FISCAL YEAR 2019

ANNUAL REPORT

FEBRUARY 18, 2020

Illinois Power Agency
Annual Report
Fiscal Year 2019

(July 2018 - June 2019)
Prepared in Accordance with 20 ILCS 3855/1-125 and 220 ILCS 5/16-115D(d)(4)

February 18, 2020

INTRODUCTION

The Illinois Power Agency ("IPA") was established to serve the people of Illinois by administering electricity and renewable resources planning and procurement processes for Ameren Illinois Company ("Ameren Illinois"), Commonwealth Edison Company ("ComEd"), and MidAmerican Energy Company ("MidAmerican").[1]

The IPA's processes and mandates are described in the Illinois Power Agency Act (20 ILCS 3855) and the Illinois Public Utilities Act (220 ILCS 5). The Agency strives to employ best practices to meet the goals set out for it in those statutes. Chief among these is to develop electricity and renewable resources procurement plans and processes to ensure adequate, reliable, affordable, efficient, and environmentally sustainable electric service at the lowest total cost over time, taking into account any benefits of price stability. The Agency prepares electricity procurement plans on an annual basis. For renewable energy resources, the Agency developed a Long-term Renewable Resources Procurement Plan in 2017-2018; that plan is required to be updated on a biennial basis, with initial planning and stakeholder feedback activities for that Plan's first update occurring in Fiscal Year 2019.

As an independent agency subject to the oversight of the Executive Ethics Commission, the Illinois Power Agency is committed to:

- Conducting competitive procurement processes to procure the supply resources identified in procurement plans.
- Ensuring that the process of power procurement is conducted in an ethical and transparent fashion, immune from improper influence.

[1] Section 16-111.5(a) of the Public Utilities Act allows small multi-jurisdictional electric utilities to elect to participate in the IPA procurement process. In April 2015, MidAmerican elected to participate in the development of the IPA's Annual Procurement Plans. This Annual Report therefore includes information about procurements for MidAmerican.

- Operating in a structurally insulated, independent and transparent fashion so that nothing impedes its mission to secure power at the best prices the market will bear, provided that it meets all applicable legal requirements.

- Continuing to review its policies and practices to determine how best to meet its mission of providing the lowest cost power to the greatest number of people, at any given point in time, in accordance with applicable law.

Fiscal Year 2019 featured the following accomplishments for the Agency:

- The Agency developed its 2019 Annual Electricity Procurement Plan and had that Plan approved by the Illinois Commerce Commission for implementation in calendar year 2019.
    - The Agency successfully conducted electricity and capacity procurement events as approved in the 2018 and 2019 Annual Procurement Plans.
- The final version of the Long-Term Renewable Resources Procurement Plan, developed to conform with the Illinois Commerce Commission's Final Order in Docket No. 17-0838, dated April 3, 2018, and Amendatory Order dated May 2, 2018, was issued by the Agency on August 6, 2018. Pursuant to that Plan:
    - The First Subsequent Forward Procurement of Renewable Energy Credits ("RECs") from new utility-scale wind projects was held on October 3, 2018. Subsequently, a Forward Procurement was held for RECs from new utility-scale solar and brownfield site photovoltaic projects on November 28, 2018. The purpose of these procurements was to offer 15-year contracts for the delivery of RECs from new renewable energy projects (thus increasing the amount of new renewable energy generation), with those projects' development financed in part through the revenue certainty offered by those REC contracts. The Agency subsequently held an additional procurement for RECs from brownfield site photovoltaic projects in July 2019 (Fiscal Year 2020). Assuming all projects are successfully developed, these procurements will result in an additional 1,651 MW of new solar, wind, and brownfield-site solar generating capacity, the vast majority of which will be located in Illinois.
    - The Adjustable Block Program – a solar incentive program administered by the IPA to incent the development of new photovoltaic distributed generation and community solar projects pursuant to Section 1-75(c)(1)(K)-(M) of the IPA Act – was developed in Fiscal Year 2019 and began taking project applications on January 31, 2019. As the end of Fiscal Year 2019 1,684 projects had been approved by the ICC totaling 414 MW of capacity; 811 community solar projects totaling 1,570 MW of capacity were placed on a waitlist awaiting additional funding. At the time of the publishing of this Annual Report, including Fiscal Year 2020

activities, 9,154 projects had been approved by the ICC totaling 521 MW of capacity. Assuming all projects are successfully developed and the program continues to be fully subscribed, the Adjustable Block Program will result in the development of over 670 MW of additional photovoltaic distributed generation and community solar projects in Illinois. This is an incredibly significant increase given that, prior to the implementation of Public Act 99-0906, Illinois was estimated to have less than 80 MW of total solar photovoltaic installed capacity statewide.

- The Illinois Solar for All Program – a low-income solar incentive program developed pursuant to Section 1-56(b) of the IPA Act – was developed in Fiscal Year 2019 and began taking project applications on May 15, 2019. 45 Low-Income Community Solar applications (totaling nearly 60 MW of capacity), 28 Non-Profit/Public Facilities applications (totaling over 3 MW of capacity), and 1 Low-Income Distributed Generation application (2 MW of capacity) applied during that initial project application window. Five Low-Income Community Solar projects (totaling 4 MW of capacity), and 7 Non-Profit/Public Facility projects (1.3 MW of capacity) were selected. Subsequent to Fiscal Year 2019, the Program opened for project applications for a second year and the Agency successfully completed a competitive procurement for low-income community solar pilot projects.
- The Agency held stakeholder workshops in June 2019 to begin the process of the biennial update of the Long-Term Renewable Resources Procurement Plan. Subsequent to the end of the Fiscal Year, the Agency developed and took public comment an updated Long-Term Renewable Resources Procurement Plan. That updated Plan was filed with the Illinois Commerce Commission on October 21, 2019 and is expected to be approved by the Commission on February 18, 2020.

The IPA welcomes your questions and hopes you will take advantage of the information offered herein and on the Agency's website: www.illinois.gov/IPA.

REPORT ORGANIZATION

20 ILCS 3855/1-125 requires that, by February 15 of each year, the Agency shall report annually to the Governor and the General Assembly on the operations and transactions of the Agency.[2] The annual report shall include, but not be limited to, each of the following:

(1) The average quantity, price, and term of all contracts for electricity procured under the procurement plans for electric utilities.

(2) (Blank)[3]

(3) The quantity, price, and rate impact of all energy efficiency and demand response measures purchased for electric utilities, and any measures included in the procurement plan pursuant to Section 16-111.5B of the Public Utilities Act.

(4) The amount of power and energy produced by each Agency facility.

(5) The quantity of electricity supplied by each Agency facility to municipal electric systems, governmental aggregators, or rural electric cooperatives in Illinois.

(6) The revenues as allocated by the Agency to each facility.

(7) The costs as allocated by the Agency to each facility.

(8) The accumulated depreciation for each facility.

(9) The status of any projects under development.

(10) Basic financial and operating information specifically detailed for the reporting year and including, but not limited to, income and expense statements, balance sheets, and changes in financial position, all in accordance with generally accepted accounting principles, debt structure, and a summary of funds on a cash basis.

(11) The average quantity, price, contract type and term and rate impact of all renewable resources purchased under the electricity procurement plans for electric utilities.

(12) A comparison of the costs associated with the Agency's procurement of renewable energy resources to (A) the Agency's costs associated with electricity generated by other types of generation facilities and (B) the benefits associated with the Agency's procurement of renewable energy resources.

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[2] As February 15, 2020 is a Saturday and the following Monday is a State Holiday, this report is being released on Tuesday, February 18, 2020.

[3] Previous Illinois Power Agency Annual Reports included a Section (2) that provided information on, "The quantity, price, and rate impact of all renewable resources purchased under the electricity procurement plans for electric utilities." That provision was repealed pursuant to Public Act 099-0536 through consolidating the Agency's Annual Report and its previously-required separate report on the Cost and Benefits of Renewable Resource Procurement. Information comparable to what was previously reported in Section (2) can be found in Section (11) of this Report.

(13) An analysis of the rate impacts associated with the Illinois Power Agency's procurement of renewable resources, including, but not limited to, any long-term contracts, on the eligible retail customers of electric utilities. The analysis shall include the Agency's estimate of the total dollar impact that the Agency's procurement of renewable resources has had on the annual electricity bills of the customer classes that comprise each eligible retail customer class taking service from an electric utility.

(14) An analysis of how the operation of the alternative compliance payment mechanism, any long-term contracts, or other aspects of the applicable renewable portfolio standards impacts the rates of customers of alternative retail electric suppliers.

In addition to these requirements, Section 16-115D(d)(4) of the Public Utilities Act requires that, beginning April 1, 2012 and by April 1 of each year thereafter, the Agency shall submit the following information to the General Assembly, the Commission, and alternative retail electric suppliers:

> A report of the alternative compliance payment mechanism fund that shall include …
>
> (A) the total amount of alternative compliance payments received in aggregate from alternative retail electric suppliers by planning year for all previous planning years in which the alternative compliance payment was in effect;
>
> (B) the total amount of those payments utilized to purchased [sic] renewable energy credits itemized by the date of each procurement in which the payments were utilized; and
>
> (C) the unused and remaining balance in the Agency Renewable Energy Resources Fund attributable to those payments."

This Annual Report for Fiscal Year 2019 addresses each of the above requirements, including reporting alternative compliance payment and expenditure information.

(1) The average quantity, price, and term of all contracts for electricity procured under the procurement plans for electric utilities.

The IPA's 2019 Annual Procurement Plan, approved by the Illinois Commerce Commission in Docket No. 18-1564, contains a hedging strategy for the procurement of electricity under which 100% of projected eligible retail customer load is to be under contract for the upcoming (or "prompt") delivery year (starting June 1, 2019),[4,5] 50% for the following year (starting June 1, 2020), and 25% for the next year (starting June 1, 2021). This approach constitutes a continuation of the approach adopted in the 2015 through 2018 Procurement Plans, under which the Agency holds two energy procurement events per year. Each procurement uses an updated load forecast provided by the utilities to match procured volumes with actual demand more accurately. The Procurement Plan covers a calendar year of Agency activities, while energy deliveries are based on an industry-standard energy delivery year that starts June 1 (and thus is one month different from the State Fiscal Year). In Fiscal Year 2019, the IPA held two energy procurements: the first occurred in September, 2018 pursuant to the 2018 Plan; the second took place in April, 2019 pursuant to the 2019 Plan.

The following tables report on the names of winning suppliers, quantity, price, and term for electricity contracts procured through the two procurement events.[6] The specific months and quantities procured reflect the load forecasts provided by Ameren Illinois, ComEd and MidAmerican.

[4] Delivery year is synonymous with planning year and used interchangeably in this Report.

[5] This percentage total is 106% for July and August 2019, on-peak.

[6] Under Section 16-111.5(h) of the Public Utilities Act, "the names of the successful bidders and the load weighted average of the winning bid prices for each contract type and for each contract term shall be made available to the public." This information is included in the tables that follow. However, as the IPA "shall maintain the confidentiality of all other supplier and bidding information," individual supplier contract quantities, prices, and terms may not be disclosed and have not been included in this report or in prior annual reports.

September 2018 Procurement[7]

Ameren Illinois

Winning Suppliers

AEP Energy Partners, Inc.
Axpo U.S. LLC
Dynegy Marketing and Trade, LLC
Exelon Generation Company, LLC
Macquarie Energy LLC
Morgan Stanley Capital Group Inc.
NextEra Energy Power Marketing, LLC
Shell Energy North America (US), L.P.
The Energy Authority, Inc.
TransAlta Energy Marketing (U.S.) Inc.
Union electric Company d/b/a Ameren Missouri
Vitol Inc.

