fair value.

Transfers between levels represent assets or liabilities that were previously (i) categorized at a higher level for which the inputs to the estimate became less observable or (ii) classified at a lower level for which the inputs became more observable during the period. The Duke Energy Registrant's policy is to recognize transfers between levels of the fair value hierarchy at the end of the period. There were no transfers between levels during the years ended December 31, 2018, 2017 and 2016. In addition, for Piedmont, there were no transfers between levels during the two months ended December 31, 2016, and the year ended October 31, 2016.

Valuation methods of the primary fair value measurements disclosed below are as follows.

Investments in equity securities

The majority of investments in equity securities are valued using Level 1 measurements. Investments in equity securities are typically valued at the closing price in the principal active market as of the last business day of the quarter. Principal active markets for equity prices include published exchanges such as the NYSE and the Nasdaq Stock Market. Foreign equity prices are translated from their trading currency using the currency exchange rate in effect at the close of the principal active market. There was no after-hours market activity that was required to be reflected in the reported fair value measurements.

Investments in debt securities

Most investments in debt securities are valued using Level 2 measurements because the valuations use interest rate curves and credit spreads applied to the terms of the debt instrument (maturity and coupon interest rate) and consider the counterparty credit rating. If the market for a particular fixed-income security is relatively inactive or illiquid, the measurement is Level 3.

Commodity derivatives

Commodity derivatives with clearinghouses are classified as Level 1. Other commodity derivatives, including Piedmont's natural gas supply contracts, are primarily valued using internally developed discounted cash flow models that incorporate forward price, adjustments for liquidity (bid-ask spread) and credit or non-performance risk (after reflecting credit enhancements such as collateral), and are discounted to present value. Pricing inputs are derived from published exchange transaction prices and other observable data sources. In the absence of an active market, the last available price may be used. If forward price curves are not observable for the full term of the contract and the unobservable period had more than an insignificant impact on the valuation, the commodity derivative is classified as Level 3. In isolation, increases (decreases) in natural gas forward prices result in favorable (unfavorable) fair value adjustments for natural gas purchase contracts; and increases (decreases) in electricity forward prices result in unfavorable (favorable) fair value adjustments for electricity sales contracts. Duke Energy regularly evaluates and validates pricing inputs used to estimate the fair value of natural gas commodity contracts by a market participant price verification procedure. This procedure provides a comparison of internal forward commodity curves to market participant generated curves.

Interest rate derivatives

Most over-the-counter interest rate contract derivatives are valued using financial models that utilize observable inputs for similar instruments and are classified as Level 2. Inputs include forward interest rate curves, notional amounts, interest rates and credit quality of the counterparties.

Other fair value considerations

See Note 11 for a discussion of the valuation of goodwill and intangible assets.

DUKE ENERGY

The following tables provide recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets. Derivative amounts in the tables below for all Duke Energy Registrants exclude cash collateral, which is disclosed in Note 14. See Note 15 for additional information related to investments by major security type for the Duke Energy Registrants.

	December 31, 2018				
(in millions)	Total Fair Value	Level 1	Level 2	Level 3	Not Categorized
NDTF equity securities	$ 4,475	$ 4,410	$ —	$ —	$ 65
NDTF debt securities	2,231	576	1,655	—	—
Other equity securities	99	99	—	—	—
Other debt securities	270	67	203	—	—
Derivative assets	57	4	25	28	—
Total assets	7,132	5,156	1,883	28	65
Derivative liabilities	(242)	(11)	(90)	(141)	—
Net assets (liabilities)	$ 6,890	$ 5,145	$ 1,793	$ (113)	$ 65

	December 31, 2017				
(in millions)	Total Fair Value	Level 1	Level 2	Level 3	Not Categorized
NDTF equity securities	$ 4,914	$ 4,840	$ —	$ —	$ 74
NDTF debt securities	2,174	635	1,539	—	—
Other equity securities	123	123	—	—	—
Other debt securities	241	57	184	—	—
Derivative assets	51	3	20	28	—
Total assets	7,503	5,658	1,743	28	74
Derivative liabilities	(230)	(2)	(86)	(142)	—
Net assets (liabilities)	$ 7,273	$ 5,656	$ 1,657	$ (114)	$ 74

The following tables provide reconciliations of beginning and ending balances of assets and liabilities measured at fair value using Level 3 measurements. Amounts included in earnings for derivatives are primarily included in Cost of natural gas on the Duke Energy Registrants' Consolidated Statements of Operations and Comprehensive Income. Amounts included in changes of net assets on the Duke Energy Registrants' Consolidated Balance Sheets are included in regulatory assets or liabilities. All derivative assets and liabilities are presented on a net basis.

	December 31, 2018	December 31, 2017		
(in millions)	Derivatives (net)	Investments	Derivatives (net)	Total
Balance at beginning of period	$ (114)	$ 5	$ (166)	$ (161)
Total pretax realized or unrealized gains included in comprehensive income	—	1	—	1
Purchases, sales, issuances and settlements:				
Purchases	57	—	55	55
Sales	—	(6)	—	(6)
Settlements	(57)	—	(47)	(47)
Total gains included on the Consolidated Balance Sheet	1	—	44	44
Balance at end of period	$ (113)	$ —	$ (114)	$ (114)

DUKE ENERGY CAROLINAS

The following tables provide recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			
(in millions)	Total Fair Value	Level 1	Level 2	Not Categorized
NDTF equity securities	$ 2,484	$ 2,419	$ —	$ 65
NDTF debt securities	1,069	149	920	—
Derivative assets	3	—	3	—
Total assets	3,556	2,568	923	65
Derivative liabilities	(33)	—	(33)	—
Net assets	$ 3,523	$ 2,568	$ 890	$ 65

	December 31, 2017			
(in millions)	Total Fair Value	Level 1	Level 2	Not Categorized
NDTF equity securities	$ 2,692	$ 2,618	$ —	$ 74
NDTF debt securities	1,066	204	862	—
Derivative assets	2	—	2	—
Total assets	3,760	2,822	864	74
Derivative liabilities	(35)	(1)	(34)	—
Net assets	$ 3,725	$ 2,821	$ 830	$ 74

The following table provides reconciliations of beginning and ending balances of assets and liabilities measured at fair value using Level 3 measurements.

	Investments
	Year Ended December 31,
(in millions)	2017
Balance at beginning of period	$ 3
Total pretax realized or unrealized gains included in comprehensive income	1
Purchases, sales, issuances and settlements:	
Sales	(4)
Balance at end of period	$ —

PROGRESS ENERGY

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			December 31, 2017		
(in millions)	Total Fair Value	Level 1	Level 2	Total Fair Value	Level 1	Level 2
NDTF equity securities	$ 1,991	$ 1,991	$ —	$ 2,222	$ 2,222	$ —
NDTF debt securities	1,162	427	735	1,108	431	677
Other debt securities	64	17	47	59	12	47
Derivative assets	4	—	4	3	1	2
Total assets	3,221	2,435	786	3,392	2,666	726
Derivative liabilities	(44)	—	(44)	(36)	(1)	(35)
Net assets	$ 3,177	$ 2,435	$ 742	$ 3,356	$ 2,665	$ 691

DUKE ENERGY PROGRESS

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			December 31, 2017		
(in millions)	Total Fair Value	Level 1	Level 2	Total Fair Value	Level 1	Level 2
NDTF equity securities	$ 1,588	$ 1,588	$ —	$ 1,795	$ 1,795	$ —
NDTF debt securities	906	294	612	796	243	553
Other debt securities	6	6	—	1	1	—
Derivative assets	4	—	4	2	1	1
Total assets	2,504	1,888	616	2,594	2,040	554
Derivative liabilities	(27)	—	(27)	(18)	(1)	(17)
Net assets	$ 2,477	$ 1,888	$ 589	$ 2,576	$ 2,039	$ 537

DUKE ENERGY FLORIDA

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			December 31, 2017		
(in millions)	Total Fair Value	Level 1	Level 2	Total Fair Value	Level 1	Level 2
NDTF equity securities	$ 403	$ 403	$ —	$ 427	$ 427	$ —
NDTF debt securities	256	133	123	312	188	124
Other debt securities	48	1	47	48	1	47
Derivative assets	—	—	—	1	—	1
Total assets	707	537	170	788	616	172
Derivative liabilities	(9)	—	(9)	(12)	—	(12)
Net assets	$ 698	$ 537	$ 161	$ 776	$ 616	$ 160

DUKE ENERGY OHIO

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			December 31, 2017		
(in millions)	Total Fair Value	Level 2	Level 3	Total Fair Value	Level 2	Level 3
Derivative assets	$ 6	$ —	$ 6	$ 1	$ —	$ 1
Derivative liabilities	(5)	(5)	—	(5)	(5)	—
Net assets (liabilities)	$ 1	$ (5)	$ 6	$ (4)	$ (5)	$ 1

The following table provides a reconciliation of beginning and ending balances of assets and liabilities measured at fair value using Level 3 measurements.

	Derivatives (net)	
	Years Ended December 31,	
(in millions)	2018	2017
Balance at beginning of period	$ 1	$ 5
Purchases, sales, issuances and settlements:		
Purchases	7	3
Settlements	(4)	(4)
Total gains included on the Consolidated Balance Sheet	2	(3)
Balance at end of period	$ 6	$ 1

DUKE ENERGY INDIANA

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018				December 31, 2017			
(in millions)	Total Fair Value	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 2	Level 3
Other equity securities	$ 67	$ 67	$ —	$ —	$ 97	$ 97	$ —	$ —
Other debt securities	41	—	41	—	31	—	31	—
Derivative assets	23	1	—	22	27	—	—	27
Total assets	$ 131	$ 68	$ 41	$ 22	$ 155	$ 97	$ 31	$ 27

The following table provides a reconciliation of beginning and ending balances of assets and liabilities measured at fair value using Level 3 measurements.

	Derivatives (net)	
	Years Ended December 31,	
(in millions)	2018	2017
Balance at beginning of period	$ 27	$ 16
Purchases, sales, issuances and settlements:		
Purchases	50	52
Settlements	(53)	(43)
Total (losses) gains included on the Consolidated Balance Sheet	(2)	2
Balance at end of period	$ 22	$ 27

PIEDMONT

The following table provides recorded balances for assets and liabilities measured at fair value on a recurring basis on the Consolidated Balance Sheets.

	December 31, 2018			December 31, 2017		
(in millions)	Total Fair Value	Level 1	Level 3	Total Fair Value	Level 1	Level 3
Other debt securities	$ —	$ —	$ —	$ 1	$ 1	$ —
Derivative assets	3	3	—	2	2	—
Total assets	3	3	—	3	3	—
Derivative liabilities	(141)	—	(141)	(142)	—	(142)
Net (liabilities) assets	$ (138)	$ 3	$ (141)	$ (139)	$ 3	$ (142)

The following table provides a reconciliation of beginning and ending balances of assets and liabilities measured at fair value using Level 3 measurements.

	Derivatives (net)	
	Years Ended December 31,	
(in millions)	2018	2017
Balance at beginning of period	$ (142)	$ (187)
Total gains and settlements	1	45
Balance at end of period	$ (141)	$ (142)

QUANTITATIVE INFORMATION ABOUT UNOBSERVABLE INPUTS

The following tables include quantitative information about the Duke Energy Registrants' derivatives classified as Level 3.

	December 31, 2018				
Investment Type	Fair Value (in millions)	Valuation Technique	Unobservable Input	Range	
Duke Energy Ohio					
FTRs	$ 6	RTO auction pricing	FTR price – per MWh	$ 1.19 –	$ 4.59
Duke Energy Indiana					
FTRs	22	RTO auction pricing	FTR price – per MWh	(2.07) –	8.27
Piedmont					
Natural gas contracts	(141)	Discounted cash flow	Forward natural gas curves — price per MMBtu	1.87 –	2.95
Duke Energy					
Total Level 3 derivatives	$ (113)				

	December 31, 2017				
Investment Type	Fair Value (in millions)	Valuation Technique	Unobservable Input	Range	
Duke Energy Ohio					
FTRs	$ 1	RTO auction pricing	FTR price – per MWh	$ 0.07 –	$ 1.41
Duke Energy Indiana					
FTRs	27	RTO auction pricing	FTR price – per MWh	(0.77) –	7.44
Piedmont					
Natural gas contracts	(142)	Discounted cash flow	Forward natural gas curves — price per MMBtu	2.10 –	2.88
Duke Energy					
Total Level 3 derivatives	$ (114)				

OTHER FAIR VALUE DISCLOSURES

The fair value and book value of long-term debt, including current maturities, is summarized in the following table. Estimates determined are not necessarily indicative of amounts that could have been settled in current markets. Fair value of long-term debt uses Level 2 measurements.

	December 31, 2018		December 31, 2017	
(in millions)	Book Value	Fair Value	Book Value	Fair Value
Duke Energy[(a)]	$ 54,529	$ 54,534	$ 52,279	$ 55,331
Duke Energy Carolinas	10,939	11,471	10,103	11,372
Progress Energy	18,911	19,885	17,837	20,000
Duke Energy Progress	8,204	8,300	7,357	7,992
Duke Energy Florida	7,321	7,742	7,095	7,953
Duke Energy Ohio	2,165	2,239	2,067	2,249
Duke Energy Indiana	3,782	4,158	3,783	4,464
Piedmont	2,138	2,180	2,037	2,209

(a) Book value of long-term debt includes $1.6 billion as of December 31, 2018, and $1.7 billion as of December 31, 2017, of unamortized debt discount and premium, net in purchase accounting adjustments related to the mergers with Progress Energy and Piedmont that are excluded from fair value of long-term debt.

At both December 31, 2018, and December 31, 2017, fair value of cash and cash equivalents, accounts and notes receivable, accounts payable, notes payable and commercial paper, and nonrecourse notes payable of VIEs are not materially different from their carrying amounts because of the short-term nature of these instruments and/or because the stated rates approximate market rates.

17. VARIABLE INTEREST ENTITIES

A VIE is an entity that is evaluated for consolidation using more than a simple analysis of voting control. The analysis to determine whether an entity is a VIE considers contracts with an entity, credit support for an entity, the adequacy of the equity investment of an entity and the relationship of voting power to the amount of equity invested in an entity. This analysis is performed either upon the creation of a legal entity or upon the occurrence of an event requiring reevaluation, such as a significant change in an entity's assets or activities. A qualitative analysis of control determines the party that consolidates a VIE. This assessment is based on (i) what party has the power to direct the activities of the VIE that most significantly impact its economic performance and (ii) what party has rights to receive benefits or is obligated to absorb losses that could potentially be significant to the VIE. The analysis of the party that consolidates a VIE is a continual reassessment.

CONSOLIDATED VIEs

The obligations of these VIEs discussed in the following paragraphs are nonrecourse to the Duke Energy Registrants. The registrants have no requirement to provide liquidity to, purchase assets of or guarantee performance of these VIEs unless noted in the following paragraphs.

No financial support was provided to any of the consolidated VIEs during the years ended December 31, 2018, 2017 and 2016, or is expected to be provided in the future, that was not previously contractually required.

Receivables Financing – DERF/DEPR/DEFR

DERF, DEPR and DEFR are bankruptcy remote, special purpose subsidiaries of Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida, respectively. DERF, DEPR and DEFR are wholly owned limited liability companies with separate legal existence from their parent companies and their assets are not generally available to creditors of their parent companies. On a revolving basis, DERF, DEPR and DEFR buy certain accounts receivable arising from the sale of electricity and related services from their parent companies.

DERF, DEPR and DEFR borrow amounts under credit facilities to buy these receivables. Borrowing availability from the credit facilities is limited to the amount of qualified receivables purchased. The sole source of funds to satisfy the related debt obligations is cash collections from the receivables. Amounts borrowed under the credit facilities are reflected on the Consolidated Balance Sheets as Long-Term Debt.

The most significant activity that impacts the economic performance of DERF, DEPR and DEFR are the decisions made to manage delinquent receivables. Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida are considered the primary beneficiaries and consolidate DERF, DEPR and DEFR, respectively, as they make those decisions.

Receivables Financing – CRC

CRC is a bankruptcy remote, special purpose entity indirectly owned by Duke Energy. On a revolving basis, CRC buys certain accounts receivable arising from the sale of electricity, natural gas and related services from Duke Energy Ohio and Duke Energy Indiana. CRC borrows amounts under a credit facility to buy the receivables from Duke Energy Ohio and Duke Energy Indiana. Borrowing availability from the credit facility is limited to the amount of qualified receivables sold to CRC. The sole source of funds to satisfy the related debt obligation is cash collections from the receivables. Amounts borrowed under the credit facility are reflected on Duke Energy's Consolidated Balance Sheets as Long-Term Debt.

The proceeds Duke Energy Ohio and Duke Energy Indiana receive from the sale of receivables to CRC are approximately 75 percent cash and 25 percent in the form of a subordinated note from CRC. The subordinated note is a retained interest in the receivables sold. Depending on collection experience, additional equity infusions to CRC may be required by Duke Energy to maintain a minimum equity balance of $3 million.

CRC is considered a VIE because (i) equity capitalization is insufficient to support its operations, (ii) power to direct the activities that most significantly impact the economic performance of the entity are not performed by the equity holder and (iii) deficiencies in net worth of CRC are funded by Duke Energy. The most significant activities that impact the economic performance of CRC are decisions made to manage delinquent receivables. Duke Energy is considered the primary beneficiary and consolidates CRC as it makes these decisions. Neither Duke Energy Ohio nor Duke Energy Indiana consolidate CRC.

Receivables Financing – Credit Facilities

The following table outlines amounts and expiration dates of the credit facilities described above.

	Duke Energy			
		Duke Energy Carolinas	Duke Energy Progress	Duke Energy Florida
	CRC	DERF	DEPR	DEFR
Expiration date	December 2020	December 2020	February 2021	April 2021
Credit facility amount (in millions)	$ 325	$ 450	$ 300	$ 225
Amounts borrowed at December 31, 2018	325	450	300	225
Amounts borrowed at December 31, 2017	325	450	300	225
Restricted Receivables at December 31, 2018	564	699	547	357
Restricted Receivables at December 31, 2017	545	640	459	317

Nuclear Asset-Recovery Bonds – DEFPF

DEFPF is a bankruptcy remote, wholly owned special purpose subsidiary of Duke Energy Florida. DEFPF was formed in 2016 for the sole purpose of issuing nuclear asset-recovery bonds to finance Duke Energy Florida's unrecovered regulatory asset related to Crystal River Unit 3.

In 2016, DEFPF issued senior secured bonds and used the proceeds to acquire nuclear asset-recovery property from Duke Energy Florida. The nuclear asset-recovery property acquired includes the right to impose, bill, collect and adjust a non-bypassable nuclear asset-recovery charge from all Duke Energy Florida retail customers until the bonds are paid in full and all financing costs have been recovered. The nuclear asset-recovery bonds are secured by the nuclear asset-recovery property and cash collections from the nuclear asset-recovery charges are the sole source of funds to satisfy the debt obligation. The bondholders have no recourse to Duke Energy Florida. For additional information see Notes 4 and 6.

DEFPF is considered a VIE primarily because the equity capitalization is insufficient to support its operations. Duke Energy Florida has the power to direct the significant activities of the VIE as described above and therefore Duke Energy Florida is considered the primary beneficiary and consolidates DEFPF.

The following table summarizes the impact of DEFPF on Duke Energy Florida's Consolidated Balance Sheets.

