

*In the opinion of Hawkins Delafield & Wood LLP and Law Offices of Joseph C. Reid, P.A., Co-Bond Counsel to the New York State Energy Research and Development Authority, interest on the Series 2019A Bonds (as hereinafter defined): (i) is included in gross income for Federal income tax purposes pursuant to the Internal Revenue Code of 1986, as amended; and (ii) is exempt, under existing statutes, from personal income taxes imposed by the State of New York or any political subdivision thereof (including The City of New York). See the caption “TAX MATTERS” herein.*



**\$15,510,000**  
**NEW YORK STATE ENERGY**  
**RESEARCH AND DEVELOPMENT AUTHORITY**  
**Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A**  
**(Federally Taxable) (Green Bonds)**

**Dated: Date of Delivery****Due: As shown below**

The New York State Energy Research and Development Authority (the “Authority”) is offering its Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A (the “Series 2019A Bonds”), in the aggregate principal amount set forth above.

The Series 2019A Bonds will be limited obligations of the Authority, payable solely from and secured by the Pledged Revenues pursuant to the Indenture of Trust, dated as of March 1, 2019, between the Authority and The Bank of New York Mellon, as trustee, registrar and paying agent. See the caption “SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2019A BONDS” herein.

Interest on the Series 2019A Bonds will be payable on April 1 and October 1 of each year, commencing on October 1, 2019. The Series 2019A Bonds will mature in the aggregate principal amounts set forth below:

**Serial Series 2019A Bonds: \$10,265,000**

<u>Maturity (April 1)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Price</u>	<u>CUSIP<sup>†</sup></u>
2020	\$1,165,000	3.152%	100%	64986RAA2
2021	1,385,000	3.202	100	64986RAB0
2022	1,320,000	3.260	100	64986RAC8
2023	1,255,000	3.324	100	64986RAD6
2024	1,185,000	3.424	100	64986RAE4
2025	1,095,000	3.620	100	64986RAF1
2026	1,045,000	3.770	100	64986RAG9
2027	995,000	3.927	100	64986RAH7
2028	820,000	4.077	100	64986RAJ3

**\$5,245,000 4.577% Term Series 2019A Bonds due April 1, 2035,<sup>\*\*</sup> Price: 100%, CUSIP<sup>†</sup> number: 64986RAK0**

The Series 2019A Bonds are subject to redemption prior to their stated maturity dates. See the caption “THE SERIES 2019A BONDS—Redemption” herein.

**See the caption “INVESTMENT CONSIDERATIONS” herein for a discussion of certain factors that investors should consider in making an informed investment decision.**

The Series 2019A Bonds will be issued only as fully registered bonds, without coupons, and will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as the Securities Depository (as hereinafter defined) for the Series 2019A Bonds. Beneficial interests in the Series 2019A Bonds may be purchased in book-entry-only form, in minimum denominations of \$100,000 or in any integral multiple of \$5,000 in excess thereof. See the caption “THE SERIES 2019A BONDS—Securities Depository” herein.

The Series 2019A Bonds will not be general obligations of the Authority. The Series 2019A Bonds will not constitute an indebtedness of or a charge against the general credit of the Authority. The Series 2019A Bonds will not constitute a debt of the State of New York, and the State of New York will not be liable on the Series 2019A Bonds. No owner of any Series 2019A Bonds will have the right to demand payment of the principal of, or premium, if any, or interest on, the Series 2019A Bonds out of any funds to be raised by taxation.

The Series 2019A Bonds are offered subject to prior sale, when, as and if issued by the Authority and accepted by the Underwriter, subject to the approval of legality by Hawkins Delafield & Wood LLP, New York, New York, and Law Offices of Joseph C. Reid, P.A., New York, New York, Co-Bond Counsel to the Authority. Certain other legal matters will be passed upon for the Authority by Noah C. Shaw, Esq., its General Counsel, and for the Underwriter by Kutak Rock LLP, Denver, Colorado, counsel to the Underwriter. It is expected that delivery of the Series 2019A Bonds against payment therefor will be made on or about March 21, 2019 in New York, New York.

**Ramirez & Co., Inc.**

Dated: March 15, 2019

<sup>†</sup> CUSIP numbers have been assigned by an independent company not affiliated with the Authority and are included solely for the convenience of the owners of the offered bonds. Neither the Authority nor the Underwriter is responsible for the selection or uses of these CUSIP numbers and no representation is made to their correctness on the offered bonds or as indicated above. The CUSIP number for a specific maturity is subject to being changed after the issuance of the offered bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the offered bonds.