Average Prices ($/MWh) and MWs of Electricity Contracts

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
October 2018	32.00	150	23.61	125
November 2018	31.22	150	23.07	125
December 2018	31.63	200	24.04	150
January 2019	36.47	175	30.18	175
February 2019	34.74	175	28.66	175
March 2019	31.61	150	24.57	125
April 2019	31.58	125	22.95	100
May 2019	32.28	125	21.36	125
June 2019	32.56	125	22.68	100
July 2019	36.92	150	23.98	100
August 2019	36.04	125	23.98	100
September 2019	31.93	100	22.25	75
October 2019	30.06	75	21.22	75
November 2019	29.23	100	21.22	100
December 2019	30.28	100	23.03	100
January 2020	34.85	100	28.62	125
February 2020	34.85	100	27.45	125

[7] Source: https://www.icc.illinois.gov/workshops/Electricity-Procurement-Process-for-Plan-Years-Beginning-June-2018

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
March 2020	31.04	75	23.49	75
April 2020	30.54	75	22.22	75
May 2020	30.15	100	21.07	75
June 2020	31.57	100	21.84	75
July 2020	38.01	125	23.54	100
August 2020	34.79	100	23.42	75
September 2020	30.90	75	20.94	50
October 2020	28.89	50	21.17	25
November 2020	28.24	50	21.17	25
December 2020	29.81	75	22.09	50
January 2021	33.40	75	27.87	50
February 2021	33.40	75	26.44	75
March 2021	30.49	50	23.11	25
April 2021	29.43	50	-	-
May 2021	29.41	25	20.56	25

In the September 2018 procurements, the IPA also procured capacity for a portion of the eligible retail customer load of Ameren Illinois as specified in the 2018 Procurement Plan. Although the capacity procured did not include an electricity component, this information is provided below for the benefit of completeness. The following tables report on the name of winning supplier, quantity of capacity procured in Zonal Resource Credits (ZRCs), the average contracted price, and term.

Winning Suppliers

Southern Illinois Power Cooperative
The Energy Authority, Inc.
Union Electric Company d/b/a Ameren Missouri
Voltus, Inc.
Wabash Valley Power Association, Inc.

Term, Average Price ($/MW-Day) and Quantities (in ZRCs) of Capacity Contracts

Term	**Zonal Resource Credits**
Delivery Year	**Average Price**
June 2019 – May 2020	$27.51 per MW-day

ComEd

Winning Suppliers

AEP Energy Partners, Inc.
Axpo U.S. LLC
Exelon Generation Company, LLC
Macquarie Energy LLC
Midwest Generation, LLC
Morgan Stanley Capital Group Inc.
NextEra Energy Marketing, LLC
Shell Energy North America (US), L.P.
TransAlta Energy Marketing (U.S.) Inc.
Vitol Inc.

Average Prices ($/MWh) and MWs of Electricity Contracts

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
October 2018	30.95	550	21.81	475
November 2018	30.88	625	21.75	550
December 2018	30.97	675	22.44	600
January 2019	38.28	725	30.23	650
February 2019	36.81	650	28.17	625
March 2019	31.98	575	23.27	525
April 2019	30.17	525	20.34	450
May 2019	30.90	550	18.87	475
June 2019	30.64	375	20.23	300
July 2019	35.83	425	22.74	350
August 2019	33.72	425	21.26	350
September 2019	30.75	300	20.19	250
October 2019	29.08	250	19.69	225
November 2019	28.44	300	19.62	250
December 2019	29.14	300	21.13	275
January 2020	35.94	325	26.98	325
February 2020	35.28	300	26.04	275
March 2020	30.05	275	21.92	250
April 2020	29.55	250	20.62	225
May 2020	29.23	275	19.20	225
June 2020	28.94	350	19.30	275
July 2020	34.08	450	20.34	350
August 2020	32.36	425	20.26	325
September 2020	29.14	275	19.15	250

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
October 2020	27.11	200	19.28	150
November 2020	27.21	225	19.08	175
December 2020	28.04	275	19.83	250
January 2021	34.83	250	24.97	250
February 2021	33.92	275	24.28	225
March 2021	29.01	200	21.34	175
April 2021	28.51	150	19.53	150
May 2021	28.10	200	18.66	175

MidAmerican

No Procurement

April 2019 Procurement[8]

Ameren Illinois

Winning Suppliers

AEP Energy Partners, Inc.
Axpo U.S. LLC
Dynegy Marketing and Trade, LLC
Exelon Generation Company, LLC
Macquarie Energy, LLC
Morgan Stanley Capital Group, Inc.
NextEra Energy Marketing, LLC
Shell Energy North America (US), L.P.
The Energy Authority, Inc.
TransAlta Energy Marketing (U.S.), Inc.
Union Electric Company d/b/a Ameren Missouri

Average Prices ($/MWh) and Quantities (MW) of Electricity Contracts

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
June 2019	32.49	550	22.76	375
July 2019	37.24	675	24.69	500
August 2019	36.81	600	24.41	425
September 2019	33.63	350	23.13	300
October 2019	32.34	150	23.48	125
November 2019	32.23	175	22.56	175
December 2019	32.56	225	24.33	225
January 2020	37.15	225	28.99	175
February 2020	35.63	200	28.41	200
March 2020	32.41	150	24.07	150
April 2020	32.19	100	23.57	100
May 2020	32.59	200	21.95	150
June 2020	31.90	125	21.77	100
July 2020	37.25	150	24.26	125
August 2020	35.74	125	23.67	100
September 2020	31.23	100	21.62	75
October 2020	29.90	75	21.92	75

[8] Source: https://www.icc.illinois.gov/workshops/Electricity-Procurement-Process-for-Plan-Years-Beginning-June-2019

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
November 2020	29.78	100	21.26	75
December 2020	30.30	100	23.22	100
January 2021	36.56	100	27.09	100
February 2021	34.09	100	27.09	100
March 2021	30.58	75	23.94	75
April 2021	29.87	50	21.79	50
May 2021	30.93	100	21.11	75
June 2021	30.78	100	21.14	75
July 2021	35.92	125	23.52	100
August 2021	34.48	125	23.24	75
September 2021	29.72	75	21.35	50
October 2021	28.97	50	21.36	25
November 2021	28.44	50	20.34	25
December 2021	29.77	75	22.54	50
January 2022	35.93	75	26.81	50
February 2022	34.33	75	26.81	50
March 2022	30.27	50	23.84	25
April 2022	29.94	25	21.41	25
May 2022	30.63	50	20.54	25

In the April 2019 procurement, the IPA also procured capacity for a portion of the eligible retail customer load of Ameren Illinois as specified in the 2019 Procurement Plan. Although the capacity procured did not include an electricity component, this information is provided below for the benefit of completeness. The following tables report on the names of winning suppliers, quantity of capacity procured - in Zonal Resource Credits (ZRCs), the average contracted price, and term.

Winning Suppliers

Southern Illinois Power Cooperative
Union Electric Company d/b/a Ameren Missouri
Voltus, Inc.

Term, Average Price ($/MW-Day) and Quantities (in ZRCs) of Capacity Contracts

Term	Zonal Resource Credits	
Delivery Year	**Average Price**	**Quantity**
June 2020 – May 2021	$24.65 per MW-day	98
June 2021 – May 2022	$27.99 per MW-day	49

ComEd

Winning Suppliers

AEP Energy Partners, Inc.
Axpo U.S. LLC
Dynegy Marketing and Trade, LLC
Exelon Generation Company, LLC
Macquarie Energy LLC
Midwest Generation, LLC
Morgan Stanley Capital Group Inc.
NextEra Energy Marketing, LLC
Shell Energy North America (US), L.P.
The Energy Authority, Inc.
TransAlta Energy Marketing (U.S.), Inc.

Average Prices ($/MWh) and Quantities (MW) of Electricity Contracts

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
June 2019	31.29	1,575	21.51	1,325
July 2019	35.70	2,125	23.04	1,550
August 2019	35.25	1975	22.85	1,425
September 2019	32.51	1,325	21.60	1,125
October 2019	31.99	550	22.76	450
November 2019	31.90	600	22.49	550
December 2019	32.12	725	23.25	650
January 2020	35.41	725	25.55	650
February 2020	35.21	675	25.24	600
March 2020	32.22	600	22.63	550
April 2020	32.24	525	22.48	475
May 2020	31.85	525	21.66	475
June 2020	30.94	375	20.57	325
July 2020	33.40	450	21.41	375
August 2020	33.22	425	21.21	350
September 2020	31.13	325	20.75	275
October 2020	30.69	275	20.96	250
November 2020	30.49	300	20.79	275
December 2020	30.54	375	21.06	325
January 2021	33.40	375	23.01	325

	On-Peak		Off-Peak	
Month(s)	**Average Price**	**Quantity**	**Average Price**	**Quantity**
February 2021	32.98	350	22.35	300
March 2021	30.78	300	21.27	275
April 2021	30.80	275	20.92	250
May 2021	30.79	275	20.78	250
June 2021	29.42	350	18.96	275
July 2021	33.11	450	20.40	350
August 2021	32.81	400	20.19	300
September 2021	29.71	275	18.97	225
October 2021	29.32	200	19.57	150
November 2021	29.06	225	19.32	175
December 2021	29.19	300	20.09	250
January 2022	32.74	275	23.73	250
February 2022	32.74	275	23.33	225
March 2022	29.85	225	20.29	175
April 2022	29.55	175	20.06	150
May 2022	29.62	200	18.87	175

MidAmerican

Winning Suppliers

Macquarie Energy, LLC
NextEra Energy Marketing, LLC

Average Prices ($/MWh) and Quantities (MW) of Electricity Contracts

Month(s)	On-Peak[9] Average Price	Off-Peak Average Price
July 2019	36.39	Not procured
August 2019	35.41	Not procured

[9] In accordance with the RFP rules and previous Commission orders, quantity information is provided where the number of successful bidders is greater than two.

(2) (Blank)

(3) The quantity, price, and rate impact of all energy efficiency and demand response measures purchased for electric utilities, and any measures included in the procurement plan pursuant to Section 16-111.5B of the Public Utilities Act.

Consistent with prior years, the IPA did not directly purchase energy efficiency or demand response measures for ComEd or Ameren Illinois in Fiscal Year 2019.

Procurement Plans developed by the Agency for the years 2013 through 2017 included the approval of incremental energy efficiency programs pursuant to Section 16-111.5B of the Public Utilities Act. Those previsions were terminated as part of Public Act 99-0906, which took effect on June 1, 2017. However, Public Act 99-0906 added a new provision (d)(1) to Section 16-111.5B allowing the programs that had been scheduled to end in May 2017 to operate through December 2017. The provision also allowed for the utilities "to increase, on a pro rata basis, the energy savings goals and budgets approved under this Section to reflect the additional seven months of implementation of the energy efficiency programs and measures." While Ameren Illinois elected not to extend its programs, ComEd chose to extend its programs for the additional seven months.

Therefore, the final ComEd programs conducted pursuant to Section 16-111.5B ended in December 2017 and no programs (or commensurate expenditures) occurred during Fiscal Year 2019.

(4) The amount of power and energy produced by each Agency facility.

Consistent with prior years, the IPA had no Agency facilities during Fiscal Year 2019.

(5) The quantity of electricity supplied by each Agency facility to municipal electric systems, governmental aggregators, or rural electric cooperatives in Illinois.

Consistent with prior years, the IPA had no Agency facilities during Fiscal Year 2019.

(6) The revenues as allocated by the Agency to each facility.

Consistent with prior years, the IPA had no Agency facilities during Fiscal Year 2019.

(7) The costs as allocated by the Agency to each facility.

Consistent with prior years, the IPA had no Agency facilities during Fiscal Year 2019.

(8) The accumulated depreciation for each facility.

Consistent with prior years, the IPA had no Agency facilities during Fiscal Year 2019.

(9) The status of any projects under development.

Consistent with prior years, the IPA had no Agency facilities under development during Fiscal Year 2019.

Among the Agency's goals and objectives enumerated in the Illinois Power Agency Act are the following:

- *Develop electric generation and co-generation facilities that use indigenous coal or renewable resources, or both, financed with bonds issued by the Illinois Finance Authority.*
- *Supply electricity from the Agency's facilities at cost to one or more of the following: municipal electric systems, governmental aggregators, or rural electric cooperatives in Illinois.*[10]

[10] 20 ILCS 3855/1-5(C) and (D).