(in millions)	December 31, 2018	December 31, 2017
Receivables of VIEs	$ 5	$ 4
Regulatory Assets: Current	52	51
Current Assets: Other	39	40
Other Noncurrent Assets: Regulatory assets	1,041	1,091
Current Liabilities: Other	10	10
Current maturities of long-term debt	53	53
Long-Term Debt	1,111	1,164

Commercial Renewables

Certain of Duke Energy's renewable energy facilities are VIEs due to Duke Energy issuing guarantees for debt service and operations and maintenance reserves in support of debt financings. Assets are restricted and cannot be pledged as collateral or sold to third parties without prior approval of debt holders. Additionally, Duke Energy has VIEs associated with tax equity arrangements entered into with third–party investors in order to finance the cost of solar energy systems eligible for tax credits. The activities that most significantly impacted the economic performance of these renewable energy facilities were decisions associated with siting, negotiating PPAs and EPC agreements, and decisions associated with ongoing operations and maintenance-related activities. Duke Energy is considered the primary beneficiary and consolidates the entities as it is responsible for all of these decisions.

The table below presents material balances reported on Duke Energy's Consolidated Balance Sheets related to renewables VIEs.

(in millions)	December 31, 2018	December 31, 2017
Current Assets: Other	$ 123	$ 174
Property, plant and equipment, cost	4,007	3,923
Accumulated depreciation and amortization	(698)	(591)
Other Noncurrent Assets: Other	261	50
Current maturities of long-term debt	174	170
Long-Term Debt	1,587	1,700
Other Noncurrent Liabilities: Deferred income taxes	—	(148)
Other Noncurrent Liabilities: Asset Retirement Obligations	106	83
Other Noncurrent Liabilities: Other	212	241

NON-CONSOLIDATED VIEs

The following tables summarize the impact of non-consolidated VIEs on the Consolidated Balance Sheets.

	December 31, 2018					
	Duke Energy				Duke	Duke
(in millions)	Pipeline Investments	Commercial Renewables	Other VIEs	Total	Energy Ohio	Energy Indiana
Receivables from affiliated companies	$ —	$ —	$ —	$ —	$ 93	$ 118
Investments in equity method unconsolidated affiliates	822	190	48	1,060	—	—
Total assets	$ 822	$ 190	$ 48	$ 1,060	$ 93	$ 118
Taxes accrued	(1)	—	—	(1)	—	—
Other current liabilities	—	—	4	4	—	—
Deferred income taxes	21	—	—	21	—	—
Other noncurrent liabilities	—	—	12	12	—	—
Total liabilities	$ 20	$ —	$ 16	$ 36	$ —	$ —
Net assets	$ 802	$ 190	$ 32	$ 1,024	$ 93	$ 118

	December 31, 2017					
	Duke Energy				Duke	Duke
(in millions)	Pipeline Investments	Commercial Renewables	Other VIEs	Total	Energy Ohio	Energy Indiana
Receivables from affiliated companies	$ —	$ —	$ —	$ —	$ 87	$ 106
Investments in equity method unconsolidated affiliates	697	180	42	919	—	—
Other noncurrent assets	17	—	—	17	—	—
Total assets	$ 714	$ 180	$ 42	$ 936	$ 87	$ 106
Taxes accrued	(29)	—	—	(29)	—	—
Other current liabilities	—	—	4	4	—	—
Deferred income taxes	42	—	—	42	—	—
Other noncurrent liabilities	—	—	12	12	—	—
Total liabilities	$ 13	$ —	$ 16	$ 29	$ —	$ —
Net assets	$ 701	$ 180	$ 26	$ 907	$ 87	$ 106

The Duke Energy Registrants are not aware of any situations where the maximum exposure to loss significantly exceeds the carrying values shown above except for the power purchase agreement with OVEC, which is discussed below, and various guarantees, including Duke Energy's guarantee agreement to support its share of the ACP revolving credit facility. Duke Energy's maximum exposure to loss under the terms of the guarantee is $677 million as of December 31, 2018. For more information on various guarantees, refer to Note 7.

Pipeline Investments

Duke Energy has investments in various joint ventures with pipeline projects currently under construction. These entities are considered VIEs due to having insufficient equity to finance their own activities without subordinated financial support. Duke Energy does not have the power to direct the activities that most significantly impact the economic performance, the obligation to absorb losses or the right to receive benefits of these VIEs and therefore does not consolidate these entities.

The table below presents Duke Energy's ownership interest and investment balance in these joint ventures.

Entity Name	Ownership Interest	Investment Amount (in millions) December 31, 2018	December 31, 2017
ACP	47%	$ 797	$ 397
Sabal Trail[a]	7.5%	—	219
Constitution[b]	24%	25	81
Total		$ 822	$ 697

(a) At December 31, 2017, Sabal Trail was considered a VIE due to having insufficient equity to finance their own activities without subordinated financial support. However, Sabal Trail is now a fully operational, well capitalized entity. As a result, Sabal Trail has sufficient equity to finance its own activities, and therefore, is no longer considered a VIE. Duke Energy's investment in Sabal Trail was $112 million at December 31, 2018.

(b) During the year ended December 31, 2018, Duke Energy recorded an OTTI of $55 million related to Constitution within Equity in earnings of unconsolidated affiliates on Duke Energy's Consolidated Statements of Income. See Note 4 for additional information.

Commercial Renewables

Duke Energy has investments in various renewable energy project entities. Some of these entities are VIEs due to Duke Energy issuing guarantees for debt service and operations and maintenance reserves in support of debt financings. Duke Energy does not consolidate these VIEs because power to direct and control key activities is shared jointly by Duke Energy and other owners.

Pioneer

Duke Energy holds a 50 percent equity interest in Pioneer. Pioneer is considered a VIE due to having insufficient equity to finance their own activities without subordinated financial support. The activities that most significantly impact Pioneer's economic performance are decisions related to the development of new transmission facilities. The power to direct these activities is jointly and equally shared by Duke Energy and the other joint venture partner, American Electric Power; therefore, Duke Energy does not consolidate Pioneer.

OVEC

Duke Energy Ohio's 9 percent ownership interest in OVEC is considered a non-consolidated VIE due to having insufficient equity to finance its activities without subordinated financial support. The activities that most significantly impact OVEC's economic performance include fuel strategy and supply activities and decisions associated with ongoing operations and maintenance-related activities. Duke Energy Ohio does not have the unilateral power to direct these activities, and therefore, does not consolidate OVEC.

As a counterparty to an ICPA, Duke Energy Ohio has a contractual arrangement to receive entitlements to capacity and energy from OVEC's power plants through June 2040 commensurate with its power participation ratio, which is equivalent to Duke Energy Ohio's ownership interest. Costs, including fuel, operating expenses, fixed costs, debt amortization, and interest expense, are allocated to counterparties to the ICPA based on their power participation ratio. The value of the ICPA is subject to variability due to fluctuation in power prices and changes in OVEC's cost of business. On March 31, 2018, FES, a subsidiary of FirstEnergy and an ICPA counterparty with a power participation ratio of 4.85 percent, filed for Chapter 11 bankruptcy, which could increase costs allocated to the counterparties. On July 31, 2018, the bankruptcy court rejected the FES ICPA, which means OVEC is an unsecured creditor in the FES bankruptcy proceeding. Duke Energy Ohio cannot predict the impact of the bankruptcy filing on its OVEC interests. In addition, certain proposed environmental rulemaking could result in future increased OVEC cost allocations. See Note 4 for additional information.

CRC

See discussion under Consolidated VIEs for additional information related to CRC.

Amounts included in Receivables from affiliated companies in the above table for Duke Energy Ohio and Duke Energy Indiana reflect their retained interest in receivables sold to CRC. These subordinated notes held by Duke Energy Ohio and Duke Energy Indiana are stated at fair value. Carrying values of retained interests are determined by allocating carrying value of the receivables between assets sold and interests retained based on relative fair value. The allocated bases of the subordinated notes are not materially different than their face value because (i) the receivables generally turnover in less than two months, (ii) credit losses are reasonably predictable due to the broad customer base and lack of significant concentration and (iii) the equity in CRC is subordinate to all retained interests and thus would absorb losses first. The hypothetical effect on fair value of the retained interests assuming both a 10 percent and a 20 percent unfavorable variation in credit losses or discount rates is not material due to the short turnover of receivables and historically low credit loss history. Interest accrues to Duke Energy Ohio and Duke Energy Indiana on the retained interests using the acceptable yield method. This method generally approximates the stated rate on the notes since the allocated basis and the face value are nearly equivalent. An impairment charge is recorded against the carrying value of both retained interests and purchased beneficial interest whenever it is determined that an OTTI has occurred.

Key assumptions used in estimating fair value are detailed in the following table.

	Duke Energy Ohio		Duke Energy Indiana	
	2018	2017	2018	2017
Anticipated credit loss ratio	0.5%	0.5%	0.3%	0.3%
Discount rate	3.0%	2.1%	3.0%	2.1%
Receivable turnover rate	13.5%	13.5%	11.0%	10.7%

The following table shows the gross and net receivables sold.

	Duke Energy Ohio		Duke Energy Indiana	
(in millions)	2018	2017	2018	2017
Receivables sold	$ 269	$ 273	$ 336	$ 312
Less: Retained interests	93	87	118	106
Net receivables sold	$ 176	$ 186	$ 218	$ 206

The following table shows sales and cash flows related to receivables sold.

	Duke Energy Ohio			Duke Energy Indiana		
	Years Ended December 31,			Years Ended December 31,		
(in millions)	2018	2017	2016	2018	2017	2016
Sales						
Receivables sold	$ 1,987	$ 1,879	$ 1,926	$ 2,842	$ 2,711	$ 2,635
Loss recognized on sale	13	10	9	16	12	11
Cash Flows						
Cash proceeds from receivables sold	1,967	1,865	1,882	2,815	2,694	2,583
Collection fees received	1	1	1	1	1	1
Return received on retained interests	6	3	2	9	7	5

Cash flows from the sales of receivables are reflected within Cash Flows From Operating Activities on Duke Energy Ohio's and Duke Energy Indiana's Consolidated Statements of Cash Flows.

Collection fees received in connection with servicing transferred accounts receivable are included in Operation, maintenance and other on Duke Energy Ohio's and Duke Energy Indiana's Consolidated Statements of Operations and Comprehensive Income. The loss recognized on sales of receivables is calculated monthly by multiplying receivables sold during the month by the required discount. The required discount is derived monthly utilizing a three-year weighted average formula that considers charge-off history, late charge history and turnover history on the sold receivables, as well as a component for the time value of money. The discount rate, or component for the time value of money, is the prior month-end LIBOR plus a fixed rate of 1.00 percent.

18. REVENUE

As described in Note 1, Duke Energy adopted Revenue from Contracts with Customers effective January 1, 2018, using the modified retrospective method of adoption, which does not require restatement of prior year reported results. No cumulative effect adjustment was recorded as the vast majority of Duke Energy's revenues are at-will and without a defined contractual term. Additionally, comparative disclosures for 2018 operating results with the previous revenue recognition rules are not applicable as Duke Energy's revenue recognition has not materially changed as a result of the new standard.

Duke Energy recognizes revenue consistent with amounts billed under tariff offerings or at contractually agreed upon rates based on actual physical delivery of electric or natural gas service, including estimated volumes delivered when billings have not yet occurred. As such, the majority of Duke Energy's revenues have fixed pricing based on the contractual terms of the published tariffs, with variability in expected cash flows attributable to the customer's volumetric demand and ultimate quantities of energy or natural gas supplied and used during the billing period. The stand-alone selling price of related sales are designed to support recovery of prudently incurred costs and an appropriate return on invested assets and are primarily governed by published tariff rates or contractual agreements approved by relevant regulatory bodies. As described in Note 1, certain excise taxes and franchise fees levied by state or local governments are required to be paid even if not collected from the customer. These taxes are recognized on a gross basis as part of revenues. Duke Energy elects to account for all other taxes net of revenues.

Performance obligations are satisfied over time as energy or natural gas is delivered and consumed with billings generally occurring monthly and related payments due within 30 days, depending on regulatory requirements. In no event does the timing between payment and delivery of the goods and services exceed one year. Using this output method for revenue recognition provides a faithful depiction of the transfer of electric and natural gas service as customers obtain control of the commodity and benefit from its use at delivery. Additionally, Duke Energy has an enforceable right to consideration for energy or natural gas delivered at any discrete point in time, and will recognize revenue at an amount that reflects the consideration to which Duke Energy is entitled for the energy or natural gas delivered.

As described above, the majority of Duke Energy's tariff revenues are at-will and, as such, related contracts with customers have an expected duration of one year or less and will not have future performance obligations for disclosure. Additionally, other long-term revenue streams, including wholesale contracts, generally provide services that are part of a single performance obligation, the delivery of electricity or natural gas. As such, other than material fixed consideration under long-term contracts, related disclosures for future performance obligations are also not applicable.

Duke Energy earns substantially all of its revenues through its reportable segments, Electric Utilities and Infrastructure, Gas Utilities and Infrastructure and Commercial Renewables.

Electric Utilities and Infrastructure

Electric Utilities and Infrastructure earns the majority of its revenues through retail and wholesale electric service through the generation, transmission, distribution and sale of electricity. Duke Energy generally provides retail and wholesale electric service customers with their full electric load requirements or with supplemental load requirements when the customer has other sources of electricity.

Retail electric service is generally marketed throughout Duke Energy's electric service territory through standard service offers. The standard service offers are through tariffs determined by regulators in Duke Energy's regulated service territory. Each tariff, which is assigned to customers based on customer class, has multiple components such as an energy charge, a demand charge, a basic facilities charge and applicable riders. Duke Energy considers each of these components to be aggregated into a single performance obligation for providing electric service, or in the case of distribution only customers in Duke Energy Ohio, for delivering electricity. Electricity is considered a single performance obligation satisfied over time consistent with the series guidance and is provided and consumed over the billing period, generally one month. Retail electric service is typically provided to at-will customers who can cancel service at any time, without a substantive penalty. Additionally, Duke Energy adheres to applicable regulatory requirements in each jurisdiction to ensure the collectability of amounts billed and appropriate mitigating procedures are followed when necessary. As such, revenue from contracts with customers for such contracts is equivalent to the electricity supplied and billed in that period (including unbilled estimates).

Wholesale electric service is generally provided under long-term contracts using cost-based pricing. FERC regulates costs that may be recovered from customers and the amount of return companies are permitted to earn. Wholesale contracts include both energy and demand charges. For full requirements contracts, Duke Energy considers both charges as a single performance obligation for providing integrated electric service. For contracts where energy and demand charges are considered separate performance obligations, energy and demand are each a distinct performance obligation under the series guidance and are satisfied as energy is delivered and stand-ready service is provided on a monthly basis. This service represents consumption over the billing period and revenue is recognized consistent with billings and unbilled estimates, which generally occur monthly. Contractual amounts owed are typically trued up annually based upon incurred costs in accordance with FERC published filings and the specific customer's actual peak demand. Estimates of variable consideration related to potential additional billings or refunds owed are updated quarterly.

The majority of wholesale revenues are full requirements contracts where the customers purchase the substantial majority of their energy needs and do not have a fixed quantity of contractually required energy or capacity. As such, related forecasted revenues are considered optional purchases. Supplemental requirements contracts that include contracted blocks of energy and capacity at contractually fixed prices have the following estimated remaining performance obligations:

	Remaining Performance Obligations						
(in millions)	2019	2020	2021	2022	2023	Thereafter	Total
Progress Energy	$ 112	$ 121	$ 80	$ 82	$ 39	$ 42	$ 476
Duke Energy Progress	9	9	9	9	9	9	54
Duke Energy Florida	103	112	71	73	30	33	422
Duke Energy Indiana	9	10	5	—	—	—	24

Revenues for block sales are recognized monthly as energy is delivered and stand-ready service is provided, consistent with invoiced amounts and unbilled estimates.

Gas Utilities and Infrastructure

Gas Utilities and Infrastructure earns its revenue through retail and wholesale natural gas service through the transportation, distribution and sale of natural gas. Duke Energy generally provides retail and wholesale natural gas service customers with all natural gas load requirements. Additionally, while natural gas can be stored, substantially all natural gas provided by Duke Energy is consumed by customers simultaneously with receipt of delivery.

Retail natural gas service is marketed throughout Duke Energy's natural gas service territory using published tariff rates. The tariff rates are established by regulators in Duke Energy's service territories. Each tariff, which is assigned to customers based on customer class, have multiple components, such as a commodity charge, demand charge, customer or monthly charge and transportation costs. Duke Energy considers each of these components to be aggregated into a single performance obligation for providing natural gas service. For contracts where Duke Energy provides all of the customer's natural gas needs, the delivery of natural gas is considered a single performance obligation satisfied over time, and revenue is recognized monthly based on billings and unbilled estimates as service is provided and the commodity is consumed over the billing period. Additionally, natural gas service is typically at-will and customers can cancel service at any time, without a substantive penalty. Duke Energy also adheres to applicable regulatory requirements to ensure the collectability of amounts billed and receivable and appropriate mitigating procedures are followed when necessary.

Certain long-term individually negotiated contracts exist to provide natural gas service. These contracts are regulated and approved by state commissions. The negotiated contracts have multiple components, including a natural gas and a demand charge, similar to retail natural gas contracts. Duke Energy considers each of these components to be a single performance obligation for providing natural gas service. This service represents consumption over the billing period, generally one month.

Fixed capacity payments under long-term contracts for the Gas Utilities and Infrastructure segment include minimum margin contracts and supply arrangements with municipalities and power generation facilities. Revenues for related sales are recognized monthly as natural gas is delivered and stand-ready service is provided, consistent with invoiced amounts and unbilled estimates. Estimated remaining performance obligations are as follows:

	Remaining Performance Obligations						
(in millions)	2019	2020	2021	2022	2023	Thereafter	Total
Piedmont	$ 70	$ 68	$ 63	$ 63	$ 60	$ 430	$ 754

Commercial Renewables

Commercial Renewables earns the majority of its revenues through long-term PPAs and generally sells all of its wind and solar facility output, electricity and RECs to customers. The majority of these PPAs have historically been accounted for as leases. For PPAs that are not accounted for as leases, the delivery of electricity and the delivery of RECs are considered separate performance obligations.

The delivery of electricity is a performance obligation satisfied over time and represents generation and consumption of the electricity over the billing period, generally one month. The delivery of RECs is a performance obligation satisfied at a point in time and represents delivery of each REC generated by the wind or solar facility. The majority of self-generated RECs are bundled with energy in Duke Energy's contracts and, as such, related revenues are recognized as energy is generated and delivered as that pattern is consistent with Duke Energy's performance. Commercial Renewables recognizes revenue based on the energy generated and billed for the period, generally one month, at contractual rates (including unbilled estimates) according to the invoice practical expedient. Amounts are typically due within 30 days of invoice.

Commercial Renewables also earns revenues from installation of distributed solar generation resources, which is primarily composed of EPC projects to deliver functioning solar power systems, generally completed within two to 12 months from commencement of construction. The installation of distributed solar generation resources is a performance obligation that is satisfied over time. Revenue from fixed-price EPC contracts is recognized using the input method as work is performed based on the estimated ratio of incurred costs to estimated total costs.

Other

The remainder of Duke Energy's operations is presented as Other, which does not include material revenues from contracts with customers.