<sup>\*\*</sup> For information concerning factors affecting the weighted average life of the Term Series 2019A Bonds, see “WEIGHTED AVERAGE LIVES AND EXPECTED REDEMPTION PERIODS FOR THE TERM SERIES 2019A BONDS” in Appendix D hereto.

**NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY**

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\* There are presently three vacancies on the Board; one for the Commissioner of the New York State Department of Transportation, who serves *ex-officio*, and two Member who will be appointed by the Governor of the State of New York, with the advice and consent of the New York State Senate.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchaser or owners of any of the Series 2019A Bonds. Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. No representation is made that any of such statements will be realized. All quotations from and summaries and explanations of provisions of laws of the State of New York (the "State") contained in this Official Statement do not purport to be complete and are qualified in their entirety by reference to the official compilations thereof. All references to the Series 2019A Bonds and the proceedings and agreements relating thereto are qualified in their entirety by reference to the definitive forms of the Series 2019A Bonds and such proceedings and agreements. This Official Statement is submitted only in connection with the sale of the Series 2019A Bonds by the Authority and may not be reproduced or used in whole or in part for any other purpose, except as specifically authorized by the Authority. Any electronic reproduction of this Official Statement may contain computer-generated errors or other deviations from the printed Official Statement. In any such case, the printed version controls.

This Official Statement contains forecasts, projections and estimates that are based on expectations and assumptions which existed at the time such forecasts, projections and estimates were prepared. The inclusion of such forecasts, projections and estimates should not be regarded as a representation by the Authority or the Underwriter that such forecasts, projections and estimates will occur. Such forecasts, projections and estimates are not intended as representation of fact or guarantees of results. If and when included in this Official Statement the words "expects," "forecasts," "intends," "anticipates," "estimates" and analogous expressions are intended to identify forward-looking statements and any such statements inherently are subjected to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, among others, general economic and business conditions, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, conditions and circumstances, many of which are beyond the control of the Authority. These forward-looking statements speak only as of the date they were prepared. The Authority disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein (except as required by law) to reflect any change in the Authority's expectations with regards thereto or any change in events, conditions or circumstances on which any such statement is based.

The Underwriter may offer and sell Series 2019A Bonds to certain dealers (including dealers depositing Series 2019A Bonds into investment trusts) and others at prices lower than the offering prices stated on the cover page of this Official Statement. After the initial public offering, the Underwriter may change the price at which the Underwriter offers the Series 2019A Bonds for sale from time to time.

In connection with the offering, the Underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of the Series 2019A Bonds. Specifically, the Underwriter may over allot the offering, creating a syndicate short position. The Underwriter may bid for and purchase Series 2019A Bonds in the open market to cover such syndicate short position or to stabilize the price of Series 2019A Bonds. Those activities may stabilize or maintain the market price of the Series 2019A Bonds above independent market levels. The Underwriter is not required to engage in these activities and may end any of these activities at any time.

The Underwriter has provided the following sentence for inclusion in this Official Statement. The Underwriter has reviewed the information in the Official Statement in accordance with, and as a part of, its responsibilities to investors under the Federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

**IN MAKING AN INVESTMENT DECISION INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE AUTHORITY, THE GJGNV PROGRAM (AS HEREINAFTER DEFINED) AND THE TERMS OF THE OFFERING, INCLUDING THE SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2019A BONDS AS DESCRIBED HEREIN AND THE MERITS AND RISKS INVOLVED. THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT.**

No person has been authorized to give any information or to make any representations other than those contained in this Official Statement in connection with the offer made hereby, and if given or made, such information or representations must not be relied upon as having been authorized by the Authority or the Underwriter. Neither the delivery of this Official Statement nor any sale hereunder shall under any circumstances create any implication that there

has been no change in the affairs of the Authority or the Program since the date hereof. This Official Statement does not constitute an offer or solicitation in any jurisdiction in which such offer or solicitation is not authorized, or in which the person making such offer or solicitation is not qualified to do so, or to any person to whom it is unlawful to make such offer or solicitation. The information set forth herein has been obtained from sources believed to be reliable.