The Act puts a number of restrictions on the Agency that severely limit its ability to develop the allowed facilities in the current marketplace. See, for example:

> *At the Agency's discretion, it may conduct feasibility studies on the construction of any facility. Funding for a study shall be assessed to municipal electric systems, governmental aggregators, units of local government, or rural electric cooperatives requesting the feasibility study; or through an appropriation from the General Assembly.*
>
> No entities have requested such a study.
>
> *The Agency may enter into contractual arrangements with private and public entities, including but not limited to municipal electric systems, governmental aggregators, and rural electric cooperatives, to plan, site, construct, improve, rehabilitate, and operate those electric generation and co-generation facilities.*
>
> No entities have requested such arrangements.
>
> *The first facility that the Agency develops, finances, or constructs shall be a facility that uses coal produced in Illinois. The Agency may, however, also develop, finance, or construct renewable energy facilities after work on the first facility has commenced.*
>
> *Any such facility that uses coal must be a clean coal facility and must be constructed in a location where the geology is suitable for carbon sequestration.*
>
> *The Agency may supply electricity produced by the Agency's facilities to municipal electric systems, governmental aggregators, or rural electric cooperatives in Illinois. The electricity shall be supplied at cost. Electric utilities shall not be required to purchase electricity directly or indirectly from facilities developed or sponsored by the Agency.*
>
> Financing of new generation generally requires that there be certainty regarding the contractual obligation to purchase the output of the facility. Even priced at cost, electricity produced by such a facility is likely to be priced significantly above the market price of electricity for the foreseeable future. Absent a mandate to purchase such electricity, buyers would not elect to purchase the significantly more expensive electricity from a clean coal facility, let alone enter into a contract featuring the length and terms necessary to finance such a facility's construction. Due to a severely restricted pool of potential buyers and the apparent absence of need among those potential buyers, the development of a new IPA facility is unlikely to be feasible for the foreseeable future.
>
> *The Agency may sell excess capacity and excess energy into the wholesale electric market at prevailing market rates; provided, however, the Agency may not sell excess capacity or*

excess energy through the procurement process described in Section 16-111.5 of the Public Utilities Act.

The Agency shall not directly sell electric power and energy to retail customers. Nothing in this paragraph shall be construed to prohibit sales to municipal electric systems, governmental aggregators, or rural electric cooperatives.
(Source: P.A. 95-481, eff. 8-28-07; 95-1027, eff. 6-1-09.)

These provisions mean that the Agency may not serve load in Illinois with any facilities it develops, which serves as a protection of both customers and the market. However, a reduced pool of potential buyers helps ensure that there is not sufficient demand at this time (or in the near future) for the IPA to develop a new facility.

(10) Basic financial and operating information specifically detailed for the reporting year and including, but not limited to, income and expense statements, balance sheets, and changes in financial position, all in accordance with generally accepted accounting principles, debt structure, and a summary of funds on a cash basis.

The Agency's Fiscal Year 2019 unaudited Financial Statements and Notes are contained in the attached Appendix A. Appendix B contains a summary of funds on a cash basis.

(11) The average quantity, price, contract type and term and rate impact of all renewable resources purchased under the electricity procurement plans for electric utilities.

This section of the report, in addition to providing the average quantity, price, contract type and term of all renewable resources purchased, provides a comparison of the costs associated with the procurement of the renewable resources to the costs associated with electricity generated by other types of generation facilities. In this Report, "cost" is used to refer to a quantity procured multiplied by that quantity's average unit price.

Information on the resources procured and the results of the competitive procurements are presented in Tables, 2, 3, and 4 below for the 2019-20 delivery year for ComEd, Ameren Illinois, and MidAmerican, respectively.[11] To place the costs of renewable resources and conventional generation on a level footing, procurement costs are compared for RECs and electricity contracted or delivered to the utility's bundled rate customers during the 2019-20 delivery year. The following costs are tabulated:

- The weighted average price and cost of RECs procured by the Agency;
- The weighted average price per MWh and cost of the blocks of electricity procured by the Agency;
- For Ameren Illinois and ComEd, the 2010 Long-Term Power Purchase Agreements ("LTPPAs") purchase costs broken down to show the imputed REC and electricity prices,[12] beginning with the 2012-13 delivery year, which is the first year of delivery under those agreements;
- For Ameren Illinois, ComEd, and MidAmerican, the average price and cost of RECs procured in the 2015 Fall Distributed Generation Procurement (Ameren Illinois and ComEd only), the 2016 Spring Distributed Generation Procurement, the 2017 Spring Distributed Generation Procurement, and the 2017 Fall Distributed Generation Procurement (Ameren Illinois and ComEd only);

[11] Historical information is available in the Agency's Report on Costs and Benefits of Renewable Resource Procurement published on April 1, 2016, and in the Fiscal Year 2016, Fiscal Year 2017, and Fiscal Year 2018 Annual Reports.

[12] In its December 19, 2012 Order, the ICC allowed for the release of the previously confidential "Appendix K" imputed REC prices. The conformed plan (ICC Docket No. 12-0544, 2013 Electricity Procurement Plan Conforming to the Commission's December 19, 2012 Order at 84) included imputed prices for the five subsequent delivery years 2013-17.

- For Ameren Illinois, ComEd, and MidAmerican, the average price and cost of RECs procured in the Competitive Procurements for new Utility-Scale Wind, new Utility-Scale Solar, and Brownfield Site Solar from 2017 through 2019; and
- For Ameren Illinois, and ComEd, the average price and cost of RECs procured through the Adjustable Block Program.

With regard to the 2010 LTPPAs, those contracts contain bundled pricing for electricity and RECs. REC prices are "imputed" by subtracting an electricity price from the bundled price. The electricity prices used in those contracts are determined through a forward energy curve calculated at the time of the procurement event. The process of imputing these REC prices is described in Appendix K to the Agency's 2010 Procurement Plan.[13]

Although the tables below compare the costs of procured RECs to the costs of procured electricity, it should be noted that these costs are not for equivalent products. RECs represent only the value of the environmental attributes of electricity produced from renewable energy resources, and not the value of the underlying electricity. Alternatively, the costs shown for electricity procured represent prices of actual electricity procured for delivery and use by the end customer. In general, the REC costs are additive to the conventional supply costs when calculating individual customer rate and bill impacts. The Agency also notes that the costs reported herein are only for the supply of electricity and do not include distribution, transmission or other costs related to the provision of electric service.

The Competitive Procurements include the Initial Forward Procurements, Subsequent Forward Procurements, and additional Forward Procurements conducted by the Agency, from 2017 through 2019, for the utilities, as required by Section 1-75(c)(1)(G) of the IPA Act. These procurements are for 15-year contracts for RECs to be delivered annually from new utility-scale wind projects, new utility-scale solar projects and brownfield site photovoltaic projects. The REC deliveries may not start before June 1, 2019 and must start by June 1, 2021. Table 1 shows the results of the specific procurements that were conducted in Fiscal Year 2019.

Table 1: FY 2019 Forward Procurement Results

Procurement Date	Product	Average Price ($/REC)
October, 2018[14]	Wind	3.25
November, 2018[15]	Solar	4.64

[13] Illinois Power Agency, ICC Docket No. 09-373, Supplemental Filing (Nov. 9, 2009).

[14] https://www.icc.illinois.gov/downloads/public/procurement/Public Notice of 2018 Wind REC Procurement Results 2018-10-10.pdf

[15] https://www.icc.illinois.gov/downloads/public/procurement/Public Notice of November 2018 Solar and Brownfield REC Procurement Results 2018-12-04.pdf

The average price and cost in tables 2, 3, and 4 are for all the Competitive Procurements from 2017 through 2019.[16] The average price and cost are based on the total for the 15-year contracts and the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

Sections 1-75(c)(1)(K) and (L) of the IPA Act, as amended by Public Act 99-0906, required the Agency to establish an Adjustable Block Program (ABP) for the procurement of RECs from new photovoltaic distributed generation systems and from new photovoltaic community renewable generation projects. The procurements under the ABP are for 15-year contracts with RECs priced according to a transparent schedule of administratively-set prices. The average price and cost of ABP RECs in tables 2,3 and 4 are based on the total for the 15 year contracts approved as of January 3, 2020 and the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[16] ComEd, Ameren Illinois, and MidAmerican provided the information in these tables in response to the IPA's data requests issued January 2, 2020.

ComEd

Table 2 shows the average quantity, price and contract type of all renewable resources purchased and a comparison of the cost of RECs relative to the cost of electricity under contract for delivery to ComEd during the 2019-20 delivery year.

Table 2: Relative Cost Comparison of RECs and Electricity under Contract with ComEd for the 2019-20 Delivery Year

Cost of RECs and Electricity Under Contract for Delivery to ComEd in the 2019-20 Delivery Year				
Procurements from Renewable Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
Competitive Procurement RECs under Contract[17]	4,219,757	RECs	$4.70	$19,833,248
Adjustable Block Program RECs under Contract[18]	604,449	RECs	$59.35	$35,876,125
2017 Fall Five-Year Distributed Generation REC Procurement	5,286	RECs	$64.48	$340,820
2017 Spring Five-Year Distributed Generation REC Procurement	13,159	RECs	$127.44	$1,676,925
2016 Spring Five-Year Distributed Generation REC Procurement[19]		RECs	$129.50	
2015 Fall Five-Year Distributed Generation REC Procurement[20]		RECs	$113.30	
2010 Long-Term Purchase Agreements REC Procurement[21]	1,261,725	RECs	$18.61	$23,484,620
Total RECs[22]	6,107,355	RECs	$13.36	$81,566,156
Long-Term Renewable Energy, 2010 Long-Term Purchase Agreements[23]	1,261,725	MWh	$44.77	$56,489,226
Electricity Procured from Conventional Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
2019 Fall Block Energy Procurement	3,782,000	MWh	$26.96	$101,947,991
2019 Spring Block Energy Procurement	7,917,200	MWh	$28.31	$224,174,549
2018 Fall Block Energy Procurement	2,585,400	MWh	$26.79	$69,254,384
2018 Spring Block Energy Procurement	2,815,400	MWh	$27.17	$76,502,240
2017 Fall Block Energy Procurement	2,267,425	MWh	$27.74	$62,888,669
2017 Spring Block Energy Procurement	2,699,200	MWh	$27.73	$74,847,619
Total Conventional Energy Resources	22,066,625	MWh	$27.63	$609,615,452

[17] REC contracts are for 15 years with the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[18] REC contracts are for 15 years with the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[19] In accordance with the procurement RFP rules and previous Illinois Commerce Commission orders, quantity information is only released when the number of successful bidders in a procurement is greater than two. The results of the 2016 Distributed Generation Procurement did not meet that threshold, therefore quantity (and cost) is not provided. The IPA also notes that these RECs were purchased using collected ACP from hourly rate customers; thus, this purchase has no rate effect on ComEd's fixed-price rate customers.

[20] In accordance with the procurement RFP rules and previous Illinois Commerce Commission orders, quantity information is only released when the number of successful bidders in a procurement is greater than two. The results of the 2015 Distributed Generation Procurement did not meet that threshold, therefore quantity (and cost) is not provided. The IPA also notes that these RECs were purchased using collected ACP from hourly rate customers; thus, this purchase has no rate effect on ComEd's fixed-price rate customers.

[21] This represents the Annual Contract Quantity Commitment of RECs specified in the contract and the imputed REC price.

[22] Total REC quantities and contracted cost includes the results of the 2015 and 2016 Fall and Spring procurements that are not individually disclosed.

[23] This represents the energy associated with the Annual Contract Quantity Commitment of RECs specified in the contract and the difference between the Contract Price and the Imputed REC Price.

Ameren Illinois

Table 3 shows the average quantity, price and contract type of all renewable resources purchased and a comparison of the cost of RECs relative to the cost of electricity under contract for delivery to Ameren Illinois during the 2019-20 delivery year.

Table 3: Relative Cost Comparison of RECs and Electricity under Contract with Ameren Illinois for the 2019-20 Delivery Year

Cost of RECs and Electricity Under Contract for Delivery to Ameren Illinois in the 2019-20 Delivery Year				
Procurements from Renewable Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
Competitive Procurement RECs under Contract[24]	1,747,059	RECs	$4.70	$8,213,800
Adjustable Block Program RECs under Contract[25]	261,103	RECs	$60.54	$15,806,668
2017 Fall Five-Year Distributed Generation REC Procurement	8,070	RECs	$127.54	$1,029,248
2017 Spring Five-Year Distributed Generation REC Procurement	1,674	RECs	$194.85	$326,179
2016 Spring Five-Year Distributed Generation REC Procurement[26]		RECs	$154.31	
2015 Fall Five-Year Distributed Generation REC Procurement[27]		RECs	$123.78	
2010 Long-Term Purchase Agreements REC Procurement[28]	600,000	RECs	$13.33	$7,998,000
Total RECs[29]	2,619,295	RECs	$12.81	$33,559,107
Long-Term Renewable Energy, 2010 Long-Term Purchase Agreements[30]	600,000	MWh	$44.61	$26,766,000
Electricity Procured from Conventional Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
2019 Fall Block Energy Procurement	875,200	MWh	$28.38	$24,841,854
2019 Spring Block Energy Procurement	2,363,200	MWh	$29.68	$70,130,210
2018 Fall Block Energy Procurement	856,200	MWh	$28.13	$24,082,162
2018 Spring Block Energy Procurement	863,000	MWh	$27.49	$23,726,350
2017 Fall Block Energy Procurement	462,000	MWh	$28.65	$13,236,212
2017 Spring Block Energy Procurement	600,200	MWh	$29.11	$17,473,634
Total Conventional Energy Resources	6,019,800	MWh	$28.82	$173,490,422

[24] REC contracts are for 15 years with the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[25] REC contracts are for 15 years with the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[26] In accordance with the procurement RFP rules and previous Illinois Commerce Commission orders, quantity information is only released when the number of successful bidders in a procurement is greater than two. The results of the 2016 Distributed Generation Procurement did not meet that threshold, therefore quantity (and cost) is not provided. The IPA also notes that these RECs were purchased using collected ACP from hourly rate customers; thus, this purchase has no rate effect on Ameren's fixed-price rate customers.