Disaggregated Revenues

For the Electric and Gas Utility and Infrastructure segments, revenue by customer class is most meaningful to Duke Energy as each respective customer class collectively represents unique customer expectations of service, generally has different energy and demand requirements, and operates under tailored, regulatory approved pricing structures. Additionally, each customer class is impacted differently by weather and a variety of economic factors including the level of population growth, economic investment, employment levels, and regulatory activities in each of Duke Energy's jurisdictions. As such, analyzing revenues disaggregated by customer class allows Duke Energy to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. For the Commercial Renewables segment, the majority of revenues from contracts with customers are from selling all of the unit-contingent output at contractually defined pricing under long-term PPAs with consistent expectations regarding the timing and certainty of cash flows. Disaggregated revenues are presented as follows:

	Year Ended December 31, 2018							
(in millions) By market or type of customer	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Electric Utilities and Infrastructure								
Residential	$ 9,587	$ 2,981	$ 4,785	$ 2,019	$ 2,766	$ 743	$ 1,076	$ —
General	6,127	2,119	2,809	1,280	1,529	422	778	—
Industrial	2,974	1,180	904	642	262	131	760	—
Wholesale	2,324	508	1,462	1,303	159	57	298	—
Other revenues	717	320	502	320	182	73	91	—
Total Electric Utilities and Infrastructure revenue from contracts with customers	$ 21,729	$ 7,108	$ 10,462	$ 5,564	$ 4,898	$ 1,426	$ 3,003	$ —
Gas Utilities and Infrastructure								
Residential	$ 1,000	$ —	$ —	$ —	$ —	$ 331	$ —	$ 669
Commercial	514	—	—	—	—	135	—	378
Industrial	147	—	—	—	—	18	—	128
Power Generation	—	—	—	—	—	—	—	54
Other revenues	139	—	—	—	—	19	—	120
Total Gas Utilities and Infrastructure revenue from contracts with customers	$ 1,800	$ —	$ —	$ —	$ —	$ 503	$ —	$ 1,349
Commercial Renewables								
Revenue from contracts with customers	$ 209	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Other								
Revenue from contracts with customers	$ 19	$ —	$ —	$ —	$ —	$ 1	$ —	$ —
Total revenue from contracts with customers	$ 23,757	$ 7,108	$ 10,462	$ 5,564	$ 4,898	$ 1,930	$ 3,003	$ 1,349
Other revenue sources[(a)]	$ 764	$ 192	$ 266	$ 135	$ 123	$ 27	$ 56	$ 26
Total revenues	$ 24,521	$ 7,300	$ 10,728	$ 5,699	$ 5,021	$ 1,957	$ 3,059	$ 1,375

(a) Other revenue sources include revenues from leases, derivatives and alternative revenue programs that are not considered revenues from contracts with customers. Alternative revenue programs in certain jurisdictions include regulatory mechanisms that periodically adjust for over or under collection of related revenues.

IMPACT OF WEATHER AND THE TIMING OF BILLING PERIODS

Revenues and costs are influenced by seasonal weather patterns. Peak sales of electricity occur during the summer and winter months, which results in higher revenue and cash flows during these periods. By contrast, lower sales of electricity occur during the spring and fall, allowing for scheduled plant maintenance. Residential and general service customers are more impacted by weather than industrial customers. Estimated weather impacts are based on actual current period weather compared to normal weather conditions. Normal weather conditions are defined as the long-term average of actual historical weather conditions. Heating-degree days measure the variation in weather based on the extent the average daily temperature falls below a base temperature. Cooling-degree days measure the variation in weather based on the extent the average daily temperature rises above the base temperature. Each degree of temperature below the base temperature counts as one heating-degree day and each degree of temperature above the base temperature counts as one cooling-degree day.

The estimated impact of weather on earnings for Electric Utilities and Infrastructure is based on the temperature variances from a normal condition and customers' historic usage patterns. The methodology used to estimate the impact of weather does not consider all variables that may impact customer response to weather conditions, such as humidity in the summer or wind chill in the winter. The precision of this estimate may also be impacted by applying long-term weather trends to shorter-term periods.

Gas Utilities and Infrastructure's costs and revenues are influenced by seasonal patterns due to peak natural gas sales occurring during the winter months as a result of space heating requirements. Residential customers are the most impacted by weather. There are certain regulatory mechanisms for the North Carolina, South Carolina, Tennessee and Ohio service territories that normalize the margins collected from certain customer classes during the winter. In North Carolina, rate design provides protection from both weather and other usage variations such as conservation, while South Carolina and Tennessee revenues are adjusted solely based on weather. Ohio primarily employs a fixed charge each month regardless of the season and usage.

UNBILLED REVENUE

Unbilled revenues are recognized by applying customer billing rates to the estimated volumes of energy or natural gas delivered but not yet billed. Unbilled revenues can vary significantly from period to period as a result of seasonality, weather, customer usage patterns, customer mix, average price in effect for customer classes, timing of rendering customer bills and meter reading schedules, and the impact of weather normalization or margin decoupling mechanisms.

Unbilled revenues are included within Receivables and Receivables of VIEs on the Consolidated Balance Sheets as shown in the following table.

	December 31,	
(in millions)	**2018**	**2017**
Duke Energy	**$ 896**	$ 944
Duke Energy Carolinas	**313**	342
Progress Energy	**244**	228
Duke Energy Progress	**148**	143
Duke Energy Florida	**96**	85
Duke Energy Ohio	**2**	4
Duke Energy Indiana	**23**	21
Piedmont	**73**	86

Additionally, Duke Energy Ohio and Duke Energy Indiana sell, on a revolving basis, nearly all of their retail accounts receivable, including receivables for unbilled revenues, to an affiliate, CRC and accounts for the transfers of receivables as sales. Accordingly, the receivables sold are not reflected on the Consolidated Balance Sheets of Duke Energy Ohio and Duke Energy Indiana. See Note 17 for further information. These receivables for unbilled revenues are shown in the table below.

	December 31,	
(in millions)	**2018**	**2017**
Duke Energy Ohio	**$ 86**	$ 104
Duke Energy Indiana	**128**	132

19. COMMON STOCK

Basic EPS is computed by dividing net income attributable to Duke Energy common stockholders, as adjusted for distributed and undistributed earnings allocated to participating securities, by the weighted average number of common shares outstanding during the period. Diluted EPS is computed by dividing net income attributable to Duke Energy common stockholders, as adjusted for distributed and undistributed earnings allocated to participating securities, by the diluted weighted average number of common shares outstanding during the period. Diluted EPS reflects the potential dilution that could occur if securities or other agreements to issue common shares, such as stock options and equity forward sale agreements, were exercised or settled. Duke Energy's participating securities are restricted stock units that are entitled to dividends declared on Duke Energy common stock during the restricted stock unit's vesting periods.

The following table presents Duke Energy's basic and diluted EPS calculations and reconciles the weighted average number of common stock outstanding to the diluted weighted average number of common stock outstanding.

	Years Ended December 31,		
(in millions, except per share amounts)	**2018**	**2017**	**2016**
Income from continuing operations attributable to Duke Energy common stockholders excluding impact of participating securities	**$ 2,642**	$ 3,059	$ 2,567
Weighted average shares outstanding – basic	**708**	700	691
Weighted average shares outstanding – diluted	**708**	700	691
Earnings per share from continuing operations attributable to Duke Energy common stockholders			
Basic	**$ 3.73**	$ 4.37	$ 3.71
Diluted	**$ 3.73**	$ 4.37	$ 3.71
Potentially dilutive items excluded from the calculation[(a)]	**2**	2	2
Dividends declared per common share	**$ 3.64**	$ 3.49	$ 3.36

(a) Performance stock awards were not included in the dilutive securities calculation because the performance measures related to the awards had not been met.

Equity Issuances

On February 20, 2018, Duke Energy filed a prospectus supplement and executed an EDA under which it may sell up to $1 billion of its common stock through an ATM offering program, including an equity forward sales component. The EDA was entered into with Wells Fargo Securities, LLC, Citigroup Global Markets Inc., and J.P. Morgan Securities LLC (the Agents). Under the terms of the EDA, Duke Energy may issue and sell, through any of the Agents, shares of common stock during the period ending September 23, 2019. In June 2018, Duke Energy marketed two separate tranches, each for 1.3 million shares, of common stock. The first tranche was marketed with Wells Fargo Bank at an initial forward price of $72.02 per share and the second tranche was marketed with Citibank at an initial forward price of $78.71 per share through equity forward transactions under the ATM program. The Equity Forwards require Duke Energy to either physically settle the transactions by issuing 2.6 million shares in exchange for net proceeds at the then-applicable forward sale price specified by the agreements or net settle in whole or in part through the delivery or receipt of cash or shares. The settlement alternative was at Duke Energy's election. In December 2018, Duke Energy physically settled these equity forwards by delivering 2.6 million shares of common stock in exchange for net proceeds of approximately $195 million.

Separately, in March 2018, Duke Energy marketed an equity offering of 21.3 million shares of common stock through an Underwriting Agreement with Credit Suisse Securities (USA) LLC, J.P. Morgan Securities LLC, Barclays Capital Inc. and Goldman Sachs & Co. LLC, as representatives of several underwriters, Credit Suisse Capital LLC and J.P. Morgan Securities LLC as Forward Sellers, and Credit Suisse Capital LLC and J.P. Morgan Chase Bank, National Association, acting as forward purchasers. In connection with the offering, Duke Energy entered into equity forward sale agreements with Credit Suisse Securities (USA) LLC as Agent for Credit Suisse Capital LLC and J.P. Morgan Chase Bank, National Association. The sale price was $75 per share less certain net adjustments for an initial forward price of $74.07 per share. The Equity Forwards require Duke Energy to either physically settle the transactions by issuing 21.3 million shares in exchange for net proceeds at the then-applicable forward sale price specified by the agreements, or net settle in whole or in part through the delivery or receipt of cash or shares. The settlement alternative was at Duke Energy's election. In June 2018, Duke Energy physically settled one-half of the equity forwards by delivering approximately 10.6 million shares of common stock in exchange for net cash proceeds of approximately $781 million. In December 2018, Duke Energy physically settled the remaining equity forward by delivering 10.6 million shares of common stock in exchange for net cash proceeds of approximately $766 million.

For the year ended December 31, 2018, Duke Energy issued 2.2 million shares through its DRIP with an increase in additional paid-in capital of approximately $174 million.

In March 2016, Duke Energy marketed an equity offering of 10.6 million shares of common stock. In lieu of issuing equity at the time of the offering, Duke Energy entered into Equity Forwards with Barclays. The Equity Forwards required Duke Energy to either physically settle the transactions by issuing 10.6 million shares, or net settle in whole or in part through the delivery or receipt of cash or shares. On October 5, 2016, following the close of the Piedmont acquisition, Duke Energy physically settled the Equity Forwards in full by delivering 10.6 million shares of common stock in exchange for net cash proceeds of approximately $723 million. The net proceeds were used to finance a portion of the Piedmont acquisition. As a result of the acquisition, all of Piedmont's issued and outstanding stock became the issued and outstanding shares of a wholly owned subsidiary of Duke Energy. See Note 2 for additional information related to the Piedmont acquisition.

20. SEVERANCE

During 2018, Duke Energy reviewed its operations and identified opportunities for improvement to better serve its customers. This operational review included the company's workforce strategy and staffing levels to ensure the company is staffed with the right skillsets and number of teammates to execute the long-term vision for Duke Energy. As such, Duke Energy extended voluntary and involuntary severance benefits to certain employees in specific areas as a part of workforce planning and digital transformation efforts.

During 2016, Duke Energy and Piedmont announced severance plans covering certain eligible employees whose employment will be involuntarily terminated without cause as a result of Duke Energy's acquisition of Piedmont. These reductions continued into 2017 and were a part of the synergies expected to be realized with the acquisition. Refer to Note 2 for additional information on the Piedmont acquisition.

Severance benefit charges for initiatives and plans discussed above were accrued for a total of approximately 1,900 employees in 2018, 100 employees in 2017 and 600 employees in 2016. The following table presents the direct and allocated severance and related charges recorded by the Duke Energy Registrants. Amounts are included within Operation, maintenance and other on the Consolidated Statements of Operations.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont[a]
Year Ended December 31, 2018	**$ 187**	**$ 102**	**$ 69**	**$ 52**	**$ 17**	**$ 6**	**$ 7**	**$ 2**
Year Ended December 31, 2017	15	2	2	1	1	—	1	9
Year Ended December 31, 2016	118	39	40	23	17	3	7	

(a) Piedmont severance benefit charges were $3 million for the two months ended December 31, 2016, and $19 million for the year ended October 31, 2016.

The table below presents the severance liability for past and ongoing severance plans including the plans described above.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Balance at December 31, 2017	$ 19	$ 5	$ 2	$ 1	$ —	$ —	$ —	$ 5
Provision/Adjustments	**200**	**98**	**50**	**40**	**10**	**2**	**2**	**—**
Cash Reductions	**(14)**	**(3)**	**(1)**	**—**	**(1)**	**—**	**—**	**(5)**
Balance at December 31, 2018	**$ 205**	**$ 100**	**$ 51**	**$ 41**	**$ 9**	**$ 2**	**$ 2**	**$ —**

21. STOCK-BASED COMPENSATION

The 2015 Plan provides for the grant of stock-based compensation awards to employees and outside directors. The 2015 Plan reserves 10 million shares of common stock for issuance. Duke Energy has historically issued new shares upon exercising or vesting of share-based awards. However, Duke Energy may use a combination of new share issuances and open market repurchases for share-based awards that are exercised or vest in the future. Duke Energy has not determined with certainty the amount of such new share issuances or open market repurchases.

The following table summarizes the total expense recognized by the Duke Energy Registrants, net of tax, for stock-based compensation.

	Years Ended December 31,		
(in millions)	2018	2017	2016
Duke Energy	**$ 56**	$ 43	$ 35
Duke Energy Carolinas	**20**	15	12
Progress Energy	**21**	16	12
Duke Energy Progress	**13**	10	7
Duke Energy Florida	**8**	6	5
Duke Energy Ohio	**4**	3	2
Duke Energy Indiana	**5**	4	3
Piedmont[a]	**3**	3	

(a) Piedmont's stock-based compensation costs were not material for the two months ended December 31, 2016. See discussion below for information on Piedmont's pre-merger stock-based compensation plans.

Duke Energy's pretax stock-based compensation costs, the tax benefit associated with stock-based compensation expense and stock-based compensation costs capitalized are included in the following table.

	Years Ended December 31,		
(in millions)	2018	2017	2016
Restricted stock unit awards	**$ 43**	$ 41	$ 36
Performance awards	**35**	27	19
Pretax stock-based compensation cost	**$ 78**	$ 68	$ 55
Stock-based compensation costs capitalized	**5**	4	2
Stock-based compensation expense	**$ 73**	$ 64	$ 53
Tax benefit associated with stock-based compensation expense	**$ 17**	$ 25	$ 20

RESTRICTED STOCK UNIT AWARDS

RSU awards generally vest over periods from immediate to three years. Fair value amounts are based on the market price of Duke Energy's common stock on the grant date. The following table includes information related to RSU awards.

	Years Ended December 31,		
	2018	2017	2016
Shares awarded (in thousands)	649	583	684
Fair value (in millions)	$ 49	$ 47	$ 52

The following table summarizes information about RSU awards outstanding.

	Shares (in thousands)	Weighted Average Grant Date Fair Value (per share)
Outstanding at December 31, 2017	1,121	$ 78
Granted	649	76
Vested	(545)	78
Forfeited	(72)	77
Outstanding at December 31, 2018	1,153	77
Restricted stock unit awards expected to vest	1,101	77

The total grant date fair value of shares vested during the years ended December 31, 2018, 2017 and 2016, was $43 million, $42 million and $38 million, respectively. At December 31, 2018, Duke Energy had $29 million of unrecognized compensation cost, which is expected to be recognized over a weighted average period of 23 months.

PERFORMANCE AWARDS

Stock-based performance awards generally vest after three years if performance targets are met. The actual number of shares issued will range from zero to 200 percent of target shares, depending on the level of performance achieved.

Performance awards contain market conditions based on relative TSR compared to a predefined peer group, as well as a performance condition based on Duke Energy's cumulative adjusted EPS. Performance awards granted in 2018 and 2017 also contain a performance condition based on the total incident case rate, one of our key employee safety metrics.

The market condition component of Duke Energy's performance awards is valued using a path-dependent model that incorporates expected relative TSR into the fair value determination of Duke Energy's performance-based share awards. The model uses three-year historical volatilities and correlations for all companies in the predefined peer group, including Duke Energy, to simulate Duke Energy's relative TSR as of the end of the performance period. For each simulation, Duke Energy's relative TSR associated with the simulated stock price at the end of the performance period plus expected dividends within the period results in a value per share for the award portfolio. The average of these simulations is the expected portfolio value per share. Actual life to date results of Duke Energy's relative TSR for each grant are incorporated within the model. For performance awards granted in 2018, the model used a risk-free interest rate of 2.4 percent, which reflects the yield on three-year Treasury bonds as of the grant date, and an expected volatility of 16.0 percent based on Duke Energy's historical volatility over three years using daily stock prices.

The following table includes information related to stock-based performance awards.

	Years Ended December 31,		
	2018	2017	2016
Shares granted assuming target performance (in thousands)	372	461	338
Fair value (in millions)	$ 27	$ 37	$ 25

The following table summarizes information about stock-based performance awards outstanding and assumes payout at the target level.

	Shares (in thousands)	Weighted Average Grant Date Fair Value (per share)
Outstanding at December 31, 2017	1,065	$ 79
Granted	372	73
Vested	(155)	81
Forfeited	(165)	80
Outstanding at December 31, 2018	1,117	77
Stock-based performance awards expected to vest	1,086	77

The total grant date fair value of shares vested during the years ended December 31, 2018, and 2016, was $13 million and $25 million, respectively. No performance awards vested during the year ended December 31, 2017. At December 31, 2018, Duke Energy had $30 million of unrecognized compensation cost, which is expected to be recognized over a weighted average period of 21 months.

PIEDMONT

Prior to Duke Energy's acquisition of Piedmont, Piedmont had an incentive compensation plan that had a series of three-year performance and RSU awards for eligible officers and other participants. The Merger Agreement provided for the conversion of the 2014-2016 and 2015-2017 performance awards and the nonvested 2016 RSU award into the right to receive $60 cash per share upon the close of the transaction. In December 2015, Piedmont's board of directors authorized the accelerated vesting, payment and taxation of the 2014-2016 and 2015-2017 performance awards, as well as the 2016 RSU award, at the election of the participant. Substantially all participants elected to accelerate the settlement of these awards. As a result of the settlement of these awards, 194 thousand shares of Piedmont shares were issued to participants, net of shares withheld for applicable federal and state income taxes, at a closing price of $56.85 and a fair value of $11 million. The 2016-2018 performance award cycle was approved subsequent to the Merger Agreement and was converted into a Duke Energy RSU award at the consummation of the acquisition.

Piedmont's stock-based compensation costs and the tax benefit associated with stock-based compensation expense are included in the following table.

(in millions)	Year Ended October 31, 2016
Pretax stock-based compensation cost	$ 16
Tax benefit associated with stock-based compensation expense	6
Net of tax stock-based compensation cost	$ 10

22. EMPLOYEE BENEFIT PLANS

DEFINED BENEFIT RETIREMENT PLANS

Duke Energy and certain subsidiaries maintain, and the Subsidiary Registrants participate in, qualified, non-contributory defined benefit retirement plans. The Duke Energy plans cover most employees using a cash balance formula. Under a cash balance formula, a plan participant accumulates a retirement benefit consisting of pay credits based upon a percentage of current eligible earnings, age or age and years of service and interest credits. Certain employees are eligible for benefits that use a final average earnings formula. Under these final average earnings formulas, a plan participant accumulates a retirement benefit equal to the sum of percentages of their (i) highest three-year, four-year, or five-year average earnings, (ii) highest three-year, four-year, or five-year average earnings in excess of covered compensation per year of participation (maximum of 35 years) or (iii) highest three-year average earnings times years of participation in excess of 35 years. Duke Energy also maintains, and the Subsidiary Registrants participate in, non-qualified, non-contributory defined benefit retirement plans that cover certain executives. The qualified and non-qualified, non-contributory defined benefit plans are closed to new participants.