[27] In accordance with the procurement RFP rules and previous Illinois Commerce Commission orders, quantity information is only released when the number of successful bidders in a procurement is greater than two. The results of the 2015 Distributed Generation Procurement did not meet that threshold, therefore quantity (and cost) is not provided. The IPA also notes that these RECs were purchased using collected ACP from hourly rate customers; thus, this purchase has no rate effect on Ameren's fixed-price rate customers.

[28] This represents the Annual Contract Quantity Commitment of RECs specified in the contract and the imputed REC price.

[29] Total REC quantities and contracted cost includes the results of the 2015 and 2016 Fall and Spring procurements that are not individually disclosed.

[30] This represents the energy associated with the Annual Contract Quantity Commitment of RECs specified in the contract and the difference between the Contract Price and the Imputed REC Price.

MidAmerican

Table 4 shows the price and contract type of all renewable resources purchased and a comparison of the cost of RECs relative to the cost of electricity under contract for delivery to MidAmerican during the 2019-20 delivery year.

Table 4: Relative Cost Comparison of RECs and Electricity under Contract with MidAmerican for the 2019-20 Delivery Year

Cost of RECs and Electricity Under Contract for Delivery to MidAmerican in the 2019-20 Delivery Year				
Procurements from Renewable Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
Competitive Procurement RECs under Contract[31]	12,877	RECs	$3.99	$51,374.78
2017 Spring Five-Year Distributed Generation REC Procurement	449	RECs	$162.81	$73,103.07
2016 Spring Five-Year Distributed Generation REC Procurement[32]		RECs	$189.90	
Total RECs[33]	13,457	RECs	$11.10	$149,354.75
Electricity Procured from Conventional Energy Resources	**Quantity**		**Average Unit Price**	**Contracted Cost**
2019 Spring Block Energy Procurement	35,200	MWh	$35.90	$1,263,592
Total Conventional Energy Resources	35,200	MWh	$35.90	$1,263,592

[31] REC contracts are for 15 years with the assumption that 1/15th of the total will be delivered in the 2019-20 Delivery Year.

[32] In accordance with the procurement RFP rules and previous Illinois Commerce Commission orders, quantity information is only released when the number of successful bidders in a procurement is greater than two. The results of the 2016 Distributed Generation Procurement did not meet that threshold, therefore quantity (and cost) is not provided.

[33] Total REC quantities and contracted cost includes the results of the 2016 Spring procurement that are not individually disclosed.

Term of REC Contracts for all Utilities

The IPA's procurement of renewable energy resources includes REC procurements of various terms (i.e., length of contract). Table 5 shows the term[34] associated with each procurement of renewable resources for delivery to Ameren Illinois, ComEd and MidAmerican during the 2019-20 delivery year.

Table 5: Term of RECs Contracts for Delivery during the 2019-20 Delivery Year

Procurements from Renewable Energy Resources	Ameren Illinois & ComEd Delivery Term	MidAmerican Delivery Term
Competitive Procurement RECs under Contract	15 years starting June 2019	15 years starting June 2019
Adjustable Block Programs under Contract	15 years starting June 2019	-
2017 Fall Five-Year Distributed Generation REC Procurement	5 years starting June 2017	-
2017 Spring Five-Year Distributed Generation REC Procurement	5 years starting June 2017	5 years starting June 2017
2016 Spring Five-Year Distributed Generation REC Procurement	5 years starting June 2016	5 years starting June 2016
2015 Fall Five-Year Distributed Generation REC Procurement	5 years starting June 2015	–
2010 Long-Term Purchase Agreements REC Procurement	20 years starting June 2012	–

[34] The five-year distributed generation term indicated in this section is merely the nominal term for REC deliveries; the full term applicable to obligations under the contracts may vary depending on the contracted system's specific development schedule (i.e., contractual obligations may still need to be fulfilled before deliveries commence).

(12) A comparison of the costs associated with the Agency's procurement of renewable energy resources to (A) the Agency's costs associated with electricity generated by other types of generation facilities and (B) the benefits associated with the Agency's procurement of renewable energy resources. [35]

The costs associated with the Agency's procurement of renewable energy resources and the Agency's costs of electricity generated by other types of generation facilities are presented above under (11). The environmental and economic benefits that result from the generation of renewable energy are considered in both quantitative and qualitative terms in this section. The primary benefits associated with renewable energy resources are attributable to the reduction of the pollutants emitted by fossil fuel electricity generation that is displaced by electricity generation from renewable resources, and from the economic benefits provided by the construction and operation of these facilities. The monetary estimates of the environmental benefits are focused on the reduced costs that result from the avoidance of emissions-related adverse health effects and crop damages. The economic benefits include increased employment that results from the construction and operation of renewable resource facilities, increased taxes or payments in lieu of taxes, and the local revenue and supply chain impacts that benefit local businesses which supply products and services to these facilities and their workers.

1. Environmental Benefits

The environmental benefits associated with renewable energy generation primarily involve the benefits of avoiding the pollutants emitted by electricity generated by the combustion of fossil fuels. Emissions from the combustion of fossil fuels—specifically, particulate matter (PM)[36], sulfur dioxide (SO_2) and nitrogen oxides (NO_x)—have been linked to a wide range of adverse health effects. The adverse health impacts that can result from PM emissions are related to a large extent to the size of the particles such that the smaller the particle, the greater the potential for damaging health effects. Fine particles referred to as $PM_{2.5}$ are the most damaging and are associated with respiratory diseases such as asthma, bronchitis and emphysema as well as cardio-pulmonary disease and cancer.[37] PM emissions can also damage the surfaces of agricultural crops adversely affecting growth rates and yields. The health effects associated with SO_2 emissions include irritation and inflammation of tissue exposed to the pollutant, which can exacerbate respiratory diseases. NO_x emissions can have adverse impacts such as respiratory and eye irritation

[35] 20 ILCS 3855/1-125(12).

[36] PM emissions are generally reported as either PM_{10}, particulates that have diameters of 10 micrometers or less, or $PM_{2.5}$, particulates of 2.5 micrometers or less.

[37] State of Illinois, Illinois Environmental Protection Agency, Illinois Air Quality Report AQI Air Quality Index, 2018.

and reduced crop yield. SO_2 and NO_x emissions also add to PM emissions in the form of secondary sources as some of these emissions turn into nitrate and sulfate particles in the atmosphere after being emitted. NO_x emissions are also a precursor to the photochemical formation of ozone (O_3). Elevated levels of O_3 in the atmosphere can result in significant damage to vegetation as well as lung damage and exacerbation of respiratory diseases. In addition to the pollutants that have direct impacts on public health, carbon dioxide (CO_2), emitted by the combustion of fossil fuels, contributes to climate change and indirectly to increased public health concerns such as reduced agricultural production, increased waterborne and pest-related diseases, increased storm severity, and ocean acidification.[38]

In Illinois, the vast majority of the emissions associated with electricity generation are sourced from coal and natural gas fired power plants. The Illinois Environmental Protection Agency reported point source emissions from electric generation in the state during 2018 for the following pollutants: NO_x, SO_2 and PM_{10}.[39] The U.S. Energy Information Administration reported CO_2 emissions from power generation in the state for 2018.[40] These emissions are shown in the following table.

Illinois Power Generation Emissions 2018 (Tons)

SO_2	54,335
NO_x	30,174
PM_{10}	3,193
CO_2	79,667,753

The Illinois EPA does not report the annual tons of $PM_{2.5}$ emitted but, based on the relative average that 43% of total PM emissions from coal-fired power plants are $PM_{2.5}$ emissions,[41] there was an estimated 2,409 tons of $PM_{2.5}$ emissions in Illinois for 2018. Essentially all of the SO_2, PM and CO_2 emissions along with more than 91 percent of the NO_x emissions were sourced from coal and natural gas power generation.

To estimate a range of benefits from renewable generation, the Agency determined the composite emission factors for the coal and natural gas generation in the state and applied the estimated environmental impacts (also known as "damages") for each pollutant and multiplied by the

[38] U.S. Environmental Protection Agency, Air Pollution: Current and Future Challenges, www.epa.gov/clean-air-act-overview/air-pollution-current-and-future-challenges, updated September 17, 2019, accessed December 17, 2019.

[39] Illinois Air Quality Report 2018, www2.illinois.gov/epa/topics/air-quality/Pages/default.aspx.

[40] U.S. Energy Information Administration, State Electricity Profiles, Illinois Electricity Profile 2018, accessed January 17, 2020 eia.gov/electricity/state/Illinois.

[41] The relative average percentage of $PM_{2.5}$ emissions was determined based on data reported for 2014 for state average emissions in "Environmental Quality and the U.S. Power Sector: Air Quality, Water Quality, Land Use and Environmental Justice," ORNL/SPR-2016/772, Oak Ridge National Laboratory, January 4, 2017.

renewable resource generation related to the Agency's procurements. This approach assumes that renewable generation will replace coal and gas-fired generation in proportion to the relative generation shares of these resources. For 2018, the generation emission factors, using Illinois EPA and U.S. EIA data are: 1.43 lbs./MWh for SO_2, 0.71 lbs./MWh for NO_x, 0.06 lbs./MWh for $PM_{2.5}$ and 1.15 tons/MWh for CO_2. While the emissions that are displaced by renewable generation can be determined with reasonable specificity, assigning monetary values to these emissions benefits is subject to significant uncertainty. In light of this uncertainty, in this report emissions quantities and emissions factors are reported as specific data points and the monetary benefits of the reduced emissions that result from wind and solar generation are reported as ranges.

Several recent studies[42] developed estimates of the marginal damages that result from emissions from electricity generation. The following ranges of damages in dollars per ton emitted are based on the monetary values reported in these studies converted to 2018 dollars: $6,921 to $27,541 for SO_2, $1,909 to $14,625 for NO_x, and $11,336 to $105,756 for $PM_{2.5}$. The differences in damage estimates between studies highlight the considerable uncertainties associated with these estimates which are dependent on a range of assumptions and inputs that vary between studies. As a result the estimates provided below should be understood to be extrapolations and rough estimates rather than definitive calculations of benefits by the Agency.

To estimate the benefits of avoided damages from CO_2 emissions displaced, the Agency used a social cost of carbon measured in terms of dollars per ton of CO_2. The social cost of carbon is an estimate of the economic damages that would result from the emissions of an additional ton of carbon. The social cost of carbon converts the future damages estimated from the emitted carbon into present values based on a discount rate. Also considered in this estimate is the geographic area assumed to be impacted by the emissions, either in terms of global damages or domestic damages specific to the United States. The range of CO_2 emissions benefits were calculated based on the domestic social cost of carbon of $7/ton and the global social cost of carbon of $50/ton determined using a 3% discount rate.[43, 44]

For the 2018-2019 delivery year, renewable resources procured by the Agency were estimated to have generated 1,876,428 MWh.[45] These MWh represent about 14% of the renewable resources

[42] See: Jaramillo, P. and Muller, N., "Air pollution emissions and damages from energy production in the U.S.: 2002-2011, Energy Policy 90 (2016) pp.202-211; Goodkind, A.L. et al, "Fine-scale damage estimates of particulate matter air pollution reveal opportunities for location-specific mitigation of emissions," PNAS, April 30, 2019, vol. 116, no. 18, 8775-8780, www.pnas.org/cgi/doi/10.1073/pnas.1816102116.; And National Research Council, "Hidden Costs of Energy Unpriced Consequences of Energy Production and Use," The National Academies Press, 2010.

[43] Rennert, K. and Kingdon, C., Resources for the Future, "Social Cost of Carbon 101" August 1, 2019.

[44] For context the $16.50/MWH Social Cost of Carbon used for the development of the Zero Emission Standard Procurement Plan translates to $31.37/ton based on a CO_2 emissions factor of 1,052 lbs./MWh.