Duke Energy approved plan amendments to restructure its qualified non-contributory defined benefit retirement plans, effective January 1, 2018. The restructuring involved (i) the spin-off of the majority of inactive participants from two plans into a separate inactive plan and (ii) the merger of the active participant portions of such plans, along with a pension plan acquired as part of the Piedmont transaction, into a single active plan. Benefits offered to the plan participants remain unchanged except that the Piedmont plan's final average earnings formula was frozen as of December 31, 2017, and affected participants were moved into the active plan's cash balance formula. Actuarial gains and losses associated with the Inactive Plan will be amortized over the remaining life expectancy of the inactive participants. The longer amortization period lowered Duke Energy's 2018 pretax qualified pension plan expense by approximately $33 million.

Duke Energy uses a December 31 measurement date for its defined benefit retirement plan assets and obligations.

Net periodic benefit costs disclosed in the tables below represent the cost of the respective benefit plan for the periods presented prior to capitalization of amounts reflected as Net property, plant and equipment, on the Consolidated Balance Sheets. Only the service cost component of net periodic benefit costs is eligible to be capitalized. The remaining non-capitalized portions of net periodic benefit costs are classified as either: (1) service cost, which is recorded in Operations, maintenance and other on the Consolidated Statements of Operations; or as (2) components of non-service cost, which is recorded in Other income and expenses, net, on the Consolidated Statements of Operations. Amounts presented in the tables below for the Subsidiary Registrants represent the amounts of pension and other post-retirement benefit cost allocated by Duke Energy for employees of the Subsidiary Registrants. Additionally, the Consolidated Statements of Operations of the Subsidiary Registrants also include allocated net periodic benefit costs for their proportionate share of pension and post-retirement benefit cost for employees of Duke Energy's shared services affiliate that provide support to the Subsidiary Registrants. However, in the tables below, these amounts are only presented within the Duke Energy column. These allocated amounts are included in the governance and shared service costs discussed in Note 13.

Duke Energy's policy is to fund amounts on an actuarial basis to provide assets sufficient to meet benefit payments to be paid to plan participants. Duke Energy does not anticipate making any contributions in 2019. The following table includes information related to the Duke Energy Registrants' contributions to its qualified defined benefit pension plans.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont[a]
Contributions Made:								
2018	**$ 141**	**$ 46**	**$ 45**	**$ 25**	**$ 20**	**$ —**	**$ 8**	**$ —**
2017	19	—	—	—	—	4	—	11
2016	155	43	43	24	20	5	9	

(a) Piedmont contributed $10 million to its U.S. qualified defined benefit pension plan during the two months ended December 31, 2016, and $10 million for the year ended October 31, 2016.

QUALIFIED PENSION PLANS

Components of Net Periodic Pension Costs

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Service cost	$ 182	$ 58	$ 51	$ 29	$ 22	$ 5	$ 11	$ 7
Interest cost on projected benefit obligation	299	72	94	43	50	17	23	11
Expected return on plan assets	(559)	(147)	(178)	(85)	(91)	(28)	(42)	(22)
Amortization of actuarial loss	132	29	44	21	23	5	10	11
Amortization of prior service credit	(32)	(8)	(3)	(2)	(1)	—	(2)	(10)
Net periodic pension costs[(a)(b)]	$ 22	$ 4	$ 8	$ 6	$ 3	$ (1)	$ —	$ (3)

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Service cost	$ 159	$ 48	$ 45	$ 26	$ 19	$ 4	$ 9	$ 10
Interest cost on projected benefit obligation	328	79	100	47	53	18	26	14
Expected return on plan assets	(545)	(142)	(167)	(82)	(85)	(27)	(42)	(24)
Amortization of actuarial loss	146	31	52	23	29	5	12	11
Amortization of prior service credit	(24)	(8)	(3)	(2)	(1)	(1)	(2)	(2)
Settlement charge	12	—	—	—	—	—	—	12
Other	8	2	2	1	1	—	1	1
Net periodic pension costs[(a)(b)]	$ 84	$ 10	$ 29	$ 13	$ 16	$ (1)	$ 4	$ 22

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Service cost	$ 147	$ 48	$ 42	$ 24	$ 19	$ 4	$ 9
Interest cost on projected benefit obligation	335	86	106	49	55	19	28
Expected return on plan assets	(519)	(142)	(168)	(82)	(84)	(27)	(42)
Amortization of actuarial loss	134	33	51	23	29	4	11
Amortization of prior service credit	(17)	(8)	(3)	(2)	(1)	—	(1)
Settlement charge	3	—	—	—	—	—	—
Other	8	2	3	1	1	1	1
Net periodic pension costs[(a)(b)]	$ 91	$ 19	$ 31	$ 13	$ 19	$ 1	$ 6

(a) Duke Energy amounts exclude $5 million, $7 million and $8 million for the years ended December 2018, 2017 and 2016, respectively, of regulatory asset amortization resulting from purchase accounting adjustments associated with Duke Energy's merger with Cinergy in April 2006.

(b) Duke Energy Ohio amounts exclude $2 million, $3 million and $4 million for the years ended December 2018, 2017 and 2016, respectively, of regulatory asset amortization resulting from purchase accounting adjustments associated with Duke Energy's merger with Cinergy in April 2006.

	Piedmont	
	Two Months Ended	Year Ended
(in millions)	December 31, 2016	October 31, 2016
Service cost	$ 2	$ 11
Interest cost on projected benefit obligation	2	9
Expected return on plan assets	(4)	(24)
Amortization of actuarial loss	2	8
Amortization of prior service credit	(1)	(2)
Settlement charge	3	—
Net periodic pension costs	$ 4	$ 2

Amounts Recognized in Accumulated Other Comprehensive Income and Regulatory Assets

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Regulatory assets, net increase (decrease)	$ 298	$ 170	$ 40	$ 31	$ 9	$ 10	$ 30	$ 8
Accumulated other comprehensive loss (income)								
Deferred income tax expense	$ (2)	—	1	—	—	—	—	—
Amortization of prior year service credit	1	—	—	—	—	—	—	—
Amortization of prior year actuarial losses	10	—	(4)	—	—	—	—	—
Net amount recognized in accumulated other comprehensive income	$ 9	$ —	$ (3)	$ —	$ —	$ —	$ —	$ —

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Regulatory assets, net (decrease) increase	$ (212)	$ (70)	$ (49)	$ (37)	$ (11)	$ 9	$ (19)	$ (64)
Accumulated other comprehensive (income) loss								
Deferred income tax expense	$ —	$ —	$ 3	$ —	$ —	$ —	$ —	$ —
Prior year service credit arising during the year	1	—	—	—	—	—	—	—
Amortization of prior year actuarial losses	(7)	—	(7)	—	—	—	—	—
Net amount recognized in accumulated other comprehensive income	$ (6)	$ —	$ (4)	$ —	$ —	$ —	$ —	$ —

Piedmont's regulatory asset net increase was $34 million and $35 million for the two months ended December 31, 2016, and for the year ended October 31, 2016, respectively.

Reconciliation of Funded Status to Net Amount Recognized

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Obligation at prior measurement date	$ 8,448	$ 2,029	$ 2,637	$ 1,211	$ 1,410	$ 479	$ 669	$ 313
Service cost	174	56	49	28	21	5	10	7
Interest cost	299	72	94	43	50	17	23	11
Actuarial gain	(485)	(44)	(204)	(87)	(114)	(29)	(29)	(18)
Transfers	—	—	—	—	—	—	—	(16)
Benefits paid	(567)	(159)	(143)	(70)	(72)	(37)	(55)	(33)
Obligation at measurement date	$ 7,869	$ 1,954	$ 2,433	$ 1,125	$ 1,295	$ 435	$ 618	$ 264
Accumulated Benefit Obligation at measurement date	$ 7,818	$ 1,954	$ 2,404	$ 1,125	$ 1,265	$ 425	$ 614	$ 264
Change in Fair Value of Plan Assets								
Plan assets at prior measurement date	$ 9,003	$ 2,372	$ 2,814	$ 1,366	$ 1,429	$ 458	$ 684	$ 368
Employer contributions	141	46	45	25	20	—	8	—
Actual return on plan assets	(344)	(91)	(110)	(53)	(55)	(16)	(26)	(14)
Benefits paid	(567)	(159)	(143)	(70)	(72)	(37)	(55)	(33)
Transfers	—	—	—	—	—	—	—	(16)
Plan assets at measurement date	$ 8,233	$ 2,168	$ 2,606	$ 1,268	$ 1,322	$ 405	$ 611	$ 305
Funded status of plan	$ 364	$ 214	$ 173	$ 143	$ 27	$ (30)	$ (7)	$ 41

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Obligation at prior measurement date	$ 8,131	$ 1,952	$ 2,512	$ 1,158	$ 1,323	$ 447	$ 658	$ 344
Service cost	159	48	45	26	19	4	9	10
Interest cost	328	79	100	47	53	18	26	14
Actuarial loss	455	68	158	57	99	35	26	38
Transfers	—	27	(32)	(2)	(15)	12	—	—
Plan amendments	(61)	—	—	—	—	—	—	(61)
Benefits paid	(537)	(145)	(146)	(75)	(69)	(37)	(50)	(5)
Benefits paid — settlements	(27)	—	—	—	—	—	—	(27)
Obligation at measurement date	$ 8,448	$ 2,029	$ 2,637	$ 1,211	$ 1,410	$ 479	$ 669	$ 313
Accumulated Benefit Obligation at measurement date	$ 8,369	$ 2,029	$ 2,601	$ 1,211	$ 1,375	$ 468	$ 652	$ 313
Change in Fair Value of Plan Assets								
Plan assets at prior measurement date	$ 8,531	$ 2,225	$ 2,675	$ 1,290	$ 1,352	$ 428	$ 657	$ 346
Employer contributions	19	—	—	—	—	4	—	11
Actual return on plan assets	1,017	265	317	153	161	51	77	43
Benefits paid	(537)	(145)	(146)	(75)	(69)	(37)	(50)	(5)
Benefits paid — settlements	(27)	—	—	—	—	—	—	(27)
Transfers	—	27	(32)	(2)	(15)	12	—	—
Plan assets at measurement date	$ 9,003	$ 2,372	$ 2,814	$ 1,366	$ 1,429	$ 458	$ 684	$ 368
Funded status of plan	$ 555	$ 343	$ 177	$ 155	$ 19	$ (21)	$ 15	$ 55

Amounts Recognized in the Consolidated Balance Sheets

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Prefunded pension[a]	$ 433	$ 214	$ 242	$ 143	$ 96	$ 24	$ 39	$ 41
Noncurrent pension liability[b]	$ 69	$ —	$ 69	$ —	$ 69	$ 54	$ 46	$ —
Net asset (liability) recognized	$ 364	$ 214	$ 173	$ 143	$ 27	$ (30)	$ (7)	$ 41
Regulatory assets	$ 2,184	$ 576	$ 796	$ 372	$ 424	$ 100	$ 182	$ 81
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (43)	$ —	$ (2)	$ —	$ —	$ —	$ —	$ —
Prior service credit	(4)	—	—	—	—	—	—	—
Net actuarial loss	126	—	5	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive loss	$ 79	$ —	$ 3	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension costs in the next year								
Unrecognized net actuarial loss	$ 97	$ 22	$ 37	$ 13	$ 24	$ 3	$ 5	$ 7
Unrecognized prior service credit	(32)	(8)	(3)	(2)	(1)	—	(2)	(9)

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Prefunded pension[a]	$ 680	$ 343	$ 245	$ 155	$ 87	$ 8	$ 16	$ 55
Noncurrent pension liability[b]	$ 125	$ —	$ 68	$ —	$ 68	$ 29	$ 1	$ —
Net asset recognized	$ 555	$ 343	$ 177	$ 155	$ 19	$ (21)	$ 15	$ 55
Regulatory assets	$ 1,886	$ 406	$ 756	$ 341	$ 415	$ 90	$ 152	$ 73
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (41)	$ —	$ (3)	$ —	$ —	$ —	$ —	$ —
Prior service credit	(5)	—	—	—	—	—	—	—
Net actuarial loss	116	—	9	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive loss	$ 70	$ —	$ 6	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension costs in the next year								
Unrecognized net actuarial loss	$ 132	$ 29	$ 44	$ 21	$ 23	$ 5	$ 7	$ 11
Unrecognized prior service credit	$ (32)	$ (8)	$ (3)	$ (2)	$ (1)	$ —	$ (2)	$ (9)

(a) Included in Other within Other Noncurrent Assets on the Consolidated Balance Sheets.
(b) Included in Accrued pension and other post-retirement benefit costs on the Consolidated Balance Sheets.

Information for Plans with Accumulated Benefit Obligation in Excess of Plan Assets

	December 31, 2018				
(in millions)	Duke Energy	Progress Energy	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Projected benefit obligation	$ 679	$ 679	$ 679	$ 123	$ 203
Accumulated benefit obligation	651	651	651	115	199
Fair value of plan assets	610	610	610	69	159

	December 31, 2017			
(in millions)	Duke Energy	Progress Energy	Duke Energy Florida	Duke Energy Ohio
Projected benefit obligation	$ 1,386	$ 718	$ 718	$ 337
Accumulated benefit obligation	1,326	683	683	326
Fair value of plan assets	1,260	650	650	308

Assumptions Used for Pension Benefits Accounting

The discount rate used to determine the current year pension obligation and following year's pension expense is based on a bond selection-settlement portfolio approach. This approach develops a discount rate by selecting a portfolio of high quality corporate bonds that generate sufficient cash flow to provide for projected benefit payments of the plan. The selected bond portfolio is derived from a universe of non-callable corporate bonds rated Aa quality or higher. After the bond portfolio is selected, a single interest rate is determined that equates the present value of the plan's projected benefit payments discounted at this rate with the market value of the bonds selected.

The average remaining service period for participants in active plans and life expectancy of participants in inactive plans is 13 years for Duke Energy and Duke Energy Progress, 12 years for Duke Energy Carolinas, Progress Energy, and Duke Energy Florida, 14 years for Duke Energy Ohio and Duke Energy Indiana, and 10 years for Piedmont.

The following tables present the assumptions or range of assumptions used for pension benefit accounting.

	December 31,		
	2018	2017	2016
Benefit Obligations			
Discount rate	**4.30%**	3.60%	4.10%
Salary increase	**3.50% – 4.00%**	3.50% – 4.00%	4.00% – 4.50%
Net Periodic Benefit Cost			
Discount rate	**3.60%**	4.10%	4.40%
Salary increase	**3.50% – 4.00%**	4.00% – 4.50%	4.00% – 4.40%
Expected long-term rate of return on plan assets	**6.50%**	6.50% – 6.75%	6.50% – 6.75%

	Piedmont	
	Two Months Ended	Year Ended
	December 31, 2016	October 31, 2016
Benefit Obligations		
Discount rate	4.10%	3.80%
Salary increase	4.50%	4.05%
Net Periodic Benefit Cost		
Discount rate	3.80%	4.34%
Salary increase	4.05%	4.07%
Expected long-term rate of return on plan assets	6.75%	7.25%

Expected Benefit Payments

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Years ending December 31,								
2019	$ 662	$ 210	$ 179	$ 105	$ 73	$ 33	$ 47	$ 20
2020	651	177	171	90	80	37	51	24
2021	663	182	177	95	81	37	51	23
2022	662	189	179	94	84	37	49	22
2023	655	185	181	95	85	35	47	22
2024-2028	2,993	794	902	451	447	158	217	96

NON-QUALIFIED PENSION PLANS

Components of Net Periodic Pension Costs

	Year Ended December 31, 2018				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Service cost	$ 2	$ 1	$ —	$ —	$ —
Interest cost on projected benefit obligation	12	—	4	1	2
Amortization of actuarial loss	8	—	2	1	1
Amortization of prior service credit	(2)	—	—	—	—
Net periodic pension costs	$ 20	$ 1	$ 6	$ 2	$ 3

	Year Ended December 31, 2017				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Service cost	$ 2	$ 1	$ —	$ —	$ —
Interest cost on projected benefit obligation	13	1	5	1	2
Amortization of actuarial loss	8	—	2	1	1
Amortization of prior service credit	(2)	—	—	—	—
Net periodic pension costs	$ 21	$ 2	$ 7	$ 2	$ 3

	Year Ended December 31, 2016				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Service cost	$ 2	$ —	$ —	$ —	$ —
Interest cost on projected benefit obligation	14	1	5	1	2
Amortization of actuarial loss	8	1	1	1	1
Amortization of prior service credit	(1)	—	—	—	—
Net periodic pension costs	$ 23	$ 2	$ 6	$ 2	$ 3

	Piedmont
	Year Ended
(in millions)	October 31, 2016
Amortization of prior service cost	$ —
Settlement charge	1
Net periodic pension costs	$ 1

Amounts Recognized in Accumulated Other Comprehensive Income and Regulatory Assets and Liabilities

	Year Ended December 31, 2018				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Regulatory assets, net (decrease) increase	$ (16)	$ 1	$ (6)	$ (3)	$ (3)
Accumulated other comprehensive (income) loss					
Deferred income tax benefit	$ 1	$ —	$ 1	$ —	$ —
Actuarial gain arising during the year	(4)	—	(3)	—	—
Net amount recognized in accumulated other comprehensive loss (income)	$ (3)	$ —	$ (2)	$ —	$ —

	Year Ended December 31, 2017				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Regulatory assets, net increase (decrease)	$ 5	$ (1)	$ 3	$ 1	$ 2
Accumulated other comprehensive (income) loss					
Prior service credit arising during the year	$ (1)	$ —	$ —	$ —	$ —
Actuarial loss arising during the year	2	—	—	—	—
Net amount recognized in accumulated other comprehensive loss (income)	$ 1	$ —	$ —	$ —	$ —

Reconciliation of Funded Status to Net Amount Recognized

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Obligation at prior measurement date	$ 331	$ 14	$ 116	$ 35	$ 47	$ 4	$ 3	$ 4
Service cost	2	1	—	—	—	—	—	—
Interest cost	12	—	4	1	2	—	—	—
Actuarial gain	(17)	—	(6)	(2)	(3)	(1)	—	(1)
Benefits paid	(24)	(1)	(8)	(3)	(3)	—	—	—
Obligation at measurement date	$ 304	$ 14	$ 106	$ 31	$ 43	$ 3	$ 3	$ 3
Accumulated Benefit Obligation at measurement date	$ 304	$ 14	$ 106	$ 31	$ 43	$ 3	$ 3	$ 3
Change in Fair Value of Plan Assets								
Benefits paid	$ (24)	$ (1)	$ (8)	$ (3)	$ (3)	$ —	$ —	$ —
Employer contributions	24	1	8	3	3	—	—	—
Plan assets at measurement date	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Obligation at prior measurement date	$ 332	$ 14	$ 114	$ 33	$ 46	$ 4	$ 3	$ 4
Service cost	2	1	—	—	—	—	—	—
Interest cost	13	1	5	1	2	—	—	—
Actuarial loss (gain)	15	—	5	4	2	—	—	—
Benefits paid	(31)	(2)	(8)	(3)	(3)	—	—	—
Obligation at measurement date	$ 331	$ 14	$ 116	$ 35	$ 47	$ 4	$ 3	$ 4
Accumulated Benefit Obligation at measurement date	$ 331	$ 14	$ 116	$ 35	$ 47	$ 4	$ 3	$ 4
Change in Fair Value of Plan Assets								
Benefits paid	$ (31)	$ (2)	$ (8)	$ (3)	$ (3)	$ —	$ —	$ —
Employer contributions	31	2	8	3	3	—	—	—
Plan assets at measurement date	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

Amounts Recognized in the Consolidated Balance Sheets

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current pension liability[(a)]	$ 21	$ 2	$ 8	$ 3	$ 3	$ —	$ —	$ —
Noncurrent pension liability[(b)]	283	12	98	28	40	3	3	3
Total accrued pension liability	$ 304	$ 14	$ 106	$ 31	$ 43	$ 3	$ 3	$ 3
Regulatory assets	$ 62	$ 5	$ 15	$ 5	$ 10	$ 1	$ —	$ 1
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (3)	$ —	$ (2)	$ —	$ —	$ —	$ —	$ —
Prior service credit	(1)	—	—	—	—	—	—	—
Net actuarial loss	8	—	6	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive loss	$ 4	$ —	$ 4	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension expense in the next year								
Unrecognized net actuarial loss	$ 6	$ —	$ 2	$ 1	$ 1	$ —	$ —	$ —
Unrecognized prior service credit	(2)	—	—	—	—	—	—	—

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current pension liability[(a)]	$ 23	$ 2	$ 8	$ 3	$ 3	$ —	$ —	$ —
Noncurrent pension liability[(b)]	308	12	108	32	44	4	3	4
Total accrued pension liability	$ 331	$ 14	$ 116	$ 35	$ 47	$ 4	$ 3	$ 4
Regulatory assets	$ 78	$ 4	$ 21	$ 8	$ 13	$ 1	$ —	$ 1
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (4)	$ —	$ (3)	$ —	$ —	$ —	$ —	$ —
Prior service credit	(1)	—	—	—	—	—	—	—
Net actuarial loss	12	—	9	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive loss	$ 7	$ —	$ 6	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension expense in the next year								
Unrecognized net actuarial loss	$ 8	$ —	$ 2	$ 1	$ 1	$ —	$ —	$ —
Unrecognized prior service credit	$ (2)	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(a) Included in Other within Current Liabilities on the Consolidated Balance Sheets.
(b) Included in Accrued pension and other post-retirement benefit costs on the Consolidated Balance Sheets.

Information for Plans with Accumulated Benefit Obligation in Excess of Plan Assets

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Projected benefit obligation	$ 304	$ 14	$ 106	$ 31	$ 43	$ 3	$ 3	$ 3
Accumulated benefit obligation	304	14	106	31	43	3	3	3

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Projected benefit obligation	$ 331	$ 14	$ 116	$ 35	$ 47	$ 4	$ 3	$ 4
Accumulated benefit obligation	331	14	116	35	47	4	3	4

Assumptions Used for Pension Benefits Accounting

The discount rate used to determine the current year pension obligation and following year's pension expense is based on a bond selection-settlement portfolio approach. This approach develops a discount rate by selecting a portfolio of high quality corporate bonds that generate sufficient cash flow to provide for projected benefit payments of the plan. The selected bond portfolio is derived from a universe of non-callable corporate bonds rated Aa quality or higher. After the bond portfolio is selected, a single interest rate is determined that equates the present value of the plan's projected benefit payments discounted at this rate with the market value of the bonds selected.

The average remaining service period of active covered employees is 10 years for Duke Energy, 13 years for Progress Energy, 11 years for Duke Energy Progress, 15 years for Duke Energy Florida, eight years for Duke Energy Carolinas, Duke Energy Ohio, Duke Energy Indiana and Piedmont. The following tables present the assumptions used for pension benefit accounting.

	December 31,		
	2018	2017	2016
Benefit Obligations			
Discount rate	**4.30%**	3.60%	4.10%
Salary increase	**3.50% – 4.00%**	3.50% – 4.00%	4.40%
Net Periodic Benefit Cost			
Discount rate	**3.60%**	4.10%	4.40%
Salary increase	**3.50% – 4.00%**	4.40%	4.40%

	Piedmont	
	Two Months Ended December 31, 2016	Year Ended October 31, 2016
Benefit Obligations		
Discount rate	4.10%	3.80%
Net Periodic Benefit Cost		
Discount rate	3.80%	3.85%

Expected Benefit Payments

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Years ending December 31,								
2019	$ 22	$ 2	$ 8	$ 3	$ 3	$ —	$ —	$ —
2020	21	1	8	2	3	—	—	—
2021	23	1	8	2	3	—	—	—
2022	25	1	8	2	3	—	—	—
2023	25	3	7	2	3	—	—	—
2024-2028	125	10	37	11	15	1	1	2

OTHER POST-RETIREMENT BENEFIT PLANS

Duke Energy provides, and the Subsidiary Registrants participate in, some health care and life insurance benefits for retired employees on a contributory and non-contributory basis. Employees are eligible for these benefits if they have met age and service requirements at retirement, as defined in the plans. The health care benefits include medical, dental and prescription drug coverage and are subject to certain limitations, such as deductibles and copayments.

Duke Energy did not make any pre-funding contributions to its other post-retirement benefit plans during the years ended December 31, 2018, 2017 or 2016.

Components of Net Periodic Other Post-Retirement Benefit Costs

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Service cost	$ 6	$ 1	$ 1	$ —	$ 1	$ 1	$ 1	$ 1
Interest cost on accumulated post-retirement benefit obligation	28	7	12	6	6	1	3	1
Expected return on plan assets	(13)	(8)	—	—	—	—	—	(2)
Amortization of actuarial loss	6	3	1	1	—	—	4	—
Amortization of prior service credit	(19)	(5)	(8)	(1)	(7)	(1)	(1)	(2)
Net periodic post-retirement benefit costs [(a)(b)]	$ 8	$ (2)	$ 6	$ 6	$ —	$ 1	$ 7	$ (2)

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Service cost	$ 4	$ 1	$ —	$ —	$ —	$ —	$ —	$ 1
Interest cost on accumulated post-retirement benefit obligation	34	8	13	7	6	1	3	1
Expected return on plan assets	(14)	(8)	—	—	—	—	(1)	(2)
Amortization of actuarial loss (gain)	10	(2)	21	12	9	(2)	(1)	1
Amortization of prior service credit	(115)	(10)	(84)	(54)	(30)	—	(1)	—
Curtailment credit [(c)]	(30)	(4)	(16)	—	(16)	(2)	(2)	—
Net periodic post-retirement benefit costs [(a)(b)]	$ (111)	$ (15)	$ (66)	$ (35)	$ (31)	$ (3)	$ (2)	$ 1

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Service cost	$ 3	$ 1	$ 1	$ —	$ 1	$ —	$ —
Interest cost on accumulated post-retirement benefit obligation	35	8	15	8	7	1	4
Expected return on plan assets	(12)	(8)	—	—	—	—	(1)
Amortization of actuarial loss (gain)	6	(3)	22	13	9	(2)	(1)
Amortization of prior service credit	(141)	(14)	(103)	(68)	(35)	—	(1)
Net periodic post-retirement benefit costs [(a)(b)]	$ (109)	$ (16)	$ (65)	$ (47)	$ (18)	$ (1)	$ 1

(a) Duke Energy amounts exclude $7 million, $7 million and $8 million for the years ended December 2018, 2017 and 2016, respectively, of regulatory asset amortization resulting from purchase accounting adjustments associated with Duke Energy's merger with Cinergy in April 2006.

(b) Duke Energy Ohio amounts exclude $2 million, $2 million and $2 million for the years ended December 2018, 2017 and 2016, respectively, of regulatory asset amortization resulting from purchase accounting adjustments associated with Duke Energy's merger with Cinergy in April 2006.

(c) Curtailment credit resulted from a reduction in average future service of plan participants due to a plan amendment.

(in millions)	Piedmont Year Ended October 31, 2016
Service cost	$ 1
Interest cost on projected benefit obligation	1
Expected return on plan assets	(2)
Amortization of actuarial loss	1
Net periodic pension costs	$ 1

Amounts Recognized in Accumulated Other Comprehensive Income and Regulatory Assets and Liabilities

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Regulatory assets, net increase (decrease)	$ 137	$ —	$ 133	$ 84	$ 49	$ —	$ (5)	$ 4
Regulatory liabilities, net increase (decrease)	$ 154	$ (6)	$ 149	$ 93	$ 56	$ 2	$ 3	$ —
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Amortization of prior year actuarial gain	1	—	—	—	—	—	—	—
Net amount recognized in accumulated other comprehensive income	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Regulatory assets, net increase (decrease)	$ 71	$ —	$ 81	$ 42	$ 39	$ —	$ (5)	$ (11)
Regulatory liabilities, net increase (decrease)	$ (27)	$ (2)	$ —	$ —	$ —	$ (3)	$ (7)	$ —
Accumulated other comprehensive (income) loss								
Deferred income tax benefit	$ (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Amortization of prior year prior service credit	3	—	—	—	—	—	—	—
Net amount recognized in accumulated other comprehensive income	$ 2	$ —	$ —	$ —	$ —	$ —	$ —	$ —

Piedmont's regulatory assets net decreased $1 million for the two months ended December 31, 2016, and increased $2 million for the year ended October 31, 2016.

Reconciliation of Funded Status to Accrued Other Post-Retirement Benefit Costs

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Accumulated post-retirement benefit obligation at prior measurement date	$ 813	$ 189	$ 342	$ 184	$ 156	$ 30	$ 78	$ 32
Service cost	6	1	1	—	1	1	1	1
Interest cost	28	7	12	6	6	1	3	1
Plan participants' contributions	18	3	6	4	3	1	2	—
Actuarial gains	(51)	(8)	(23)	(9)	(13)	(2)	(5)	(1)
Transfers	—	—	—	—	—	—	—	(1)
Benefits paid	(86)	(18)	(35)	(19)	(16)	(2)	(12)	(2)
Accumulated post-retirement benefit obligation at measurement date	$ 728	$ 174	$ 303	$ 166	$ 137	$ 29	$ 67	$ 30
Change in Fair Value of Plan Assets								
Plan assets at prior measurement date	$ 225	$ 133	$ —	$ —	$ —	$ 7	$ 11	$ 31
Actual return on plan assets	(8)	(5)	—	—	—	—	—	(1)
Benefits paid	(86)	(18)	(35)	(19)	(16)	(2)	(12)	(2)
Employer contributions	46	2	29	15	13	2	4	1
Plan participants' contributions	18	3	6	4	3	1	2	—
Plan assets at measurement date	$ 195	$ 115	$ —	$ —	$ —	$ 8	$ 5	$ 29
Funded status of plan	$ (533)	$ (59)	$ (303)	$ (166)	$ (137)	$ (21)	$ (62)	$ (1)

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Change in Projected Benefit Obligation								
Accumulated post-retirement benefit obligation at prior measurement date	$ 868	$ 201	$ 357	$ 191	$ 164	$ 32	$ 83	$ 39
Service cost	4	1	—	—	—	—	—	1
Interest cost	34	8	13	7	6	1	3	1
Plan participants' contributions	17	3	6	3	3	1	2	—
Actuarial losses (gains)	4	(3)	4	1	3	—	3	1
Transfers	—	2	(1)	—	(1)	1	—	—
Plan amendments	(28)	(5)	(3)	(1)	(2)	(2)	(2)	(9)
Benefits paid	(86)	(18)	(34)	(17)	(17)	(3)	(11)	(1)
Accumulated post-retirement benefit obligation at measurement date	$ 813	$ 189	$ 342	$ 184	$ 156	$ 30	$ 78	$ 32
Change in Fair Value of Plan Assets								
Plan assets at prior measurement date	$ 244	$ 137	$ 1	$ —	$ —	$ 7	$ 22	$ 29
Actual return on plan assets	25	15	1	—	—	2	1	3
Benefits paid	(86)	(18)	(34)	(17)	(17)	(3)	(11)	(1)
Employer contributions (reimbursements)	25	(4)	26	14	14	—	(3)	—
Plan participants' contributions	17	3	6	3	3	1	2	—
Plan assets at measurement date	$ 225	$ 133	$ —	$ —	$ —	$ 7	$ 11	$ 31
Funded status of plan	$ (588)	$ (56)	$ (342)	$ (184)	$ (156)	$ (23)	$ (67)	$ (1)

Amounts Recognized in the Consolidated Balance Sheets

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current post-retirement liability[(a)]	$ 8	$ —	$ 5	$ 3	$ 2	$ 2	$ —	$ —
Noncurrent post-retirement liability[(b)]	525	59	298	163	135	19	62	1
Total accrued post-retirement liability	$ 533	$ 59	$ 303	$ 166	$ 137	$ 21	$ 62	$ 1
Regulatory assets	$ 262	$ —	$ 262	$ 164	$ 98	$ —	$ 41	$ —
Regulatory liabilities	$ 301	$ 38	$ 149	$ 93	$ 56	$ 18	$ 67	$ —
Accumulated other comprehensive (income) loss								
Deferred income tax expense	$ 3	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Prior service credit	(2)	—	—	—	—	—	—	—
Net actuarial gain	(9)	—	—	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive income	$ (8)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension expense in the next year								
Unrecognized net actuarial loss	$ 4	$ 2	$ 1	$ —	$ —	$ —	$ —	$ —
Unrecognized prior service credit	(19)	(5)	(7)	(1)	(6)	(1)	(1)	(2)

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current post-retirement liability[(a)]	$ 36	$ —	$ 29	$ 15	$ 14	$ 2	$ —	$ —
Noncurrent post-retirement liability[(b)]	552	56	313	169	142	21	67	1
Total accrued post-retirement liability	$ 588	$ 56	$ 342	$ 184	$ 156	$ 23	$ 67	$ 1
Regulatory assets	$ 125	$ —	$ 129	$ 80	$ 49	$ —	$ 46	$ (4)
Regulatory liabilities	$ 147	$ 44	$ —	$ —	$ —	$ 16	$ 64	$ —
Accumulated other comprehensive (income) loss								
Deferred income tax expense	$ 4	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Prior service credit	(2)	—	—	—	—	—	—	—
Net actuarial gain	(10)	—	—	—	—	—	—	—
Net amounts recognized in accumulated other comprehensive income	$ (8)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Amounts to be recognized in net periodic pension expense in the next year								
Unrecognized net actuarial loss (gain)	$ 5	$ 3	$ 1	$ —	$ 1	$ —	$ —	$ —
Unrecognized prior service credit	(19)	(5)	(7)	(1)	(6)	(1)	(1)	(2)

(a) Included in Other within Current Liabilities on the Consolidated Balance Sheets.
(b) Included in Accrued pension and other post-retirement benefit costs on the Consolidated Balance Sheets.

Assumptions Used for Other Post-Retirement Benefits Accounting

The discount rate used to determine the current year other post-retirement benefits obligation and following year's other post-retirement benefits expense is based on a bond selection-settlement portfolio approach. This approach develops a discount rate by selecting a portfolio of high quality corporate bonds that generate sufficient cash flow to provide for projected benefit payments of the plan. The selected bond portfolio is derived from a universe of non-callable corporate bonds rated Aa quality or higher. After the bond portfolio is selected, a single interest rate is determined that equates the present value of the plan's projected benefit payments discounted at this rate with the market value of the bonds selected. The average remaining service period of active covered employees is nine years for Duke Energy, eight years for Duke Energy Carolinas, seven years for Duke Energy Florida, Duke Energy Ohio, and Piedmont, and six years for Progress Energy, Duke Energy Progress, and Duke Energy Indiana.

The following tables present the assumptions used for other post-retirement benefits accounting.

	December 31,		
	2018	2017	2016
Benefit Obligations			
Discount rate	**4.30%**	3.60%	4.10%
Net Periodic Benefit Cost			
Discount rate	**3.60%**	4.10%	4.40%
Expected long-term rate of return on plan assets	**6.50%**	6.50%	6.50%
Assumed tax rate	**35%**	35%	35%

	Piedmont	
	Two Months Ended	Year Ended
	December 31, 2016	October 31, 2016
Benefit Obligations		
Discount rate	4.10%	3.80%
Net Periodic Benefit Cost		
Discount rate	3.80%	4.38%
Expected long-term rate of return on plan assets	6.75%	7.25%

Assumed Health Care Cost Trend Rate

	December 31,	
	2018	2017
Health care cost trend rate assumed for next year	**6.50%**	7.00%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	**4.75%**	4.75%
Year that rate reaches ultimate trend	**2024**	2024

Sensitivity to Changes in Assumed Health Care Cost Trend Rates

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
1-Percentage Point Increase								
Effect on total service and interest costs	$ 1	$ —	$ 1	$ 1	$ —	$ —	$ —	$ —
Effect on post-retirement benefit obligation	22	5	9	5	4	1	2	1
1-Percentage Point Decrease								
Effect on total service and interest costs	(1)	—	(1)	(1)	—	—	—	—
Effect on post-retirement benefit obligation	(20)	(5)	(8)	(5)	(4)	(1)	(2)	(1)

Expected Benefit Payments

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Years ending December 31,								
2019	$ 81	$ 19	$ 30	$ 16	$ 14	$ 3	$ 9	$ 2
2020	75	18	29	15	13	3	8	2
2021	71	18	28	15	13	3	7	2
2022	68	17	27	14	12	3	7	3
2023	64	16	26	14	12	3	6	3
2024-2028	266	64	109	59	50	11	26	12

PLAN ASSETS

Description and Allocations

Duke Energy Master Retirement Trust

Assets for both the qualified pension and other post-retirement benefits are maintained in the Duke Energy Master Retirement Trust. Qualified pension and other post-retirement assets related to Piedmont were transferred into the Duke Energy Master Retirement Trust during 2017. Approximately 98 percent of the Duke Energy Master Retirement Trust assets were allocated to qualified pension plans and approximately 2 percent were allocated to other post-retirement plans (comprised of 401(h) accounts), as of December 31, 2018, and 2017. The investment objective of the Duke Energy Master Retirement Trust is to invest in a diverse portfolio of assets that is expected to generate positive surplus return over time (i.e. asset growth greater than liability growth) subject to a prudent level of portfolio risk, for the purpose of enhancing the security of benefits for plan participants.

As of December 31, 2018, Duke Energy assumes pension and other post-retirement plan assets will generate a long-term rate of return of 6.85 percent. The expected long-term rate of return was developed using a weighted average calculation of expected returns based primarily on future expected returns across asset classes considering the use of active asset managers, where applicable. The asset allocation targets were set after considering the investment objective and the risk profile. Equity securities are held for their higher expected returns. Debt securities are primarily held to hedge the qualified pension plan liability. Real assets, return seeking fixed income, hedge funds and other global securities are held for diversification. Investments within asset classes are diversified to achieve broad market participation and reduce the impact of individual managers or investments.

Effective January 1, 2019, the target asset allocation for the Duke Energy Retirement Master Trust is 58 percent liability hedging assets and 42 percent return-seeking assets. Duke Energy periodically reviews its asset allocation targets, and over time, as the funded status of the benefit plans increase, the level of asset risk relative to plan liabilities may be reduced to better manage Duke Energy's benefit plan liabilities and reduce funded status volatility.

The Duke Energy Master Retirement Trust is authorized to engage in the lending of certain plan assets. Securities lending is an investment management enhancement that utilizes certain existing securities of the Duke Energy Master Retirement Trust to earn additional income. Securities lending involves the loaning of securities to approved parties. In return for the loaned securities, the Duke Energy Master Retirement Trust receives collateral in the form of cash and securities as a safeguard against possible default of any borrower on the return of the loan under terms that permit the Duke Energy Master Retirement Trust to sell the securities. The Duke Energy Master Retirement Trust mitigates credit risk associated with securities lending arrangements by monitoring the fair value of the securities loaned, with additional collateral obtained or refunded as necessary. The fair value of securities on loan was approximately $154 million and $195 million at December 31, 2018, and 2017, respectively. Cash and securities obtained as collateral exceeded the fair value of the securities loaned at December 31, 2018, and 2017, respectively. Securities lending income earned by the Duke Energy Master Retirement Trust was immaterial for the years ended December 31, 2018, 2017 and 2016, respectively.