[45] See Tables 2-4 of the Illinois Power Agency Fiscal Year 2018 Annual Report.

generation in Illinois, which was 13,325,000 MWh in 2018.[46] Using the emissions factors, the amount of renewable generation procured by the Agency for the 2018-2019 delivery year, and the dollar per ton estimated emissions damages, the value of the environmental benefits from the renewable resources procured by the Agency in the 2018-2019 delivery year were estimated as shown in the following table.

Estimated Benefits of Renewable Resource Procured by the Agency for the 2018-2019 Delivery Year

SO_2	$9 - $37 million
NO_x	$1 - $10 million
$PM_{2.5}$	$1 - $6 million
CO_2	$15 - $108 million
Total	$26 - $161 million

By way of comparison, a study by Lawrence Berkley National Laboratory (LBNL) and National Renewable Energy Laboratory (NREL) focused on the prospective impacts of renewable portfolio standards ("RPS") over the period of 2015 to 2050. The study assumed that state RPS policies which were in effect as of July 2016 remained the same through the end of the 35-year forecast period. The study predicts that compliance with the existing RPS goals through 2050 would reduce cumulative SO_2 emissions by 2.1 million metric tons, cumulative NO_x emissions by 2.5 million metric tons, and cumulative $PM_{2.5}$ emissions by 0.3 million metric tons.[47] If these reductions were to come to fruition, the report analysis estimates that there would be 12,000 to 28,000 fewer premature deaths due to respiratory issues over this period.[48] Based on the emissions reductions under the existing RPS, the study estimated total health and environmental benefits to be on the order of $97 billion for the U.S. over the forecast period.[49]

2. Economic Benefits

The increasing integration of renewable energy into the electric grid is being driven in large part by state RPS requirements with the primary goal of reducing the adverse health and environmental impacts associated with electricity generation. Along with these environmental benefits, renewable generation also offers a range of economic benefits. The economic benefits that can be attributed to renewable energy include potential electricity price reductions, increased electric system

[46] U.S. EIA, Electric Power Monthly, February 2019.

[47] Mai, T., Wiser, R., Barbose, G., Bird, L., Heeter, J., Keyser, D., Krishnan, V., Macknick, J., and Millstein, D., "A Prospective Analysis of the Costs, Benefits, and Impacts of U.S. Renewable Portfolio Standards," National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory, December 2016, NREL/TP-6A20-67455.

[48] Id.

[49] Id. at 45.

reliability through portfolio diversity, as well as state and regional economic development, including employment and tax revenue benefits.

a) Electricity Price Benefits

Price Moderation and Portfolio Diversity

Wind and solar power offer opportunities for lower wholesale electricity costs, generation supply portfolio diversity, and, because these sources do not involve fuel costs, the costs of wind and solar generation are not affected by fuel price volatility. In addition to moderating fuel induced price volatility, wind and solar can provide diversity benefits to a generation portfolio that contains significant amounts of fossil fuel and nuclear generation. These renewable resources offer improved reliability by potentially substituting for other resources that may be adversely impacted by fuel supply and transportation issues, supply disruptions, and the potential delay or avoidance of conventional generation capital expenditures.[50] Wind and solar in a diversified portfolio can provide a hedge against the cost impacts associated with potential changes in environmental regulations that could adversely affect the costs of, and ultimately the price of electricity, from fossil fuel and nuclear generation.[51] Wind, solar, and certain other forms of renewable energy are not subject to the uncertainty surrounding potential future carbon taxes, unlike fossil fuel-fired power plants.[52]

Since the majority of the costs associated with wind and solar generation involve upfront investments, these resources have low operating costs. The resulting low marginal costs do not involve fuel costs and as a result can reduce the wholesale price of electricity by shifting more expensive (on a marginal cost basis) resources out on the supply curve. However, the net pricing benefits attributable to renewable energy resources will be determined by the trade-off between the system costs[53] incurred by higher market penetration and the downward pressure exerted on wholesale electricity prices by higher levels of renewable resource generation.

[50] U.S. Environmental Protection Agency, "Quantifying the Multiple Benefits of Energy Efficiency and Renewable Energy: A Guide for State and Local Governments. Part One: The Multiple Benefits of Energy Efficiency and Renewable Energy." 2018 edition.

[51] *Guide to Purchasing Green Power*, United States Department of Energy Office of Renewable Energy and Energy Efficiency, at 5. (March 2010).

[52] Loomis, D., Stroup, I., Center for Renewable Energy, Illinois State University, "Economic Impact: Illinois Wind Energy Development," June 2016, at 10.

[53] System costs generally refer to the costs incurred by increasing variable renewable energy penetration involving grid extension and reinforcement, transmission, and balancing.

Impacts on Locational Marginal Prices

Wholesale electric energy prices are set for hourly periods based on bidding by available generators into the regional markets. Most analyses of the impact of renewable generation on electricity prices address these Locational Marginal Prices ("LMPs") and assume generator bids reflect variable costs. LMPs consist of three components – Energy, Congestion, and Marginal Losses. The energy component prices energy purchases and sales, the congestion component prices transmission congestion costs to move energy from one point to another, and the marginal losses component prices losses on the bulk power system as a result of moving power from one point to another. An impact on any one of these components will have a corresponding impact on the overall LMP. Renewable generation resources tend to lower the price of electricity in the real-time markets (LMPs) and indirectly lower forward wholesale market prices.[54]

The Lawrence Berkley National Laboratory conducted a recent study to assess the impact on wholesale electricity prices that resulted from the growth in variable renewable energy generation (wind and solar) over the period of 2008 through 2017.[55] This study also evaluated the relative impacts that other market drivers, notably lower natural gas prices and increasing gas-fired generation, had on wholesale prices during this period. While increasing variable renewable generation was found to result in reduced wholesale electricity prices, lower natural gas prices over this period was the dominant driver of declining average wholesale prices. In MISO, solar and wind generation were found to account for $0.60/MWh of the drop in average wholesale prices (at the Cinergy/Indiana Hub) from $50.71/MWh in 2008 to $29.38/MWh in 2017, while the drop in natural gas prices accounted for $10.90/MWh of the wholesale electricity price decline during this period. In PJM, based on an analysis of wholesale prices at the PJM Western Hub, wind and solar generation accounted for $0.40/MWh of the drop in the average annual electricity price from $69.81/MWh in 2008 to $29.38/MWh in 2017, while lower natural gas prices contributed $26.30/MWh to the price decline.[56] A range of other factors including flat electricity demand growth, declines in other fuel prices, thermal plant heat rate improvements, retirements of high cost generating plants, and in many markets, lower priced imports, accounted for the rest of the wholesale price declines. The relatively modest wholesale price impacts of variable renewable generation in MISO and PJM are due in part to the low penetration of renewable generation in

[54] Electricity acquired through the Agency's procurement events is purchased competitively in regional forward wholesale markets.

[55] Mills, A.D., et al, "Impact of Wind, Solar, and Other Factors on Wholesale Power Prices, An Historical Analysis – 2008 through 2017," Lawrence Berkeley National Laboratory, November 2019.

[56] It should be noted here that this analysis of price impacts resulting from increasing wind and solar generation only considers the wholesale market price and does not include consideration of the other environmental and economic benefits associated with renewable electricity generation.

these markets during this time period. However, going forward, increasing penetration of renewable electricity can be expected to exert a larger influence on wholesale prices.

While the IPA is presently unaware of any substantive studies done to show the impact of renewables on capacity prices, PJM testimony at FERC has highlighted the price suppression concerns of renewables on capacity prices in PJM in the docketed proceeding addressing (i) Calpine's complaint that PJM's Minimum Offer Price Rule is unjust and unreasonable because it does not address the impact of subsidized existing resources on the capacity market, and (ii) PJM's filing consisting of two alternate proposals designed to address the price suppressing effects of state out-of-market support for certain resources.[57] FERC, in their order noted as follows:

> *"PJM, however, recognizes that in today's market, even if a load-serving entity's or a state's primary goal may not be to suppress price, the growing use of out-of-market support of renewable resources can have a significant effect on prices. PJM presents evidence showing that the MW-level of renewable resources receiving out-of-market support has increased significantly and raises price suppression concerns, similar to other resources receiving out-of-market support. Intervenors echo this same concern."*[58] *(Underlining added for emphasis)*

A previous simulation modeling study conducted by the LBNL assessed the impact of variable renewable resources on wholesale electricity prices in four market areas including; the California Independent System Operator (CAISO), the Electric Reliability Council of Texas (ERCOT), the Southwest Power Pool (SPP), and the New York Independent System Operator (NYISO). This assessment compared the change in prices from 2016 to 2030 of a low variable renewable energy scenario that froze renewable penetration in each market area at 2016 levels with a 40% penetration of a mix of wind and solar generation in 2030. The 2016 renewable generation penetration levels were 21% in CAISO, 13.25% in ERCOT, 19% in SPP, and 3.8% in NYISO, renewable generation in the latter markets areas was predominantly wind. Although specific to the market areas analyzed, the findings support the contention that increasing variable renewable energy generation in competitive wholesale electricity markets would result in a general decrease in average annual hourly wholesale electricity prices.[59] In these market areas, the reduction in hourly average annual

[57] Order Rejecting Proposed Tariff Revisions, Granting in Part and Denying in Part Complaint, and Instituting Proceeding under Section 206 of the Federal Power Act, 163 FERC ¶ 61,236, FERC Docket No. EL16-49-000 et al, June 29, 2018.

[58] Id. at p.102.

[59] J. Seel; A. Mills; R. Wiser; "Impacts of High Variable Renewable Energy Futures on Wholesale Electricity Prices and on Electric-Sector Decision Making." Energy Analysis and Environmental Impacts Division, Lawrence Berkeley National Laboratory, May 2018.

electricity prices ranged from 4% to 21% at the simulated 40% penetration levels as compared to the 2016 renewable penetration levels.

MISO's 2011 launch of the Dispatchable Intermittent Resources ("DIRs") program allows registered intermittent (variable) generation (mostly wind generators) to participate in the Real-Time Energy Market and set the Real-Time price. Wind generation resources in MISO receive production tax credits, which allow these resources to submit negative energy offers in the energy market. Negative price hours are usually correlated with higher variable renewable energy generation, especially during low system loads. The low marginal-cost generation including negative price bidding shifts the supply curve out to the right reducing near-term wholesale prices.[60]

In the 2018 PJM State of the Market Report, the PJM Market Monitor reported that "[i]n 2018, 70.8 percent of the wind marginal units had negative offer prices, 27.1 percent had zero offer prices and 2.1 percent had positive offer prices."[61] The PJM Market Monitor report suggests that wind units in PJM also exert downward pressure on LMPs.

These analyses of the downward impacts on LMPs are focused on reductions at the wholesale level and are not necessarily directly or immediately reflected in the retail rates customers pay.

b) Economic Development Opportunities

In 2016, the Illinois State University's Center for Renewable Energy issued "Economic Impact: Illinois Wind Energy Development," a report that modeled the economic impact of wind energy on Illinois' economy by entering wind project-specific information into the NREL's Jobs and Economic Development Impact ("JEDI") model. The model was used to estimate the income, economic activity, and number of job opportunities accruing to the state from the wind projects that have generating capacities of larger than 50 MW. The report estimated that the development of the 25 largest Illinois wind farms installed at the time of the analysis, accounting for 3,610 MW of nameplate capacity out of a total nameplate capacity for all wind projects in the state of 3,842 MW, was responsible for 20,173 full-time equivalent jobs in Illinois during construction and 869 permanent jobs, and would generate a total economic benefit of $6.4 billion[62] during the construction and typical 25-year operational lives of the projects. NREL lists the current installed

[60] Wiser, R.; A. Mills; J. Seel; T. Levin; A. Botterud; "Impacts of Variable Renewable Energy on Bulk Power System, Assets, Pricing and Costs." Lawrence Berkeley National Laboratory and Argonne National Laboratory. November 2017.

[61] Monitoring Analytics, LLC, 2018 State of the Market Report for PJM, March 14, 2019. Volume 2 at 118.