Qualified pension and other post-retirement benefits for the Subsidiary Registrants are derived from the Duke Energy Master Retirement Trust, as such, each are allocated their proportionate share of the assets discussed below.

The following table includes the target asset allocations by asset class at December 31, 2018, and the actual asset allocations for the Duke Energy Master Retirement Trust.

	Target Allocation	Actual Allocation at December 31, 2018	2017
U.S. equity securities	10%	**11%**	11%
Non-U.S. equity securities	8%	**8%**	8%
Global equity securities	10%	**10%**	10%
Global private equity securities	3%	**2%**	2%
Debt securities	63%	**63%**	63%
Hedge funds	2%	**2%**	2%
Real estate and cash	2%	**2%**	2%
Other global securities	2%	**2%**	2%
Total	100%	**100%**	100%

Other post-retirement assets

Duke Energy's other post-retirement assets are comprised of VEBA trusts and 401(h) accounts held within the Duke Energy Master Retirement Trust. Duke Energy's investment objective is to achieve sufficient returns, subject to a prudent level of portfolio risk, for the purpose of promoting the security of plan benefits for participants.

The following table presents target and actual asset allocations for the VEBA trusts at December 31, 2018.

	Target Allocation	Actual Allocation at December 31, 2018	2017
U.S. equity securities	32%	**43%**	41%
Non-U.S. equity securities	6%	**8%**	8%
Real estate	2%	**2%**	2%
Debt securities	45%	**40%**	36%
Cash	15%	**7%**	13%
Total	100%	**100%**	100%

Fair Value Measurements

Duke Energy classifies recurring and non-recurring fair value measurements based on the fair value hierarchy as discussed in Note 16.

Valuation methods of the primary fair value measurements disclosed below are as follows:

Investments in equity securities

Investments in equity securities are typically valued at the closing price in the principal active market as of the last business day of the reporting period. Principal active markets for equity prices include published exchanges such as NASDAQ and NYSE. Foreign equity prices are translated from their trading currency using the currency exchange rate in effect at the close of the principal active market. Prices have not been adjusted to reflect after-hours market activity. The majority of investments in equity securities are valued using Level 1 measurements. When the price of an institutional commingled fund is unpublished, it is not categorized in the fair value hierarchy, even though the funds are readily available at the fair value.

Investments in corporate debt securities and U.S. government securities

Most debt investments are valued based on a calculation using interest rate curves and credit spreads applied to the terms of the debt instrument (maturity and coupon interest rate) and consider the counterparty credit rating. Most debt valuations are Level 2 measurements. If the market for a particular fixed-income security is relatively inactive or illiquid, the measurement is Level 3. U.S. Treasury debt is typically Level 2.

Investments in short-term investment funds

Investments in short-term investment funds are valued at the net asset value of units held at year end and are readily redeemable at the measurement date. Investments in short-term investment funds with published prices are valued as Level 1. Investments in short-term investment funds with unpublished prices are valued as Level 2.

Investments in real estate limited partnerships

Investments in real estate limited partnerships are valued by the trustee at each valuation date (monthly). As part of the trustee's valuation process, properties are externally appraised generally on an annual basis, conducted by reputable, independent appraisal firms, and signed by appraisers that are members of the Appraisal Institute, with the professional designation MAI. Fair value is defined as 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. There are three valuation techniques that can be used to value investments in real estate assets: the market, income or cost approach. The appropriateness of each valuation technique depends on the type of asset or business being valued. In addition, the trustee may cause additional appraisals to be performed as warranted by specific asset or market conditions. Property valuations and the salient valuation-sensitive assumptions of each direct investment property are reviewed by the trustee quarterly and values are adjusted if there has been a significant change in circumstances related to the investment property since the last valuation. Value adjustments for interim capital expenditures are only recognized to the extent that the valuation process acknowledges a corresponding increase in fair value. An independent firm is hired to review and approve quarterly direct real estate valuations. Key inputs and assumptions used to determine fair value includes among others, rental revenue and expense amounts and related revenue and expense growth rates, terminal capitalization rates and discount rates. Development investments are valued using cost incurred to date as a primary input until substantive progress is achieved in terms of mitigating construction and leasing risk at which point a discounted cash flow approach is more heavily weighted. Key inputs and assumptions in addition to those noted above used to determine the fair value of development investments include construction costs and the status of construction completion and leasing. Investments in real estate limited partnerships are valued at net asset value of units held at year end and are not readily redeemable at the measurement date. Investments in real estate limited partnerships are not categorized within the fair value hierarchy.

Duke Energy Master Retirement Trust

The following tables provide the fair value measurement amounts for the Duke Energy Master Retirement Trust qualified pension and other post-retirement assets.

	December 31, 2018				
(in millions)	Total Fair Value	Level 1	Level 2	Level 3	Not Categorized[(b)]
Equity securities	$ 2,373	$ 1,751	$ —	$ —	$ 622
Corporate debt securities	4,054	—	4,054	—	—
Short-term investment funds	363	279	84	—	—
Partnership interests	120	—	—	—	120
Hedge funds	226	—	—	—	226
Real estate limited partnerships	144	—	—	—	144
U.S. government securities	961	—	961	—	—
Guaranteed investment contracts	27	—	—	27	—
Governments bonds – foreign	30	—	30	—	—
Cash	28	28	—	—	—
Net pending transactions and other investments	(2)	(6)	4	—	—
Total assets[(a)]	$ 8,324	$ 2,052	$ 5,133	$ 27	$ 1,112

(a) Duke Energy Carolinas, Progress Energy, Duke Energy Progress, Duke Energy Florida, Duke Energy Ohio, Duke Energy Indiana, and Piedmont were allocated approximately 27 percent, 31 percent, 15 percent, 16 percent, 5 percent, 7 percent, and 4 percent, respectively, of the Duke Energy Master Retirement Trust at December 31, 2018. Accordingly, all amounts included in the table above are allocable to the Subsidiary Registrants using these percentages.

(b) Certain investments that are measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy.

	December 31, 2017				
(in millions)	Total Fair Value	Level 1	Level 2	Level 3	Not Categorized[b]
Equity securities	$ 2,823	$ 1,976	$ —	$ —	$ 847
Corporate debt securities	4,694	—	4,694	—	—
Short-term investment funds	246	192	54	—	—
Partnership interests	137	—	—	—	137
Hedge funds	226	—	—	—	226
Real estate limited partnerships	135	—	—	—	135
U.S. government securities	762	—	762	—	—
Guaranteed investment contracts	28	—	—	28	—
Governments bonds – foreign	38	—	38	—	—
Cash	6	6	—	—	—
Government and commercial mortgage backed securities	2	—	2	—	—
Net pending transactions and other investments	17	15	2	—	—
Total assets[a]	$ 9,114	$ 2,189	$ 5,552	$ 28	$ 1,345

(a) Duke Energy Carolinas, Progress Energy, Duke Energy Progress, Duke Energy Florida, Duke Energy Ohio, Duke Energy Indiana, and Piedmont were allocated approximately 27 percent, 30 percent, 15 percent, 15 percent, 5 percent, 8 percent, and 4 percent, respectively, of the Duke Energy Master Retirement Trust and Piedmont's Pension assets at December 31, 2017. Accordingly, all amounts included in the table above are allocable to the Subsidiary Registrants using these percentages.

(b) Certain investments that are measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy.

The following table provides a reconciliation of beginning and ending balances of Duke Energy Master Retirement Trust qualified pension and other post-retirement assets at fair value on a recurring basis where the determination of fair value includes significant unobservable inputs (Level 3).

(in millions)	2018	2017[a]
Balance at January 1	$ 28	$ 38
Sales	(1)	(2)
Total gains and other, net	—	1
Transfer of Level 3 assets to other classifications	—	(9)
Balance at December 31	$ 27	$ 28

(a) Balance at January 1 includes $9 million associated with Piedmont pension assets.

Other post-retirement assets

The following tables provide the fair value measurement amounts for VEBA trust assets.

	December 31, 2018	
(in millions)	Total Fair Value	Level 2
Cash and cash equivalents	$ 3	$ 3
Real estate	1	1
Equity securities	25	25
Debt securities	20	20
Total assets	$ 49	$ 49

	December 31, 2017	
(in millions)	Total Fair Value	Level 2
Cash and cash equivalents	$ 8	$ 8
Real estate	1	1
Equity securities	28	28
Debt securities	21	21
Total assets	$ 58	$ 58

EMPLOYEE SAVINGS PLANS

Retirement Savings Plan

Duke Energy or its affiliates sponsor, and the Subsidiary Registrants participate in, employee savings plans that cover substantially all U.S. employees. Most employees participate in a matching contribution formula where Duke Energy provides a matching contribution generally equal to 100 percent of employee before-tax and Roth 401(k) contributions of up to 6 percent of eligible pay per pay period. Dividends on Duke Energy shares held by the savings plans are charged to retained earnings when declared and shares held in the plans are considered outstanding in the calculation of basic and diluted EPS.

For new and rehired employees who are not eligible to participate in Duke Energy's defined benefit plans, an additional employer contribution of 4 percent of eligible pay per pay period, which is subject to a three-year vesting schedule, is provided to the employee's savings plan account. Certain Piedmont employees whose participation in a prior Piedmont defined benefit plan (that was frozen as of December 31, 2017) are eligible for employer transition credit contributions of 3 to 5 percent of eligible pay per period, for each pay period during the three-year period ending December 31, 2020.

The following table includes pretax employer matching contributions made by Duke Energy and expensed by the Subsidiary Registrants.

(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont[a]
Years ended December 31,								
2018	$ 213	$ 68	$ 58	$ 40	$ 19	$ 4	$ 10	$ 12
2017	179	61	53	37	16	3	9	7
2016	169	57	50	35	15	3	8	

(a) Piedmont's pretax employer matching contributions were $1 million and $7 million during the two months ended December 31, 2016, and for the year ended October 31, 2016, respectively.

Money Purchase Pension Plan

Piedmont sponsored the MPP plan, which is a defined contribution pension plan that allowed employees to direct investments and assume risk of investment returns. Under the MPP plan, Piedmont annually deposited a percentage of each participant's pay into an account of the MPP plan. This contribution equaled 4 percent of the participant's eligible compensation plus an additional 4 percent of eligible compensation above the Social Security wage base up to the IRS compensation limit. The participant was vested in MPP plan after three years of service. No contributions were made to the MPP plan during the two months ended December 31, 2016. Piedmont contributed $2 million to the MPP plan during each of the years ended December 31, 2017, and October 31, 2016. Effective December 31, 2017, the MPP Plan was merged into the Retirement Savings Plan and the money purchase plan formula was discontinued. Beginning with the 2018 plan year, the former MPP Plan participants are eligible to receive the additional employer contribution under the Retirement Savings Plan, discussed above.

23. INCOME TAXES

Tax Act

On December 22, 2017, President Trump signed the Tax Act into law. Among other provisions, the Tax Act lowered the corporate federal income tax rate from 35 to 21 percent, limits interest deductions outside of regulated utility operations, requires the normalization of excess deferred taxes associated with property under the average rate assumption method as a prerequisite to qualifying for accelerated depreciation and repealed the federal manufacturing deduction. The Tax Act also repealed the corporate AMT and stipulates a refund of 50 percent of remaining AMT credit carryforwards (to the extent the credits exceed regular tax for the year) for tax years 2018, 2019 and 2020 with all remaining AMT credits to be refunded in tax year 2021.

On December 22, 2017, the SEC staff issued SAB 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act, which provides guidance on accounting for the Tax Act's impact. SAB 118 provides a measurement period, which in no case should extend beyond one year from the Tax Act enactment date, during which a company acting in good faith may complete the accounting for the impacts of the Tax Act under ASC Topic 740. In accordance with SAB 118, a company must reflect the income tax effects of the Tax Act in the reporting period in which the accounting under ASC Topic 740 is complete. To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete, a company can determine a reasonable estimate for those effects and record a provisional estimate in the financial statements in the first reporting period in which a reasonable estimate can be determined.

As of December 31, 2018, the accounting for the effects of the Tax Act is complete. During the year ended December 31, 2018, Duke Energy recorded the following measurement period adjustments in accordance with SAB 118:

- Additional tax expense of $23 million related to the completion of the analysis of Duke Energy's existing regulatory liability related to deferred taxes;
- A $10 million tax benefit for the remeasurement of deferred tax assets and deferred tax liabilities primarily related to the guidance on bonus depreciation issued by the IRS in August 2018 affecting the computation of the Company's 2017 Federal income tax liability;
- Additional tax expense of $7 million related to the portion of the deferred tax asset as of December 31, 2017, that represents nondeductible long-term incentives under the Tax Act's limitation on the deductibility of executive compensation; and
- During the fourth quarter of 2018, the Company released the $76 million valuation allowance that it recorded in the first quarter of 2018 as a result of additional guidance published by the IRS that stated refundable AMT credits would not be subject to sequestration.
- The majority of Duke Energy's operations are regulated and it is expected that the Subsidiary Registrants will ultimately pass on the savings associated with the amount representing the remeasurement of deferred tax balances related to regulated operations to customers. For Duke Energy's regulated operations, where the reduction is expected to be returned to customers in future rates, the remeasurement has been deferred as a regulatory liability. During 2018, Duke Energy recorded an additional regulatory liability of $83 million, representing the revaluation of those deferred tax balances. The Subsidiary Registrants continue to respond to requests from regulators in various jurisdictions to determine the timing and magnitude of savings they will pass on to customers.

In addition, during 2018 Duke Energy reclassified $573 million of AMT credit carryforwards from noncurrent deferred tax liabilities to a current federal income tax receivable as the Company expects to receive this amount via a refund from the IRS in 2019, based on the expected filing of Duke Energy's 2018 income tax return in the second quarter of 2019.

Income Tax Expense

Components of Income Tax Expense

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current income taxes								
Federal	$ (647)	$ (8)	$ (135)	$ (71)	$ (49)	$ 20	$ 29	$ 67
State	(11)	6	(5)	(5)	(10)	(1)	3	1
Foreign	3	—	—	—	—	—	—	—
Total current income taxes	(655)	(2)	(140)	(76)	(59)	19	32	68
Deferred income taxes								
Federal	1,064	299	341	256	115	21	74	(36)
State	49	11	20	(17)	45	3	22	5
Total deferred income taxes[(a)(b)]	1,113	310	361	239	160	24	96	(31)
Investment tax credit amortization	(10)	(5)	(3)	(3)	—	—	—	—
Income tax expense from continuing operations	448	303	218	160	101	43	128	37
Tax benefit from discontinued operations	(26)	—	—	—	—	—	—	—
Total income tax expense included in Consolidated Statements of Operations	$ 422	$ 303	$ 218	$ 160	$ 101	$ 43	$ 128	$ 37

(a) Includes benefits of NOL carryforwards and tax credit carryforwards of $22 million at Duke Energy Carolinas, $293 million at Progress Energy, $59 million at Duke Energy Progress, $219 million at Duke Energy Florida, $17 million at Duke Energy Ohio, $21 million at Duke Energy Indiana and $39 million at Piedmont. In addition, total deferred income taxes includes utilization of NOL carryforwards and tax credit carryforwards of $18 million at Duke Energy.

(b) For the year ended December 31, 2018, the Company has revised the December 31, 2017, estimates of the income tax effects of the Tax Act, in accordance with SAB 118. See the Statutory Rate Reconciliation section below for additional information on the Tax Act's impact on income tax expense.

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Current income taxes								
Federal	$ (247)	$ 221	$ (436)	$ (95)	$ (188)	$ (37)	$ 128	$ (90)
State	4	20	(5)	2	(11)	2	21	(3)
Foreign	3	—	—	—	—	—	—	—
Total current income taxes	(240)	241	(441)	(93)	(199)	(35)	149	(93)
Deferred income taxes								
Federal	1,344	381	664	378	194	99	138	147
State	102	35	44	10	51	(4)	14	8
Total deferred income taxes[(a)(b)]	1,446	416	708	388	245	95	152	155
Investment tax credit amortization	(10)	(5)	(3)	(3)	—	(1)	—	—
Income tax expense from continuing operations	1,196	652	264	292	46	59	301	62
Tax benefit from discontinued operations	(6)	—	—	—	—	—	—	—
Total income tax expense included in Consolidated Statements of Operations	$ 1,190	$ 652	$ 264	$ 292	$ 46	$ 59	$ 301	$ 62

(a) Includes utilization of NOL carryforwards and tax credit carryforwards of $428 million at Duke Energy, $74 million at Progress Energy, $36 million at Duke Energy Florida, $17 million at Duke Energy Ohio, $42 million at Duke Energy Indiana and $79 million at Piedmont. In addition, total deferred income taxes includes benefits of NOL carryforwards and tax credit carryforwards of $10 million at Duke Energy Carolinas and $1 million at Duke Energy Progress.

(b) As a result of the Tax Act, Duke Energy's deferred tax assets and liabilities were revalued as of December 31, 2017. See the Statutory Rate Reconciliation section below for additional information on the Tax Act's impact on income tax expense.

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Current income taxes							
Federal	$ —	$ 139	$ 15	$ (59)	$ 76	$ (7)	$ 7
State	(15)	25	(19)	(25)	22	(13)	6
Foreign	2	—	—	—	—	—	—
Total current income taxes	(13)	164	(4)	(84)	98	(20)	13
Deferred income taxes							
Federal	1,064	430	486	350	199	88	202
State	117	45	50	40	25	11	11
Total deferred income taxes[(a)]	1,181	475	536	390	224	99	213
Investment tax credit amortization	(12)	(5)	(5)	(5)	—	(1)	(1)
Income tax expense from continuing operations	1,156	634	527	301	322	78	225
Tax (benefit) expense from discontinued operations	(30)	—	1	—	—	(36)	—
Total income tax expense included in Consolidated Statements of Operations	$ 1,126	$ 634	$ 528	$ 301	$ 322	$ 42	$ 225

(a) Includes benefits of NOL carryforwards and utilization of NOL and tax credit carryforwards of $648 million at Duke Energy, $4 million at Duke Energy Carolinas, $190 million at Progress Energy, $60 million at Duke Energy Progress, $49 million at Duke Energy Florida, $26 million at Duke Energy Ohio and $58 million at Duke Energy Indiana.

	Piedmont	
	Two Months Ended	Year Ended October 31,
(in millions)	December 31, 2016	2016
Current income taxes		
Federal	$ 4	$ 27
State	(2)	12
Total current income taxes	2	39
Deferred income taxes		
Federal	24	79
State	6	6
Total deferred income taxes[(a)]	30	85
Total income tax expense from continuing operations included in Consolidated Statements of Operations	$ 32	$ 124

(a) Includes benefits of NOL and tax carryforwards of $17 million and $91 million for the two months ended December 31, 2016, and the year ended October 31, 2016, respectively.

Duke Energy Income from Continuing Operations before Income Taxes

	Years Ended December 31,		
(in millions)	2018	2017	2016
Domestic[(a)]	$ 3,018	$ 4,207	$ 3,689
Foreign	55	59	45
Income from continuing operations before income taxes	$ 3,073	$ 4,266	$ 3,734

(a) Includes a $16 million expense in 2017 related to the Tax Act impact on equity earnings included within Equity in earnings (losses) of unconsolidated affiliates on the Consolidated Statement of Operations.