[62] Economic Impact: Illinois Wind Energy Development at 6.

wind capacity in Illinois to be 4,887 MW which reflects a 27% increase in installed wind capacity since 2016.[63]

The U.S. Energy Information Administration reported that as of November 2019, installed solar PV capacity in Illinois was 226.1 MW up from 114.9 MW in November 2018.[64] During this period, small-scale PV (under 1 MW in size) installed capacity increased to 185.5 MW while utility-scale PV capacity remained unchanged at 40.6 MW.[65] The Solar Energy Industries Association ("SEIA") data on the solar industry in Illinois indicated that solar employment in Illinois in 2018 totaled 4,879.[66]

The wind reports by Illinois State University found that renewable power development leads to the creation of temporary and permanent jobs requiring highly skilled workers in the fields of construction, management, and engineering.[67] Construction phase jobs typically last anywhere from 6 months to over a year, while operational jobs, including operations and maintenance positions, last the life of the generating facility, typically 20-30 years.[68]

The jobs and economic benefits estimated in the wind report included "turbine and supply chain impacts," which can also referred to as "indirect impacts."[69] Indirect impacts occurred both in the construction and the operation of wind turbines, and included construction spending on materials and wind farm equipment and other purchases of goods and offsite services. The supply chain of inputs required to produce these goods and services; and project revenues that flow to the local economy in the form of land lease revenue, property tax revenue, and revenue to equity investors are also indirect impacts.[70] The estimated benefits also included local spending by employees working directly or indirectly on the wind farm project who receive their paychecks and then spend money in the community.[71] Additional economic impacts referred to in the study as "induced impacts" were also considered, these impacts result from changes in household spending in the

[63] U.S. Department of Energy, National Renewable Energy Laboratory, WINDExchange, Installed Wind Capacity, accessed December 19, 2019. The NREL installed capacity data is based on the American Wind Energy Association Q3 2019 Market Report.

[64] U.S. Energy Information Administration, Electric Power Monthly, January 2020, hrrps://www.eia.gov/electricity/monthly/current_month/epm.

[65] The Agency expects the amount of utility-scale solar in Illinois to increase significantly in the coming years as projects selected through the Agency-administered REC procurements are completed and come online.

[66] SEIA, Solar Spotlight Illinois, June 2019.

[67] Economic Impact: Wind Energy Development in Illinois at 23.

[68] Id.

[69] Id. at 19.

[70] Id. at 20.

[71] Id. at 20.

areas surrounding the wind project development due to increased income brought about by the direct and indirect impacts.[72] The solar report showed similar types of economic benefits would be associated with the development of photovoltaic generating facilities.

The analysis in the wind report also determined the 25 largest wind projects in Illinois are estimated to generate more than $30.4 million in annual property taxes.[73] Local governments can also receive significant amounts of revenue from permitting fees.[74] Benefits to landowners identified included revenue from leasing their land, which the report found amounted to almost $14 million annually.[75] There may be some local concerns such as wear and tear on roads during construction, unfunded decommissioning cost liability, and possibly lowered land values that should be considered when evaluating any specific project's impacts.

Other entities have published employment estimates regarding the impact of wind and solar development in Illinois. According to the American Wind Energy Association, wind power supported 7,001-8,000 direct and indirect jobs in Illinois during 2018.[76] This apparently includes manufacturing jobs, which may be supported by wind generation located outside Illinois. The Clean Energy Trust, in partnership with Environmental Entrepreneurs, reported that in 2018 there were an estimated 5,341 jobs in the solar industry and 8,706 jobs in the wind industry in Illinois.[77] An Illinois Science & Technology Institute report conducted with Strategic Economic Research estimated that increasing Illinois' RPS target to 35% would result in average annual additional jobs of 8,571 by 2030.[78]

Implementation of Public Act 99-0906's renewable resources provisions will have significant, continuing economic and environmental impacts on the state. The development and installation of new renewable generation is expected to expand significantly, with RECs from approximately 1,300 MW of new utility-scale wind generating capacity and 1,500 MW of new utility scale solar already under contract to be procured (with development to occur in the coming years), and approximately 666 MW of photovoltaic distributed generation and community solar expected to be developed over the next several years.

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[72] Id. At 20.

[73] Id. at 23.

[74] Id. at 18.

[75] The study noted that these payments to landowners usually extend over the 25-year life of the project and can involve adjustments for inflation which would result in higher payments over time.

[76] American Wind Energy Association, State Wind Facts, Illinois Wind Energy, accessed December16, 2019.

[77] Clean Jobs Midwest 2019. http://www.cleanjobsmidwest.com/state/illinois, accessed December 19, 2019.

[78] Illinois Science & Technology Institute, "Illinois Employment Impacts Due to Energy Policy Changes," Executive Summary, March 2015.

The Agency's renewable energy procurement plans include support for the development of utility-scale solar as well as community solar and photovoltaic distributed generation (DG). DG includes residential rooftop solar and commercial and industrial solar with a capacity of less than 2 MW. The Agency procures DG and community solar RECs through the Adjustable Block and Illinois Solar for All programs. DG, community solar, and utility-scale solar PV offer economic and environmental benefits, but to a differing degree. On a levelized cost of energy basis, utility-scale PV is substantially less expensive with costs in the range of $32 to $44/MWh as compared with $151 to $242/MWh for residential rooftop solar, $75 to $154/MWh for commercial and industrial rooftop solar, and $64 to $148/MWh for community solar.[79] The lower cost utility-scale PV generation means that more solar generation can be procured maximizing the environmental and price impact benefits at the lowest overall system cost.[80] The comparative economics of DG versus utility-scale PV are heavily impacted by net metering policies. Net metering improves the economics of DG by allowing the DG systems to sell unused electricity back to the grid at retail prices. While utility-scale systems result in more renewable generation and more emissions benefits for the same cost, DG systems offer additional benefits in terms of greater local employment impacts, the potential to avoid some transmission and distribution system investments, and distributing the benefits of renewable resource electricity to a more diverse range of participants in terms of income strata and geographic location.

The continued development of photovoltaic distributed generation projects and community solar projects will have a wide range of local impacts as those projects are expected to be spread throughout the state. The Solar Foundation's National Solar Jobs Census found that solar jobs in Illinois had increased by 37% from 2017 to 2018. This increase in solar jobs reflected an increase in small-scale solar PV installations of 25.7 MW. The November 2018 to November 2019 increase in small-scale solar PV in Illinois is expected to result in a commensurately larger increase in solar jobs, and that trend is expected to continue into 2020.[81] The Agency plans to monitor and report on the impacts of the development of these (and other) new resources in future Annual Reports.

[79] Lazard's Levelized Cost of Energy Analysis – Version 13.0, November 2019, lazard.com/perspective/lcoe2019. Please note that these are national estimates and not based on Illinois data.

[80] Tsuchida, B. et. al., "Comparative Generation Costs of Utility-Scale and Residential-Scale PV in Xcel Energy Colorado's Service Area," The Brattle Group, July 2015, brattle.com/news-and-knowledge/publications/comparative-generation-costs-of-utility-scale-and-residential-scale-pv-in-xcel-energy-colorados-service-area.

[81] Solar employment data for 2018 -2019 in Illinois was not available as of the date of this report.

(13) Rate Impacts on Eligible Retail Customers

> ***"An analysis of the rate impacts associated with the Illinois Power Agency's procurement of renewable resources, including, but not limited to, any long term contracts, on the eligible retail customers of electric utilities. The analysis shall include the Agency's estimate of the total dollar impact that the Agency's procurement of renewable resources has had on the annual electricity bills of the customer classes that comprise each eligible retail customer class taking service from an electric utility."***[82]

This section of the report also includes estimates of bill impacts determined by analysis of the load of each eligible customer class, numbers of customers, and bill estimates contained in publicly available utility tariff and rate case filings. For the purposes of determining the total bill impact, this section of the report includes the same costs included in the statutory RPS spending cap: "the total amount paid for electric service [which] includes without limitation amounts paid for supply, transmission, distribution, surcharges, and add-on taxes." The bill impacts are presented both as a percentage of an average customer bill for that class and as cents per kilowatt-hour.

These breakouts provide the rate impact associated with the Agency's procurement of renewable resources. When multiplied by the overall billing determinants, the values also provide the total dollar impact on the annual electricity bills of each customer class. Results for each electric utility and corresponding customer class are presented for ComEd in Table 6 and Table 7, for Ameren Illinois in Table 8 and Table 9, and for MidAmerican in Table 10 and Table 11.[83]

[82] 20 ILCS 3855/1-125(13).

[83] ComEd, Ameren Illinois, and MidAmerican provided the information in these tables in response to the IPA's data requests issued January 2, 2020.

ComEd

Table 6: Rate Impact for Customers Taking Supply from ComEd[84]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Single Family No Electric Space Heat	Revenue/kWh	$0.1506	$0.1456
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)[85]	1.25%	1.30%
Multi Family No Electric Space Heat	Revenue/kWh	$0.1621	$0.1571
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)	1.17%	1.20%
Single Family With Electric Space Heat	Revenue/kWh	$0.1172	$0.1120
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)	1.61%	1.69%
Multi Family With Electric Space Heat	Revenue/kWh	$0.1274	$0.1222
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)	1.48%	1.55%
Watt-hour	Revenue/kWh	$0.1666	$0.1617
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)	1.13%	1.17%
Small Load (< 100 kW)	Revenue/kWh	$0.1229	$0.1211
	REC/kWh	$0.00189	$0.00189
	Ratio (REC/Revenue)	1.54%	1.56%

[84] Overall bill (e.g. Revenue/kWh) includes fixed supply charges, RTO services charges, delivery services charges (customer charge, standard metering service charges, distribution facilities charges, and Illinois Electricity Distribution Tax charge), other environmental cost recovery and energy efficiency & demand adjustments, franchise cost additions, and municipal and state taxes. The REC/kWh value is equal to the cost of renewable resources in the delivery year, divided by the sum of the actual load of eligible retail customers.

[85] This value represents the amount that RECs cost each customer of that delivery year class as a percentage of the amount paid for total "annual electricity bills," including taxes. Thus, a Rate Impact of 1.25% (2018-19 delivery year) means that 1.25% of the total electricity bill of a customer of that class in that delivery year was spent on contracts for renewable energy resources.

Table 7: Dollar Impact for Customers Taking Supply from ComEd[86]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Single Family No Electric Space Heat	Usage (kWh)	12,674,565,649	8,045,488,285
	Dollar Impact	$23,954,929	$15,205,973
Multi Family No Electric Space Heat	Usage (kWh)	3,471,213,002	2,176,149,226
	Dollar Impact	$6,560,593	$4,112,922
Single Family With Electric Space Heat	Usage (kWh)	390,341,079	188,290,233
	Dollar Impact	$737,745	$355,869
Multi Family With Electric Space Heat	Usage (kWh)	1,075,276,276	520,410,574
	Dollar Impact	$2,032,272	$983,576
Watt-hour	Usage (kWh)	166,979,854	100,106,969
	Dollar Impact	$315,592	$189,202
Small Load (< 100 kW)	Usage (kWh)	4,171,716,197	2,571,208,989
	Dollar Impact	$7,884,544	$4,859,585

[86] Usage values were reported by ComEd. Dollar Impact values were calculated by multiplying the Usage by the REC/kWh reported in Table 6.

Ameren Illinois

Table 8: Rate Impact for Customers Taking Supply from Ameren Illinois[87]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Residential Service (DS-1)	Revenue/kWh	$0.104	$0.113
	REC/kWh	$0.001805	$0.001805
	Ratio (REC/Revenue)[88]	1.74%	1.60%
Small General Service (DS-2)	Revenue/kWh	$0.105	$0.111
	REC/kWh	$0.001805	$0.001805
	Ratio (REC/Revenue)	1.72%	1.62%
General Service & Large General Service (DS-3 and DS-4)[89]	Revenue/kWh	$0.062	$0.060
	REC/kWh	$0.001354	$0.001805
	Ratio (REC/Revenue)	2.18%	3.00%

[87] Overall bill (i.e. Revenue/kWh) includes fixed supply charges, RTO services charges, delivery services charges (customer charge, standard metering service charges, distribution facilities charges, and Illinois Electricity Distribution Tax charge), other environmental cost recovery and energy efficiency & demand adjustments, franchise cost additions, and municipal and state taxes. The REC/kWh value is equal to the cost of renewable resources in the delivery year, divided by the sum of the actual load of eligible retail customers.

[88] This value represents the amount that RECs cost each customer of that delivery year class as a percentage of the amount paid for total "annual electricity bills," including taxes. Thus, a Rate Impact of 1.74% (2018-19 delivery year) means that 1.74% of the total electricity bill of a customer of that class in that delivery year was spent on contracts for renewable energy resources.

[89] General Service & Large General Service (DS-3 and DS-4) have been declared fully competitive and therefore these classes can no longer take supply from Ameren Illinois fixed price (Rider BGS). Therefore, calculations represent only the load of customers taking supply from Ameren Illinois real time price supply applicable to larger customers (Rider HSS). The REC/kWh value is as described in the footnote above except it only applies to customers and load on Rider HSS.

Table 9: Dollar Impact for Customers Taking Supply from Ameren Illinois[90]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Residential Service (DS-1)	Usage (kWh)	4,911,916,653	2,856,313,137
	Dollar Impact	$8,867,974	$5,156,788
Small General Service (DS-2)	Usage (kWh)	1,699,428,757	997,170,967
	Dollar Impact	$3,068,149	1,800,292
General Service & Large General Service (DS-3 and DS-4)[91]	Usage (kWh)	1,493,572,385	808,203,051
	Dollar Impact	$2,022,372	$1,459,130

[90] Usage values were reported by Ameren Illinois. Dollar Impact values were calculated by multiplying the Usage by the REC/kWh reported in Table 8.

[91] General Service & Large General Service (DS-3 and DS-4) have been declared fully competitive and therefore these classes can no longer take supply from Ameren Illinois fixed price (Rider BGS). Therefore, calculations represent only the load of customers taking supply from Ameren Illinois real time price supply applicable to larger customers (Rider HSS).

MidAmerican

Table 10: Rate Impact for Customers Taking Supply from MidAmerican[92]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Residential	Revenue/kWh	$0.10331	$0.09993
	REC/kWh	$0.00124	$0.00124
	Ratio (REC/Revenue)[93]	1.20%	1.24%
Commercial	Revenue/kWh	$0.08125	$0.07837
	REC/kWh	$0.00124	$0.00124
	Ratio (REC/Revenue)	1.53%	1.58%
Industrial	Revenue/kWh	$0.05542	$0.05611
	REC/kWh	$0.00124	$0.00124
	Ratio (REC/Revenue)	2.24%	2.21%
Public Authority	Revenue/kWh	$0.06708	$0.06743
	REC/kWh	$0.00124	$0.00124
	Ratio (REC/Revenue)	1.85%	1.84%
Street Lighting	Revenue/kWh	$0.12685	$0.13712
	REC/kWh	$0.00124	$0.00124
	Ratio (REC/Revenue)	0.98%	0.91%

[92] Overall bill (e.g. Revenue/kWh) includes fixed supply charges, RTO services charges, delivery services charges (customer charge, standard metering service charges, distribution facilities charges, and Illinois Electricity Distribution Tax charge), other environmental cost recovery and energy efficiency & demand adjustments, franchise cost additions, and municipal and state taxes. The REC/kWh value is equal to the cost of renewable resources in the delivery year, divided by the sum of the actual load of eligible retail customers.

[93] This value represents the amount that RECs cost each customer of that delivery year class as a percentage of the amount paid for total "annual electricity bills," including taxes. Thus, a Rate Impact of 1.20% (2018-19 delivery year) means that 1.20% of the total electricity bill of a customer of that class in that delivery year was spent on contracts for renewable energy resources.

Table 11: Dollar Impact for Customers Taking Supply from MidAmerican[94]

Customer Class	Description	2018-19 Delivery Year	2019-20 Delivery Year (Through December 2019)
Residential	Usage (kWh)	655,986,280	398,482,468
	Dollar Impact	$814,407	$494,716
Commercial	Usage (kWh)	470,348,902	277,085,109
	Dollar Impact	$583,938	$344,001
Industrial	Usage (kWh)	636,277,935	349,938,656
	Dollar Impact	$789,939	$434,449
Public Authority	Usage (kWh)	169,988,316	99,596,214
	Dollar Impact	$211,040	$123,649
Street Lighting	Usage (kWh)	8,933,831	3,993,091
	Dollar Impact	$11,091	$4,957

[94] Usage values were reported by MidAmerican. Dollar Impact values were calculated by multiplying the Usage by the REC/kWh reported in Table 10.

(14) Rate Impacts on Customers of Alternative Retail Electric Suppliers

"An analysis of how the operation of the alternative compliance payment mechanism, any long-term contracts, or other aspects of the applicable renewable portfolio standards impacts the rates of customers of alternative retail electric suppliers."[95]

Due to changes to Section 16-115D of the Public Utilities Act contained in Public Act 99-0906, for the 2017-18 delivery year through the 2018-19 delivery year, Section 16-115D's ARES RPS requirements were gradually phased out, with Section 16-115D's requirements applicable to only 50% of load in the first of those years and 25% of load in the second. Furthermore, ARES were no longer required to make alternative compliance payments ("ACPs") for a portion of their obligations.[96] After the 2018-19 delivery year (which ended on May 31, 2019), RPS obligations became fully consolidated under the processes identified in Section 1-75(c) of the IPA Act and funded through a charge applicable to all retail customers and ARES will no longer make ACP payments.[97]

Table 12: Historical ACP Rates[98]

Delivery Year	ComEd ACP Rate (¢/kWh)	Ameren Illinois ACP Rate (¢/kWh)	MidAmerican ACP Rate (¢/kWh)
June 2009 - May 2010	0.0764	0.0645	
June 2010 - May 2011	0.0256	0.0211	
June 2011 - May 2012	0.00568	0.00584	
June 2012 - May 2013	0.09724	0.06687	
June 2013 - May 2014	0.15923	0.14661	
June 2014 - May 2015	0.18917	0.16811	
June 2015 - May 2016	0.16641	0.14806	
June 2016 - May 2017	0.12815	0.17351	0.01507
June 2017 - May 2018	0.04317	0.04252	0.00586
June 2018 - May 2019	0.03548	0.03073	0.00515

Assuming an ARES used the ACP to meet half its RPS requirement and passed through the costs of the ACP to all its volume sold, the estimated rate impact on ARES customers would have been

[95] 20 ILCS 3855/1-125(14).

[96] Additional new requirements include a change from 60% of resources coming from wind, and 6% from photovoltaics, to a combined 32% coming from wind or photovoltaics. Resources also may not come from facilities that have their costs recovered through rates regulated by a state.

[97] See https://www.icc.illinois.gov/industry-reports/renewable-portfolio-standards-requirements for a chart of year to year obligations for ARES.

[98] The data is sourced from https://www.icc.illinois.gov/electricity/RPSCompliancePaymentNotices.aspx.

half the values shown in Table 12 above. That is, for example, for an ARES customer in Ameren Illinois territory, the ARES rate impact in delivery year June 2018 to May 2019 would have been 0.01537 cents per kilowatt-hour for the ACP portion of that ARES's compliance. The ARES would have incurred additional costs to self-procure the additional renewable resources to meet the balance of its obligations. However, ARES are not required to disclose those costs.

Because ACPs are based on the utilities' average cost of REC procurement, if ARES were to have paid approximately the same amount for renewable resources they directly procured as the utilities, the bill impact of renewable procurement on ARES and utility customers would have been similar in dollar amount. The percentage impact on an ARES customer is shown in Table 13. However, if ARES had procured different or less expensive products (for instance, only purchasing short-term REC supply contracts rather than entering into long-term PPAs), overall ARES costs to comply with the RPS would likely have been lower than the costs paid by utility default service customers.

Table 13: RPS Compliance - Comparative Rate Impact on ARES Customers

Utility Territory	Maximum ACP Rate (¢/kWh)	Representative ARES Price (¢/kWh)[99]	Maximum Rate Impact on ARES Customers Assuming 100% ACP (estimated)
ComEd	0.18917	8.25	2.29%
Ameren Illinois	0.18054	6.37	2.83%

However, it appears that most ARES procured RECs rather than making ACP payments, so the actual rate impacts were likely to have been significantly lower. Because price information on ARES direct purchases of RECs is not publicly available, an exact calculation of typical or average rate impacts on ARES customers was not possible. It is also important to note that the comparison here is only looking at the supply component of a customer's bill, not the entire bill, so it is not directly comparable to the rate impacts presented in Tables 6, 8, and 10.

[99] Representative ARES prices are for the 2018-19 delivery year, based on offers found on the Plug In Illinois website (https://www.pluginillinois.org/OffersBegin.aspx) for 12-month fixed prices energy contracts as of 1/4/2019. Any monthly fees included with the offers were converted to ¢/kWh based on a usage rate of 1,000 kWh/month. ARES data for the MidAmerican service area had only one offer with a variable price over a 24 month period. Due to the lack of offers with 12-month fixed prices, the rate impact on ARES customers in the MidAmerican service area is not included in Table 13. Note that some plans may contain early termination fees that are not included in the calculation of the representative prices. Clarification of the specifications, marketing, and disclosure requirements associated with these plans was the subject of a rulemaking proceeding before the ICC (see Docket No. 15-0512). A Final Order in the Docket was issued on October 19, 2017.

Alternative Compliance Payment Mechanism Fund Report

"[T]he Illinois Power Agency shall submit an annual report to the General Assembly, the Commission, and alternative retail electric suppliers that shall include …"

> ***(A) the total amount of alternative compliance payments received in aggregate from alternative retail electric suppliers by planning year for all previous planning years in which the alternative compliance payment was in effect;***
>
> ***(B) the total amount of those payments utilized to purchased [sic] renewable energy credits itemized by the date of each procurement in which the payments were utilized; and***
>
> ***(C) the unused and remaining balance in the Agency Renewable Energy Resources Fund attributable to those payments."***[100]

For the delivery year ending May 31, 2017, to the extent an ARES complied with its RPS obligations by procuring renewable energy resources, at least 60% of the renewable energy resources procured by that ARES was required to come from wind generation, while at least 6% of the renewable energy resources procured was required to come from solar PV.[101] If an ARES did not purchase at least the technology-specific sub- target levels of wind or photovoltaic renewable energy resources, then it was required to make additional ACPs at the same rate to meet those obligations. For the delivery years beginning on June 1, 2017 and June 1, 2018, 32% of the renewable energy resources procured by an ARES had to come from either wind or photovoltaics and cannot come from facilities that had their costs recovered through rates regulated by a state.

Up until June 1, 2017, all ACPs were deposited into the Renewable Energy Resources Fund ("RERF"), a state fund administered by the Agency to procure renewable energy resources through the purchase and retirement of RECs.[102] As of June 1, 2017, changes to Section 16-115D(d)(4.5) of the Public Utilities Act contained in Public Act 99-0906 required ACPs to be remitted to the utilities and used to support the procurement of renewable resources for the utilities by the IPA under Section 1-75(c) of the IPA Act.

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[100] 220 ILCS 5/16-115D(d)(4).

[101] 220 ILCS 5/16-115D(a)(3) (the 60% statutory wind energy minimum for ARES is lower than the 75% wind standard for utilities).

[102] 20 ILCS 3855/1-56.

A. Total Amount of ACPs Received

This report must provide the total amount of ACPs received in aggregate from ARES for each delivery year in which the ACP was in effect.[103] Under the PUA, a delivery year begins on June 1st of each calendar year.[104] The ACP mechanism was "in effect" by September 1, 2010 to require payments by ARES for the period of June 1, 2009 to May 1, 2010.[105] Therefore, this report must provide the aggregate total amount of ACPs for the delivery years 2009-10 through 2017-18. Table 14 shows the total ACPs for each year through 2015-2016 which were collected by the ICC and deposited into the Renewable Energy Resources Fund. Starting with the 2016-2017 delivery year, ACP payments are made to the applicable utility and are reported separately.

Table 14: Total ACPs Received by the RERF[106]

Delivery Year	Total ACPs Received
June 2009 – May 2010	$7,148,261.61
June 2010 – May 2011	$5,632,587.18
June 2011 – May 2012	$2,156,777.61
June 2012 – May 2013	$38,382,345.57
June 2013 – May 2014	$77,145,921.09
June 2014 – May 2015	$86,278,411.02
June 2015 – May 2016	$71,649,805.76
Aggregate Total	**$288,394,109.84**

ARES ACP payments were due by September 1st following the end of the delivery year. For example, for the delivery year that ended in May, 2017, payments were due September 1, 2017.[107] Payments are made in conjunction with a Compliance Report submitted to the ICC.

Table 15 shows total the ACPs collected by the utilities from ARES from for the delivery years 2016-2017, 2017-2018 and 2018-2019, the final delivery year.

[103] 220 ILCS 5/16-115D(d)(4)(A).

[104] *See e.g.* 220 ILCS 5/16-111.5(b).

[105] Pub. Act 96-0033 (eff. 7/10/2009); 220 ILCS 5/16-115D(d)(2).