Taxes on Foreign Earnings

In February 2016, Duke Energy announced it had initiated a process to divest the International Disposal Group and, accordingly, no longer intended to indefinitely reinvest post-2014 undistributed foreign earnings. This change in the company's intent, combined with the extension of bonus depreciation by Congress in late 2015, allowed Duke Energy to more efficiently utilize foreign tax credits and reduce U.S. deferred tax liabilities associated with the historical unremitted foreign earnings by approximately $95 million during the year ended December 31, 2016.

Due to the classification of the International Disposal Group as discontinued operations beginning in the fourth quarter of 2016, income tax amounts related to the International Disposal Group's foreign earnings are presented within Income (Loss) From Discontinued Operations, net of tax on the Consolidated Statements of Operations. In December 2016, Duke Energy closed on the sale of the International Disposal Group in two separate transactions to execute the divestiture. See Note 2 for additional information on the sale.

Statutory Rate Reconciliation

The following tables present a reconciliation of income tax expense at the U.S. federal statutory tax rate to the actual tax expense from continuing operations.

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Income tax expense, computed at the statutory rate of 21 percent	$ 645	$ 288	$ 263	$ 174	$ 137	$ 46	$ 109	$ 35
State income tax, net of federal income tax effect	30	14	13	(17)	28	2	20	4
Amortization of excess deferred income tax	(61)	—	(55)	(1)	(54)	(3)	(2)	—
AFUDC equity income	(42)	(15)	(22)	(12)	(10)	(2)	(2)	—
AFUDC equity depreciation	31	18	9	5	4	1	4	—
Renewable energy production tax credits	(129)	—	—	—	—	—	—	—
Other tax credits	(28)	(7)	(13)	(5)	(8)	(1)	(1)	(3)
Tax Act[(a)]	20	1	25	19	—	2	—	—
Other items, net	(18)	4	(2)	(3)	4	(2)	—	1
Income tax expense from continuing operations	$ 448	$ 303	$ 218	$ 160	$ 101	$ 43	$ 128	$ 37
Effective tax rate	14.6%	22.1%	17.4%	19.3%	15.4%	19.6%	24.6%	22.3%

(a) For the year ended December 31, 2018, the Company revised the December 31, 2017 estimates of the income tax effects of the Tax Act, in accordance with SAB 118. Amounts primarily include but are not limited to items that are excluded for ratemaking purposes related certain wholesale fixed rate contracts, remeasurement of nonregulated net deferred tax liabilities, Federal net operating losses, and valuation allowance on foreign tax credits.

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Income tax expense, computed at the statutory rate of 35 percent	$ 1,493	$ 653	$ 536	$ 353	$ 265	$ 88	$ 229	$ 70
State income tax, net of federal income tax effect	69	36	25	8	26	(1)	23	3
AFUDC equity income	(81)	(37)	(32)	(17)	(16)	(4)	(8)	—
Renewable energy production tax credits	(132)	—	—	—	—	—	—	—
Tax Act[(a)]	(112)	15	(246)	(40)	(226)	(23)	55	(12)
Tax true up	(52)	(24)	(19)	(13)	(7)	(5)	(6)	—
Other items, net	11	9	—	1	4	4	8	1
Income tax expense from continuing operations	$ 1,196	$ 652	$ 264	$ 292	$ 46	$ 59	$ 301	$ 62
Effective tax rate	28.0%	34.9%	17.2%	29.0%	6.1%	23.4%	46.0%	30.8%

(a) Amounts primarily include but are not limited to items that are excluded for ratemaking purposes related to abandoned or impaired assets, certain wholesale fixed rate contracts, remeasurement of nonregulated net deferred tax liabilities, Federal net operating losses, and valuation allowance on foreign tax credits.

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Income tax expense, computed at the statutory rate of 35 percent	$ 1,307	$ 630	$ 548	$ 315	$ 306	$ 95	$ 212
State income tax, net of federal income tax effect	64	46	20	10	30	(2)	11
AFUDC equity income	(70)	(36)	(26)	(17)	(9)	(2)	(6)
Renewable energy production tax credits	(97)	—	—	—	—	—	—
Audit adjustment	5	3	—	—	—	—	—
Tax true up	(14)	(14)	(11)	(3)	(9)	(16)	2
Other items, net	(39)	5	(4)	(4)	4	3	6
Income tax expense from continuing operations	$ 1,156	$ 634	$ 527	$ 301	$ 322	$ 78	$ 225
Effective tax rate	31.0%	35.2%	33.7%	33.4%	36.9%	28.9%	37.1%

	Piedmont	
	Two Months Ended	Year Ended October 31,
(in millions)	December 31, 2016	2016
Income tax expense, computed at the statutory rate of 35 percent	$ 30	$ 111
State income tax, net of federal income tax effect	1	11
Other items, net	1	2
Income tax expense from continuing operations	$ 32	$ 124
Effective tax rate	37.2%	39.1%

Valuation allowances have been established for certain state NOL carryforwards and state income tax credits that reduce deferred tax assets to an amount that will be realized on a more-likely-than-not basis. The net change in the total valuation allowance is included in the State income tax, net of federal income tax effect in the above tables.

DEFERRED TAXES

Net Deferred Income Tax Liability Components

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Deferred credits and other liabilities	$ 164	$ 64	$ 35	$ 53	$ —	$ 17	$ 6	$ 17
Capital lease obligations	60	26	—	—	—	—	2	—
Pension, post-retirement and other employee benefits	347	24	110	47	58	16	24	(1)
Progress Energy merger purchase accounting adjustments[a]	483	—	—	—	—	—	—	—
Tax credits and NOL carryforwards	4,580	257	693	215	363	42	237	110
Regulatory liabilities and deferred credits	—	—	—	—	—	56	—	48
Investments and other assets	—	—	—	—	—	18	—	16
Other	25	6	5	5	—	1	(1)	—
Valuation allowance	(484)	—	—	—	—	—	—	—
Total deferred income tax assets	5,175	377	843	320	421	150	268	190
Investments and other assets	(1,317)	(795)	(430)	(272)	(163)	—	(5)	—
Accelerated depreciation rates	(10,124)	(3,207)	(3,369)	(1,735)	(1,670)	(967)	(1,081)	(733)
Regulatory assets and deferred debits, net	(1,540)	(64)	(985)	(432)	(574)	—	(191)	—
Other	—	—	—	—	—	—	—	(8)
Total deferred income tax liabilities	(12,981)	(4,066)	(4,784)	(2,439)	(2,407)	(967)	(1,277)	(741)
Net deferred income tax liabilities	$ (7,806)	$ (3,689)	$ (3,941)	$ (2,119)	$ (1,986)	$ (817)	$ (1,009)	$ (551)

(a) Primarily related to capital lease obligations and debt fair value adjustments.

The following table presents the expiration of tax credits and NOL carryforwards.

	December 31, 2018		
(in millions)	Amount	Expiration Year	
Investment tax credits	$ 1,614	2024 —	2038
Alternative minimum tax credits	574	Refundable by 2021	
Federal NOL carryforwards[a][e]	788	2022 —	Indefinite
State NOL carryforwards and credits[b][e]	301	2019 —	Indefinite
Foreign NOL carryforwards[c]	12	2027 —	2037
Foreign Tax Credits[d]	1,271	2024 —	2027
Charitable contribution carryforwards	20	2019 —	2023
Total tax credits and NOL carryforwards	$ 4,580		

(a) A valuation allowance of $4 million has been recorded on the Federal NOL carryforwards, as presented in the Net Deferred Income Tax Liability Components table.
(b) A valuation allowance of $85 million has been recorded on the state NOL carryforwards, as presented in the Net Deferred Income Tax Liability Components table.
(c) A valuation allowance of $12 million has been recorded on the foreign NOL carryforwards, as presented in the Net Deferred Income Tax Liability Components table.
(d) A valuation allowance of $383 million has been recorded on the foreign tax credits, as presented in the Net Deferred Income Tax Liability Components table.
(e) Indefinite carryforward for Federal NOLs, and NOLs for states that have adopted the Tax Act's NOL provisions, generated in tax years beginning after December 31, 2017.

	December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Deferred credits and other liabilities	$ 143	$ 33	$ 78	$ 23	$ 49	$ 11	$ 6	$ (5)
Capital lease obligations	49	14	—	—	—	—	2	—
Pension, post-retirement and other employee benefits	295	(17)	111	44	60	14	18	(4)
Progress Energy merger purchase accounting adjustments[(a)]	536	—	—	—	—	—	—	—
Tax credits and NOL carryforwards	4,527	234	402	156	143	25	216	70
Regulatory liabilities and deferred credits	—	222	—	—	—	65	—	61
Investments and other assets	—	—	—	—	—	—	1	18
Other	73	10	1	4	—	—	—	—
Valuation allowance	(519)	—	(14)	—	—	—	—	—
Total deferred income tax assets	5,104	496	578	227	252	115	243	140
Investments and other assets	(1,419)	(849)	(470)	(289)	(187)	—	(14)	—
Accelerated depreciation rates	(9,216)	(3,060)	(2,803)	(1,583)	(1,257)	(896)	(966)	(697)
Regulatory assets and deferred debits, net	(1,090)	—	(807)	(238)	(569)	—	(188)	—
Other	—	—	—	—	—	—	—	(7)
Total deferred income tax liabilities	(11,725)	(3,909)	(4,080)	(2,110)	(2,013)	(896)	(1,168)	(704)
Net deferred income tax liabilities	$ (6,621)	$ (3,413)	$ (3,502)	$ (1,883)	$ (1,761)	$ (781)	$ (925)	$ (564)

(a) Primarily related to capital lease obligations and debt fair value adjustments.

On June 28, 2017, the North Carolina General Assembly amended N.C. Gen. Stat. 105-130.3, reducing the North Carolina corporate income tax rate from a statutory rate of 3.0 to 2.5 percent beginning January 1, 2019. Duke Energy recorded a net reduction of approximately $55 million to their North Carolina deferred tax liabilities in the second quarter of 2017. The significant majority of this deferred tax liability reduction was offset by recording a regulatory liability pending NCUC determination of the disposition of amounts related to Duke Energy Carolinas, Duke Energy Progress and Piedmont. The impact did not have a significant impact on the financial position, results of operation or cash flows of Duke Energy, Duke Energy Carolinas, Progress Energy or Duke Energy Progress.

UNRECOGNIZED TAX BENEFITS

The following tables present changes to unrecognized tax benefits.

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Unrecognized tax benefits – January 1	$ 25	$ 5	$ 5	$ 5	$ 5	$ 1	$ 1	$ 3
Unrecognized tax benefits increases (decreases)								
Gross decreases – tax positions in prior periods	(2)	(1)	—	—	(4)	—	—	—
Gross increases – current period tax positions	7	2	4	1	2	—	—	1
Decreases due to settlements	(6)	—	—	—	—	—	—	—
Total changes	(1)	1	4	1	(2)	—	—	1
Unrecognized tax benefits – December 31	$ 24	$ 6	$ 9	$ 6	$ 3	$ 1	$ 1	$ 4

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Unrecognized tax benefits – January 1	$ 17	$ 1	$ 2	$ 2	$ 4	$ 4	$ —	$ —
Unrecognized tax benefits increases (decreases)								
Gross increases – tax positions in prior periods	12	4	3	3	1	1	1	3
Gross decreases – tax positions in prior periods	(4)	—	—	—	—	(4)	—	—
Total changes	8	4	3	3	1	(3)	1	3
Unrecognized tax benefits – December 31	$ 25	$ 5	$ 5	$ 5	$ 5	$ 1	$ 1	$ 3

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Unrecognized tax benefits – January 1	$ 88	$ 72	$ 1	$ 3	$ —	$ —	$ 1
Unrecognized tax benefits increases (decreases)							
Gross increases – tax positions in prior periods	—	—	—	—	4	4	—
Gross decreases – tax positions in prior periods	(4)	(4)	(1)	(1)	—	—	—
Decreases due to settlements	(68)	(67)	—	—	—	—	(1)
Reduction due to lapse of statute of limitations	1	—	2	—	—	—	—
Total changes	(71)	(71)	1	(1)	4	4	(1)
Unrecognized tax benefits – December 31	$ 17	$ 1	$ 2	$ 2	$ 4	$ 4	$ —

The following table includes additional information regarding the Duke Energy Registrants' unrecognized tax benefits at December 31, 2018. All Duke Energy Registrants do not anticipate a material increase or decrease in unrecognized tax benefits within the next 12 months.

	December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Amount that if recognized, would affect the effective tax rate or regulatory liability[(a)]	$ 21	$ 6	$ 9	$ 6	$ 3	$ 1	$ 1	$ 4
Amount that if recognized, would be recorded as a component of discontinued operations	2	—	—	—	—	—	—	—

(a) Duke Energy, Duke Energy Carolinas, Progress Energy, Duke Energy Progress, Duke Energy Florida, Duke Energy Ohio, Duke Energy Indiana and Piedmont are unable to estimate the specific amounts that would affect the effective tax rate versus the regulatory liability.

OTHER TAX MATTERS

The following tables include interest recognized in the Consolidated Statements of Operations and the Consolidated Balance Sheets.

	Year Ended December 31, 2018		
(in millions)	Duke Energy	Progress Energy	Duke Energy Progress
Net interest income recognized related to income taxes	$ 2	$ —	$ —
Interest payable related to income taxes	3	1	1

	Year Ended December 31, 2017				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Net interest income recognized related to income taxes	$ —	$ —	$ 1	$ —	$ 1
Net interest expense recognized related to income taxes	—	2	—	—	—
Interest payable related to income taxes	5	25	1	1	—

	Year Ended December 31, 2016				
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida
Net interest income recognized related to income taxes	$ —	$ —	$ 1	$ —	$ 2
Net interest expense recognized related to income taxes	—	7	—	—	—
Interest payable related to income taxes	4	23	1	1	—

Piedmont recognized $1 million in net interest income related to income taxes in the Consolidated Statements of Operations for the year ended October 31, 2016.

Duke Energy and its subsidiaries are no longer subject to U.S. federal examination for years before 2015. With few exceptions, Duke Energy and its subsidiaries are no longer subject to state, local or non-U.S. income tax examinations by tax authorities for years before 2015.

24. OTHER INCOME AND EXPENSES, NET

The components of Other income and expenses, net on the Consolidated Statements of Operations are as follows.

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Interest income	$ 20	$ 1	$ 18	$ 1	$ 18	$ 7	$ 9	$ 1
AFUDC equity	221	73	104	57	47	11	32	—
Post in-service equity returns	15	9	5	5	—	1	—	—
Nonoperating income, other	143	70	38	24	21	4	4	13
Other income and expense, net	$ 399	$ 153	$ 165	$ 87	$ 86	$ 23	$ 45	$ 14

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Interest income	$ 13	$ 2	$ 6	$ 2	$ 5	$ 6	$ 8	$ —
AFUDC equity	237	106	92	47	45	11	28	—
Post in-service equity returns	40	28	12	12	—	—	—	—
Nonoperating income, other	218	63	99	54	46	6	11	(11)
Other income and expense, net	$ 508	$ 199	$ 209	$ 115	$ 96	$ 23	$ 47	$ (11)

	Year Ended December 31, 2016						
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana
Interest income	$ 21	$ 4	$ 4	$ 3	$ 2	$ 5	$ 6
AFUDC equity	200	102	76	50	26	6	16
Post in-service equity returns	67	55	12	12	—	—	—
Nonoperating income, other	175	53	94	67	35	—	4
Other income and expense, net[(a)]	$ 463	$ 214	$ 186	$ 132	$ 63	$ 11	$ 26

(a) Amounts for Piedmont for the two months ended December 31, 2016, and for the year ended October 31, 2016, were not material.

25. SUBSEQUENT EVENTS

For information on subsequent events related to the adoption of the new lease accounting standard, regulatory matters, commitments and contingencies and debt and credit facilities, see Notes 1, 4, 5 and 6, respectively.

26. QUARTERLY FINANCIAL DATA (UNAUDITED)

DUKE ENERGY

Quarterly EPS amounts may not sum to the full-year total due to changes in the weighted average number of common shares outstanding and rounding.

(in millions, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 6,135	$ 5,643	$ 6,628	$ 6,115	$ 24,521
Operating income	1,256	979	1,579	871	4,685
Income from continuing operations	622	507	1,062	434	2,625
(Loss) Income from discontinued operations, net of tax	—	(5)	4	20	19
Net income	622	502	1,066	454	2,644
Net income attributable to Duke Energy Corporation	620	500	1,082	464	2,666
Earnings per share:					
Income from continuing operations attributable to Duke Energy Corporation common stockholders					
Basic	$ 0.88	$ 0.72	$ 1.51	$ 0.62	$ 3.73
Diluted	$ 0.88	$ 0.72	$ 1.51	$ 0.62	$ 3.73
(Loss) Income from discontinued operations attributable to Duke Energy Corporation common stockholders					
Basic	$ —	$ (0.01)	$ —	$ 0.03	$ 0.03
Diluted	$ —	$ (0.01)	$ —	$ 0.03	$ 0.03
Net income attributable to Duke Energy Corporation common stockholders					
Basic	$ 0.88	$ 0.71	$ 1.51	$ 0.65	$ 3.76
Diluted	$ 0.88	$ 0.71	$ 1.51	$ 0.65	$ 3.76
2017					
Operating revenues	$ 5,729	$ 5,555	$ 6,482	$ 5,799	$ 23,565
Operating income	1,402	1,353	1,661	1,209	5,625
Income from continuing operations	717	691	957	705	3,070
Loss from discontinued operations, net of tax	—	(2)	(2)	(2)	(6)
Net income	717	689	955	703	3,064
Net income attributable to Duke Energy Corporation	716	686	954	703	3,059
Earnings per share:					
Income from continuing operations attributable to Duke Energy Corporation common stockholders					
Basic	$ 1.02	$ 0.98	$ 1.36	$ 1.00	$ 4.37
Diluted	$ 1.02	$ 0.98	$ 1.36	$ 1.00	$ 4.37
Loss from discontinued operations attributable to Duke Energy Corporation common stockholders					
Basic	$ —	$ —	$ —	$ —	$ (0.01)
Diluted	$ —	$ —	$ —	$ —	$ (0.01)
Net income attributable to Duke Energy Corporation common stockholders					
Basic	$ 1.02	$ 0.98	$ 1.36	$ 1.00	$ 4.36
Diluted	$ 1.02	$ 0.98	$ 1.36	$ 1.00	$ 4.36

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (17)	$ (20)	$ (16)	$ (31)	$ (84)
Regulatory and Legislative Impacts (see Note 4)	(86)	(179)	—	—	(265)
Sale of Retired Plant (see Note 3)	(107)	—	—	—	(107)
Impairment Charges (see Notes 4, 11 and 12)	(55)	—	(93)	(60)	(208)
Severance Charges (see Note 20)	—	—	—	(187)	(187)
Impacts of the Tax Act (see Note 23)	(76)	—	3	53	(20)
Total	$ (341)	$ (199)	$ (106)	$ (225)	$ (871)
2017					
Costs to Achieve Mergers (see Note 2)	$ (16)	$ (30)	$ (23)	$ (34)	$ (103)
Regulatory Settlements (see Note 4)	—	—	(135)	(23)	(158)
Commercial Renewables Impairments (see Notes 10 and 11)	—	—	(84)	(18)	(102)
Impacts of the Tax Act (see Note 23)	—	—	—	102	102
Total	$ (16)	$ (30)	$ (242)	$ 27	$ (261)