[106] Total ACPs Received does not account for expenditures (or other diversions) from the RERF and, therefore, the Aggregate Total reported in this figure will differ from the RERF balance reported in Table 16. Source: internal IPA records reconciled with the ARES reports submitted to the ICC.

[107] 220 ILCS 5/16-115D(d)(2).

Table 15: Total ACPs Collected by the Utilities[108]

Delivery Year	ComEd	Ameren Illinois	MidAmerican	Total ACPs Collected
June 2016 – May 2017	$40,575,311.19	$23,375,512.09	$10,532	$63,961,355.28
June 2017 – May 2018	$74,147.65	$76,169.24	$1,951.00	$152,267.89
June 2018 – May 2019	$1,744,624.35	$67,725.00	$1,073.00	$1,813,422.35
Aggregate Total	**$42,394,083.19**	**$23,519,406.33**	**$13,556.00**	**$65,927,045.52**

The dramatic decrease in the amount of ACP payments collected by the utilities between the first two Delivery Years appears to be the result of the removal of the requirement that an ARES was required to make ACP payments for 50% of its RPS obligations as well as a very low ACP rate for the 2017-2018 delivery year (see Table 12 above). ARES appear to have complied with their RPS obligations primarily through the purchase and retirement of Renewable Energy Credits rather than making ACP payments.

The combined total of ACPs received by the Renewable Energy Resources Fund and by the utilities since the ACP compliance mechanisms was first instituted is $354,321,155.36.

B. Amount of ACPs used to purchase RECs

1. Purchases Made

Prior to May 2013, the only disbursements made from the RERF were temporary transfers of funds to the State's General Revenue Fund pursuant to 30 ILCS 105/5h(a). Of the $7,148,261.61 in total ACPs received for the 2009-10 delivery year, the State of Illinois transferred $2,000,000 on September 20, 2010 and $4,710,000 on October 15, 2010.[109] The remaining $438,261.61 was not used to purchase RECs and remained in the RERF. The State was required to repay the funds within 18 months of borrowing, and it repaid $2,000,000 to the RERF in March 2012 and the remaining $4,710,000 was repaid in April 2012. Because the funds were transferred from a non-interest earning account, no interest was paid.

In 2013, REC deliveries under the 2010 LTPPAs were curtailed due to application of the RPS budget cap.[110] Pursuant to the 2013 Procurement Plan, holders of those LTPPAs were given the option to sell curtailed RECs to ComEd with the purchases supported by the ACPs collected from customers on hourly pricing, which are distinct from ACPs collected from ARES. Those funds

[108] Source: ACP balances provided to the IPA by the respective utility.

[109] 30 ILCS 105/5h(a).

[110] Illinois Power Agency, *2013 Annual Report*, December 1, 2013, at 5. This document, which is available at http://www2.illinois.gov/ipa/Pages/IPA_Reports.aspx#AnnualReports, should not be confused with the *2013 Annual Report on the Costs and Benefits of Renewable Resource Procurement in Illinois*.

were insufficient to purchase all of the curtailed RECs and the IPA offered to voluntarily use the RERF to purchase remaining curtailed RECs. In May 2013, the IPA entered into contracts to purchase RECs associated with ComEd's curtailed long-term contracts that were not otherwise purchased by ComEd.[111] These purchase contracts were for the delivery year June 1, 2013 through May 31, 2014, and were for up to 121,620 RECs with no minimum delivery levels with a total value of $2.24 million. Due to improved market prices for RECs elsewhere, not all contract holders exercised their rights to deliver RECs to the IPA. A total of 74,402 RECs were delivered in the June 1, 2013 through May 31, 2014 delivery year under these contracts at a total cost of $1,719,141.52. There was no direct rate impact resulting from these purchases because they used ACP funds previously collected from ARES. As approved in ICC Docket No. 12-0544, ComEd also used ACP funds to purchase 79,674 RECs curtailed under the operation of LTPPAs in the June 1, 2013 through May 31, 2014 delivery year at a total cost of $1,647,596.

Effective June 28, 2014, Public Act 98-0672 created new subsection 1-56(i) of the Illinois Power Agency Act requiring the Agency to develop a one-time supplemental procurement plan for the procurement of renewable energy credits from new or existing photovoltaics using up to $30,000,000 from the RERF. The Supplemental Plan was developed by the IPA in 2014 and approved by the ICC on January 21, 2015. Three procurement events were conducted pursuant to the Supplemental Plan (June 2015; November 2015; and March 2016). Table 16 shows the number of RECs contracted for purchase using alternative compliance payments held in the RERF as the result of each procurement event.[112]

Table 16: Supplemental Photovoltaic Procurement RECs and RERF Funds Committed

Procurement Event	RECs Contracted For Purchase	RERF Funds Committed
June 2015	37,082	$4,999,963
November 2015	70,096	$9,999,961
March 2016	91,770	$14,999,894
Total	198,948	$29,999,818

Table 17 below documents the expenditures for RECs from those procurements as the photovoltaic projects developed pursuant to it are completed and begin operation. As of February 14, 2020, 1,062 new photovoltaic projects have begun operation as a result of this procurement process and have delivered 80,000 RECs under five-year delivery contracts.[113]

[111] Of the eight LTPPA-holders, seven elected to enter into contracts.

[112] Source: SPV procurement results, internal IPA records

[113] Unlike future REC purchases as part of the Illinois Solar for All Program which will feature upfront payments, the Supplemental Photovoltaic Procurement only pays for RECs as they are delivered.

Public Act 99-0002, effective March 26, 2015, authorized the transfer of $98,000,000 from the RERF to the State's General Revenue Fund. That transfer occurred on April 1, 2015 and did not include a repayment provision, further increasing the differential between ACPs received and the current RERF balance.

Public Act 99-0524, effective June 30, 2016, included an appropriation of $12 million from the Renewable Energy Resources Fund for deposit into the Illinois Commerce Commission Public Utility Fund. The transfer occurred on June 23, 2017.

Public Act 100-0023, effective July 6, 2017, authorized transfers from special funds (such as the Renewable Energy Resources Fund) to the State's General Revenue Fund with a two-year deadline for repayment provision. On August 10, 2017, $150 million was transferred from the Renewable Energy Resources Fund to the General Revenue Fund. In April 2018, $37.5 million was repaid back to the Renewable Energy Resources Fund from the General Revenue Fund. However, on January 22, 2020, an additional $10 million was transferred from the Renewable Energy Resources Fund to the General Revenue Fund.

2. Changes in Spending the RERF

Public Act 99-0906, effective June 1, 2017, substantially revamped Section 1-56 of the Illinois Power Agency Act (which governs how the Agency uses the RERF). Other than expenditures previously committed via the Supplemental Photovoltaic Procurement process as described above, the remaining balance of the RERF will shift to supporting the Illinois Solar for All Program, which is designed to create incentives for and support to the development of photovoltaic resources benefitting low-income households and communities. (Solar for All is also supported by contracts with the utilities in addition to the RERF funds.)

Details of the Illinois Solar for All Program were included in the original Long-Term Renewable Resources Procurement Plan developed by the Agency and approved by the Illinois Commerce Commission through Docket No. 17-0838. Implementation of Illinois Solar for All is underway, with project applications into the program first received in May 2019. See www.illinoissfa.com for more information and details on the program. As of February 14, 2020, REC contracts totaling $21,525,470.68 have been awarded to Illinois Solar for All projects using funds from the RERF (and an additional $14,103,252.12 in contracts funded by the utilities) but no payments for RECs have been made because projects are still under development.

Some of the challenges in spending the RERF that have been previously documented are resolved by this change in State law. However, the RERF remains a special State Fund and expenditures from it are only authorized pursuant to the annual appropriations process, and the RERF could be subject to future reallocations of funds to other State purposes if authorized by the General Assembly and Governor.

C. Balance in RERF

As of February 14, 2020, the RERF balance equals $37,630,941.67. Table 17 shows the current RERF balance.[114] As discussed above, ACP payments from ARES were submitted to the utilities in recent years and were not deposited into the RERF.

Table 17: IPA RERF Balance Sheet

Date	Transaction	Amount	Cumulative Balance
Fall 2010	ACPs received	$7,148,261.61	$7,148,261.61
September 2010	Transfer to General Revenue Fund pursuant to 30 ILCS 105/5h(a)	($2,000,000.00)	$5,148,261.61
October 2010	Transfer General Revenue Fund pursuant to 30 ILCS 105/5h(a)	($4,710,000.00)	$438,261.61
Fall 2011	ACPs received	$5,606,245.18	$6,044,506.79
March 2012	Transfer in pursuant to 30 ILCS 105/5h(a)	$2,000,000.00	$8,044,506.79
April 2012	Transfer in pursuant to 30 ILCS 105/5h(a)	$4,710,000.00	$12,754,506.79
Fall 2012	ACPs received	$2,156,777.61	$14,911,284.40
Fall 2013	ACPs received	$38,382,345.57	$53,293,629.97
Winter/Spring 2014	RECs purchased per May 2013 Contracts	($1,719,141.52)	$51,574,488.45
Fall 2014	ACPs received	$77,145,921.09	$128,720,409.54
Fall 2014	Supplemental PV Procurement Expenses	($170,068.33)	$128,550,341.21
Spring 2015	Transfer to General Revenue Fund pursuant to Public Act 99-0002	($98,000,000.00)	$30,550,341.21
Spring 2015	ACPs Received	$26,342.00	$30,576,683.21
Summer 2015	Supplemental PV Procurement Expenses	($653,549.18)	$29,923,134.03
Summer 2015	SPV Deposits	$427,836.00	$30,350,970.03
Fall 2015	ACPs Received	$86,278,411.02	$116,629,381.05
Fall 2015	SPV Deposits	$492,785.00	$117,122,166.05
Spring 2016	SPV Deposits	$561,734.04	$117,683,900.09
Summer 2016	REC Payments/SPV Deposit Returns/Supplemental PV Procurement Expenses	($738,377.81)	$116,945,522.28
Fall 2016	ACPs Received	$71,649,805.76	$188,595,328.04
Fall 2016	REC Payments/SPV Deposit Returns	($728,153.71)	$187,867,174.33
Winter 2016	REC Payments/SPV Deposit Returns	($734,612.31)	$187,132,562.02
Spring 2017	REC Payments/SPV Deposit Returns	($660,180.37)	$186,472,381.65
Spring 2017	Transfer to Public Utility Fund pursuant to Public Act 99-0524	($12,000,000)	$174,472,381.65
Summer 2017	REC Payments/SPV Deposit Returns	($871,070.33)	$173,601,311.32
Summer 2017	Transfer to General Revenue Fund pursuant to Public Act 100-0023	($150,000,000.00)	$23,601,311.32
Fall 2017	REC Payments/SPV Deposit Returns	($1,169,996.58)	$22,431,314.74
Winter 2017	REC Payments/SPV Deposit Returns	($1,235,079)	$21,196,235.74
Spring 2018	REC Payments/SPV Deposit Returns	($792,668.65)	$20,403,567.09
Spring 2018	Repayment pursuant to Public Act 100-0023	$37,500,000.00	$57,903,567.09
Summer 2018	REC Payments/SPV Deposit Returns	($1,397,724.65)	$56,505,842.44
Fall 2018	REC Payments/SPV Deposit Returns	($1,553,532.50)	$54,952,309.94
Winter 2018	REC Payments/SPV Deposit Returns	($1,022,016.35)	$53,930,293.59
Spring 2019	REC Payments/SPV Deposits Returns	($547,071.59)	$53,383,222.00
	ILSFA Expenses	($74,414.06)	$53,308,807.94
Summer 2019	REC Payments/SPV Deposits Returns	($1,202,920.01)	$52,105,887.93
	ILSFA Expenses	($1,962,538.97)	$50,143,348.96

[114] Source: internal IPA records

Fall 2019	REC Payments/SPV Deposits Returns	($1,467,086.90)	$48,676,262.06
	ILSFA Expenses	($888,293.54)	$47,787,968.52
Winter 2019	REC Payments/SPV Deposits Returns	($935,608.35)	$46,852,360.17
	ILSFA Expenses	($684,579.33)	$46,167,780.84
	ILSFA Collateral Deposits	$1,212,224.74	$47,380,005.58
	Transfer to General Revenue Fund Pursuant to Public Act 100-0023	($10,000,000.00)	$37,380,005.58

Appendix A

Illinois Power Agency

Fiscal Year 2019

Financial Statement and Notes (Unaudited)

Appendix B

Illinois Power Agency

Fiscal Year 2019

Summary of Funds on a Cash Basis