DUKE ENERGY CAROLINAS

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 1,763	$ 1,672	$ 2,090	$ 1,775	$ 7,300
Operating income	482	224	713	241	1,660
Net income	323	117	496	135	1,071
2017					
Operating revenues	$ 1,716	$ 1,729	$ 2,136	$ 1,721	$ 7,302
Operating income	471	471	763	384	2,089
Net income	270	273	466	205	1,214

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (4)	$ (2)	$ (2)	$ (1)	$ (9)
Regulatory and Legislative Impacts (see Note 4)	(19)	(179)	—	—	(198)
Severance Charges (see Note 20)	—	—	—	(102)	(102)
Impacts of the Tax Act (see Note 23)	—	—	(1)	—	(1)
Total	$ (23)	$ (181)	$ (3)	$ (103)	$ (310)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (4)	$ (6)	$ (5)	$ (5)	$ (20)
Impacts of the Tax Act (see Note 23)	—	—	—	(15)	(15)
Total	$ (4)	$ (6)	$ (5)	$ (20)	$ (35)

PROGRESS ENERGY

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 2,576	$ 2,498	$ 3,045	$ 2,609	$ 10,728
Operating income	447	484	663	334	1,928
Net income	237	267	406	123	1,033
Net income attributable to Parent	235	265	404	123	1,027
2017					
Operating revenues	$ 2,179	$ 2,392	$ 2,864	$ 2,348	$ 9,783
Operating income	471	576	641	459	2,147
Net income	201	277	343	447	1,268
Net income attributable to Parent	199	274	341	444	1,258

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (4)	$ (3)	$ (1)	$ (2)	$ (10)
Regulatory and Legislative Impacts (see Note 4)	(67)	—	—	—	(67)
Impairment Charges (see Note 4)	—	—	—	(60)	(60)
Severance Charges (see Note 20)	—	—	—	(69)	(69)
Impacts of the Tax Act (see Note 23)	(1)	—	(5)	(19)	(25)
Total	$ (72)	$ (3)	$ (6)	$ (150)	$ (231)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (4)	$ (7)	$ (6)	$ (6)	$ (23)
Regulatory Settlements (see Note 4)	—	—	(135)	(23)	(158)
Impacts of the Tax Act (see Note 23)	—	—	—	246	246
Total	$ (4)	$ (7)	$ (141)	$ 217	$ 65

DUKE ENERGY PROGRESS

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 1,460	$ 1,291	$ 1,582	$ 1,366	$ 5,699
Operating income	269	233	330	227	1,059
Net income	177	139	216	135	667
2017					
Operating revenues	$ 1,219	$ 1,199	$ 1,460	$ 1,251	$ 5,129
Operating income	274	270	398	243	1,185
Net income	147	154	246	168	715

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (2)	$ (2)	$ (1)	$ (1)	$ (6)
Regulatory and Legislative Impacts (see Note 4)	(67)	—	—	—	(67)
Severance Charges (see Note 20)	—	—	—	(52)	(52)
Impacts of the Tax Act (see Note 23)	—	—	(4)	(15)	(19)
Total	$ (69)	$ (2)	$ (5)	$ (68)	$ (144)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (2)	$ (4)	$ (4)	$ (4)	$ (14)
Regulatory Settlements (see Note 4)	—	—	—	(23)	(23)
Impacts of the Tax Act (see Note 23)	—	—	—	40	40
Total	$ (2)	$ (4)	$ (4)	$ 13	$ 3

DUKE ENERGY FLORIDA

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 1,115	$ 1,203	$ 1,462	$ 1,241	$ 5,021
Operating income	173	245	331	107	856
Net income	103	168	243	40	554
2017					
Operating revenues	$ 959	$ 1,191	$ 1,401	$ 1,095	$ 4,646
Operating income	192	301	236	212	941
Net income	90	158	120	344	712

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (2)	$ (1)	$ —	$ (1)	$ (4)
Impairment Charges (see Note 4)	—	—	—	(60)	(60)
Severance Charges (see Note 20)	—	—	—	(17)	(17)
Impacts of the Tax Act (see Note 23)	—	—	(2)	2	—
Total	$ (2)	$ (1)	$ (2)	$ (76)	$ (81)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (2)	$ (3)	$ (2)	$ (2)	$ (9)
Regulatory Settlements (see Note 4)	—	—	(135)	—	(135)
Impacts of the Tax Act (see Note 23)	—	—	—	226	226
Total	$ (2)	$ (3)	$ (137)	$ 224	$ 82

DUKE ENERGY OHIO

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 524	$ 459	$ 469	$ 505	$ 1,957
Operating (loss) income	(21)	77	139	93	288
Net (loss) income	(25)	46	100	55	176
2017					
Operating revenues	$ 518	$ 437	$ 471	$ 497	$ 1,923
Operating income	82	64	101	73	320
Loss from discontinued operations, net of tax	—	—	(1)	—	(1)
Net income	42	30	55	65	192

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (3)	$ (5)	$ —	$ (6)	$ (14)
Sale of Retired Plant (see Note 3)	(107)	—	—	—	(107)
Severance Charges (see Note 20)	—	—	—	(6)	(6)
Impacts of the Tax Act (see Note 23)	—	—	—	(2)	(2)
Total	$ (110)	$ (5)	$ —	$ (14)	$ (129)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (1)	$ (1)	$ (2)	$ (2)	$ (6)
Impacts of the Tax Act (see Note 23)	—	—	—	23	23
Total	$ (1)	$ (1)	$ (2)	$ 21	$ 17

DUKE ENERGY INDIANA

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 731	$ 738	$ 819	$ 771	$ 3,059
Operating income	168	169	173	133	643
Net income	100	98	119	76	393
2017					
Operating revenues	$ 758	$ 742	$ 802	$ 745	$ 3,047
Operating income	184	208	228	166	786
Net income	91	106	121	36	354

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ —	$ —	$ (2)	$ —	$ (2)
Severance Charges (see Note 20)	—	—	—	(7)	(7)
Total	$ —	$ —	$ (2)	$ (7)	$ (9)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (1)	$ (2)	$ (2)	$ (1)	$ (6)
Impacts of the Tax Act (see Note 23)	—	—	—	(55)	(55)
Total	$ (1)	$ (2)	$ (2)	$ (56)	$ (61)

PIEDMONT

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Operating revenues	$ 553	$ 215	$ 172	$ 435	$ 1,375
Operating income (loss)	161	5	(19)	79	226
Net income (loss)	110	(8)	(21)	48	129
2017					
Operating revenues	$ 500	$ 201	$ 183	$ 444	$ 1,328
Operating income (loss)	170	5	(4)	126	297
Net income (loss)	95	(8)	(11)	63	139

The following table includes unusual or infrequently occurring items in each quarter during the two most recently completed fiscal years. All amounts discussed below are pretax.

(in millions)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2018					
Costs to Achieve Piedmont Merger (see Note 2)	$ (6)	$ (9)	$ (11)	$ (22)	$ (48)
Severance Charges (see Note 20)	—	—	—	(2)	(2)
Total	$ (6)	$ (9)	$ (11)	$ (24)	$ (50)
2017					
Costs to Achieve Piedmont Merger (see Note 2)	$ (6)	$ (13)	$ (8)	$ (19)	$ (46)
Impacts of the Tax Act (see Note 23)	—	—	—	2	2
Total	$ (6)	$ (13)	$ (8)	$ (17)	$ (44)

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed by the Duke Energy Registrants in the reports they file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified by the SEC rules and forms.

Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by the Duke Energy Registrants in the reports they file or submit under the Exchange Act is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Duke Energy Registrants have evaluated the effectiveness of their disclosure controls and procedures (as such term is defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2018, and, based upon this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that these controls and procedures are effective in providing reasonable assurance of compliance.

Changes in Internal Control Over Financial Reporting

Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Duke Energy Registrants have evaluated changes in internal control over financial reporting (as such term is defined in Rules 13a-15 and 15d-15 under the Exchange Act) that occurred during the fiscal quarter ended December 31, 2018, and have concluded no change has materially affected, or is reasonably likely to materially affect, internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

The Duke Energy Registrants' management is responsible for establishing and maintaining an adequate system of internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). The Duke Energy Registrants' internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes, in accordance with generally accepted accounting principles in the United States. Due to inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of the internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies and procedures may deteriorate.

The Duke Energy Registrants' management, including their Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of their internal control over financial reporting as of December 31, 2018, based on the framework in the Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, management concluded that its internal controls over financial reporting were effective as of December 31, 2018.

Deloitte & Touche LLP, Duke Energy's independent registered public accounting firm, has issued an attestation report on the effectiveness of Duke Energy's internal control over financial reporting, which is included herein. This report is not applicable to the Subsidiary Registrants as these companies are not accelerated or large accelerated filers.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Duke Energy Corporation

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Duke Energy Corporation and subsidiaries (the "Company") as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of December 31, 2018, of the Company and our report dated February 28, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Charlotte, North Carolina
February 28, 2019

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding Duke Energy's Executive Officers is set forth in Part I, Item 1, "Business – Executive Officers of the Registrants," in this Annual Report on Form 10-K. Duke Energy will provide information that is responsive to the remainder of this Item 10 in its definitive proxy statement or in an amendment to this Annual Report not later than 120 days after the end of the fiscal year covered by this Annual Report. That information is incorporated in this Item 10 by reference.

ITEM 11. EXECUTIVE COMPENSATION

Duke Energy will provide information that is responsive to this Item 11 in its definitive proxy statement or in an amendment to this Annual Report not later than 120 days after the end of the fiscal year covered by this Annual Report. That information is incorporated in this Item 11 by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Equity Compensation Plan Information

The following table shows information as of December 31, 2018, about securities to be issued upon exercise of outstanding options, warrants and rights under Duke Energy's equity compensation plans, along with the weighted-average exercise price of the outstanding options, warrants and rights and the number of securities remaining available for future issuance under the plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)[1]	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	3,729,606 [2]	n/a	6,080,741 [3]
Equity compensation plans not approved by security holders	186,900 [4]	n/a	n/a [5]
Total	3,916,506	n/a	6,080,741

(1) As of December 31, 2018, no options were outstanding under equity compensation plans.
(2) Includes restricted stock units and performance shares (assuming the maximum payout level) granted under the Duke Energy Corporation 2015 Long-Term Incentive Plan, as well as shares that could be payable with respect to certain compensation deferred under the Executive Savings Plan or the Directors' Savings Plan.
(3) Includes shares remaining available for issuance pursuant to stock awards under the Duke Energy Corporation 2015 Long-Term Incentive Plan.
(4) Includes shares that could be payable with respect to certain compensation deferred under the Executive Savings Plan or and the Directors' Savings Plan, each of which is a non-qualified deferred compensation plan described in more detail below.
(5) The number of shares remaining available for future issuance under equity compensation plans not approved by security holders cannot be determined because it is based on the amount of future voluntary deferrals, if any, under the Executive Savings Plan and the Directors' Savings Plan.

Under the Executive Savings Plan, participants can elect to defer a portion of their base salary and short-term incentive compensation. Participants also receive a company matching contribution in excess of the contribution limits prescribed by the Internal Revenue Code under the Duke Energy Retirement Savings Plan, which is the 401(k) plan in which employees are generally eligible to participate. In general, payments are made following termination of employment or death in the form of a lump sum or installments, as selected by the participant. Participants may direct the deemed investment of base salary deferrals, short-term incentive compensation deferrals and matching contributions among investment options available under the Duke Energy Retirement Savings Plan, including the Duke Energy Common Stock Fund. Participants may change their investment elections on a daily basis. Deferrals of equity awards are credited with earnings and losses based on the performance of the Duke Energy Common Stock Fund. The benefits payable under the plan are unfunded and subject to the claims of Duke Energy's creditors.

Under the Directors' Savings Plan, outside directors may elect to defer all or a portion of their annual compensation, generally consisting of retainers. Deferred amounts are credited to an unfunded account, the balance of which is adjusted for the performance of phantom investment options, including the Duke Energy common stock fund, as elected by the director, and generally are paid when the director terminates his or her service from the Board of Directors.

Duke Energy will provide additional information that is responsive to this Item 12 in its definitive proxy statement or in an amendment to this Annual Report not later than 120 days after the end of the fiscal year covered by this Annual Report. That information is incorporated in this Item 12 by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Duke Energy will provide information that is responsive to this Item 13 in its definitive proxy statement or in an amendment to this Annual Report not later than 120 days after the end of the fiscal year covered by this Annual Report. That information is incorporated in this Item 13 by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Deloitte provided professional services to the Duke Energy Registrants. The following tables present the Deloitte fees for services rendered to the Duke Energy Registrants during 2018 and 2017.

	Year Ended December 31, 2018							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Types of Fees								
Audit Fees[a]	$ 14.0	$ 5.0	$ 5.5	$ 3.3	$ 2.2	$ 0.9	$ 1.4	$ 0.8
Audit-Related Fees[b]	0.4	—	0.1	—	0.1	—	—	—
Tax Fees[c]	0.6	0.2	0.2	0.1	0.1	—	0.1	0.1
Other Fees[d]	—	—	—	—	—	—	—	—
Total Fees	$ 15.0	$ 5.2	$ 5.8	$ 3.4	$ 2.4	$ 0.9	$ 1.5	$ 0.9

	Year Ended December 31, 2017							
(in millions)	Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
Types of Fees								
Audit Fees[a]	$ 13.6	$ 4.7	$ 5.6	$ 3.1	$ 2.4	$ 0.8	$ 1.4	$ 0.8
Audit-Related Fees[b]	0.2	—	—	—	—	—	—	—
Tax Fees[c]	1.7	0.6	0.1	0.4	—	0.1	0.1	0.1
Other Fees[d]	0.1	—	—	—	—	—	—	—
Total Fees	$ 15.6	$ 5.3	$ 5.7	$ 3.5	$ 2.4	$ 0.9	$ 1.5	$ 0.9

(a) Audit Fees are fees billed, or expected to be billed, by Deloitte for professional services for the financial statement audits, audit of the Duke Energy Registrants' financial statements included in the Annual Report on Form 10-K, reviews of financial statements included in Quarterly Reports on Form 10-Q, and services associated with securities filings such as comfort letters and consents.

(b) Audit-Related Fees are fees billed, or expected to be billed, by Deloitte for assurance and related services that are reasonably related to the performance of an audit or review of financial statements, including statutory reporting requirements.

(c) Tax Fees are fees billed by Deloitte for tax return assistance and preparation, tax examination assistance and professional services related to tax planning and tax strategy.

(d) Other Fees are billed by Deloitte for attendance at Deloitte-sponsored conferences and access to Deloitte research tools and subscription services.

To safeguard the continued independence of the independent auditor, the Audit Committee of Duke Energy adopted a policy that all services provided by the independent auditor require preapproval by the Audit Committee. Pursuant to the policy, certain audit services, audit-related services, tax services and other services have been specifically preapproved up to fee limits. In the event the cost of any of these services may exceed the fee limits, the Audit Committee must specifically approve the service. All services performed in 2018 and 2017 by the independent accountant were approved by the Audit Committee pursuant to the preapproval policy.

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Consolidated Financial Statements, Supplemental Financial Data and Supplemental Schedules included in Part II of this Annual Report are as follows:

Duke Energy Corporation

Consolidated Financial Statements
Consolidated Statements of Operations for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
Notes to the Consolidated Financial Statements
Quarterly Financial Data, (unaudited, included in Note 26 to the Consolidated Financial Statements)
Report of Independent Registered Public Accounting Firm
All other schedules are omitted because they are not required, or because the required information is included in the Consolidated Financial Statements or Notes.

Duke Energy Carolinas, LLC

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
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All other schedules are omitted because they are not required, or because the required information is included in the Consolidated Financial Statements or Notes.

Progress Energy, Inc.

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
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Duke Energy Progress, LLC

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
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Duke Energy Florida, LLC

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
Notes to the Consolidated Financial Statements
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All other schedules are omitted because they are not required, or because the required information is included in the Consolidated Financial Statements or Notes.

Duke Energy Ohio, Inc.

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, 2017 and 2016
Notes to the Consolidated Financial Statements
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All other schedules are omitted because they are not required, or because the required information is included in the Consolidated Financial Statements or Notes.

Duke Energy Indiana, LLC

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
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All other schedules are omitted because they are not required, or because the required information is included in the Consolidated Financial Statements or Notes.

Piedmont Natural Gas Company, Inc.

Consolidated Financial Statements
Consolidated Statements of Operations and Comprehensive Income for the Years Ended December 31, 2018, and 2017, Two Months Ended December 31, 2016, and the Year Ended October 31, 2016
Consolidated Balance Sheets as of December 31, 2018, and 2017
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, and 2017, Two Months Ended December 31, 2016, and the Year Ended October 31, 2016
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2018, and 2017, Two Months Ended December 31, 2016, and the Year Ended October 31, 2016
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EXHIBIT INDEX

Exhibits filed herewithin are designated by an asterisk (*). All exhibits not so designated are incorporated by reference to a prior filing, as indicated. Items constituting management contracts or compensatory plans or arrangements are designated by a double asterisk (**). The Company agrees to furnish upon request to the Commission a copy of any omitted schedules or exhibits upon request on all items designated by a triple asterisk (***).

Exhibit Number		Duke Energy	Duke Energy Carolinas	Progress Energy	Duke Energy Progress	Duke Energy Florida	Duke Energy Ohio	Duke Energy Indiana	Piedmont
2.1	Agreement and Plan of Merger between Duke Energy Corporation, Diamond Acquisition Corporation and Progress Energy, Inc., dated as of January 8, 2011 (incorporated by reference to Exhibit 2.1 to Duke Energy Corporation's Current Report on Form 8-K filed on January 11, 2011, File No. 1-32853).	X							
2.2	Agreement and Plan of Merger between Piedmont Natural Gas Company, Duke Energy Corporation and Forest Subsidiary, Inc. (incorporated by reference to Exhibit 2.1 to Duke Energy Corporation's Current Report on Form 8-K filed on October 26, 2015, File No. 1-32853).	X							
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Duke Energy Corporation's Current Report on Form 8-K filed on May 20, 2014, File No. 1-32853).	X							
3.2	Amended and Restated By-Laws of Duke Energy Corporation (incorporated by reference to Exhibit 3.1 to Duke Energy Corporation's Current Report on Form 8-K filed on January 4, 2016, File No. 1-32853).	X							
3.3	Articles of Organization including Articles of Conversion (incorporated by reference to Exhibit 3.1 to Duke Energy Carolinas, LLC's Current Report on Form 8-K filed on April 7, 2006, File No. 1-4928).		X						
3.3.1	Amended Articles of Organization, effective October 1, 2006, (incorporated by reference to Exhibit 3.1 to Duke Energy Carolinas, LLC's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006, filed on November 13, 2006, File No. 1-4928).		X						
3.4	Amended Articles of Incorporation of Duke Energy Ohio, Inc. (formerly The Cincinnati Gas & Electric Company), effective October 23, 1996, (incorporated by reference to Exhibit 3(a) to registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996, filed on November 13, 1996, File No. 1-1232).						X		
3.4.1	Amended Articles of Incorporation, effective September 19, 2006, (incorporated by reference to Exhibit 3.1 to Duke Energy Ohio, Inc.'s (formerly The Cincinnati Gas & Electric Company) Quarterly Report on Form 10-Q for the quarter ended September 30, 2006, filed on November 17, 2006, File No. 1-1232).						X		
3.5	Certificate of Conversion of Duke Energy Indiana, LLC (incorporated by reference to Exhibit 3.1 to registrant's Current Report on Form 8-K filed on January 4, 2016, File No. 1-3543).							X	