## TABLE OF CONTENTS

<u>Page</u>	<u>Page</u>
SUMMARY OF TERMS.....	i
INTRODUCTORY STATEMENT.....	1
THE AUTHORITY.....	2
GREEN JOBS—GREEN NEW YORK	
PROGRAM.....	3
Legislative Authorization.....	3
Regulatory Approvals.....	5
GJGNY Program.....	6
THE AUTHORITY’S RESIDENTIAL LOAN	
PROGRAM.....	6
General.....	6
Sales and Marketing.....	7
Originator and Origination Agreement.....	7
Underwriting—Loan Approval Process.....	8
Underwriting—Pricing and Credit	
Scoring.....	9
Servicer and Servicing Agreement.....	9
On-Bill Servicing Parameters.....	11
Payment Application: Smart Energy	
Loan billing—pay by check.....	13
Payment Application: Smart Energy	
Loan billing—ACH payment.....	13
Payment Application: On-Bill Recovery	
Loans.....	14
Account Closure Provisions for On-Bill	
Recovery Loans.....	14
Account Transfer Provisions for On-Bill	
Recovery Loans.....	14
Other Unique Servicing Provisions of	
On-Bill Recovery Loans.....	15
Collection Procedures.....	15
Collection/Delinquency.....	15
Collection/Delinquency: Assessment of	
Late Charges.....	16
Collection/Delinquency: Telephone	
Collection Efforts and Written Late	
Notices.....	16
Default Collections.....	16
Charge-offs.....	16
Extensions and Workouts.....	16
Backup Servicer and Backup Servicing	
Agreement.....	16
THE PORTFOLIO LOANS.....	17
General.....	17
Loan Criteria.....	17
Portfolio Criteria.....	19
Characteristics of the Initial Portfolio	
Loans as of the Statistical Cutoff Date.....	19
Delinquency and Loss Information.....	29
USE OF PROCEEDS.....	35
Sources and Uses.....	35
Green Bond Principles.....	35
SECURITY AND SOURCES OF PAYMENT	
FOR THE SERIES 2019A BONDS.....	36
THE SERIES 2019A BONDS.....	37
General.....	37
Securities Depository.....	37
Interest.....	39
Redemption.....	39
Purchase of Series 2019A Bonds.....	40
DESCRIPTION OF THE INDENTURE.....	40
Funds.....	40
Application of Pledged Revenues held in	
the Revenue Fund.....	41
Loan Fund.....	41
Debt Service Fund.....	42
Redemption Fund.....	42
Reserve Fund.....	42
Cost of Issuance Fund.....	42
Enforcement of Loan Agreements.....	42
Representations, Warranties and	
Covenants as to Program Agreements.....	43
INVESTMENT CONSIDERATIONS.....	43
Considerations Relating to the Pledged	
Revenues.....	43
Investment Characteristics.....	46
Legislative and Regulatory Investment	
Considerations.....	47
Servicing Investment Considerations.....	48
STATE PLEDGE AND AGREEMENT.....	51
LEGALITY FOR INVESTMENT AND	
DEPOSIT.....	51
UNDERWRITING.....	51
LITIGATION.....	52
RATING.....	52
CONTINUING DISCLOSURE.....	52
TAX MATTERS.....	52
Series 2019A Bonds.....	52
Original Issue Discount.....	53
Bond Premium.....	53
Disposition and Defeasance.....	53
Information Reporting and Backup	
Withholding.....	54
U.S. Holders.....	54
Miscellaneous.....	54
FINANCIAL ADVISORS.....	54
APPROVALS.....	54
LEGAL OPINIONS.....	55

APPENDIX A	CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE
APPENDIX B	FORM OF APPROVING OPINIONS OF CO-BOND COUNSEL
APPENDIX C	FORM OF CONTINUING DISCLOSURE UNDERTAKING
APPENDIX D	WEIGHTED AVERAGE LIVES AND EXPECTED REDEMPTION PERIODS FOR THE TERM SERIES 2019A BONDS
APPENDIX E	SECOND-PARTY OPINION OF ALIGNMENT WITH GREEN BOND PRINCIPLES FOR NYSERDA SERIES 2019A BOND ISSUANCE

**SUMMARY OF TERMS**

The following is qualified in its entirety by reference to the information appearing elsewhere in this Official Statement. Terms used in this Official Statement and not defined herein are defined in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

Issuer ..... The New York State Energy Research and Development Authority (the “Authority”) is a public benefit corporation of the State of New York (the “State”) created under the New York State Energy Research and Development Authority Act (the “Act”).

Securities Offered..... \$15,510,000 Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A of the Authority (the “Series 2019A Bonds”) are to be issued pursuant to the Indenture of Trust, dated as of March 1, 2019 (the “Indenture”), between the Authority and The Bank of New York Mellon, as trustee (the “Trustee”), registrar and paying agent.

The Series 2019A Bonds will be limited obligations of the Authority, payable solely from and secured by the Pledged Revenues and Pledged Funds held by the Trustee, which includes all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund held by the Trustee under the Indenture.

Interest and Principal..... Interest on the Series 2019A Bonds will accrue on the basis of a 360-day year, consisting of twelve 30-day months, from their delivery date at the rates set forth herein and will be payable semiannually on April 1 and October 1 of each year, commencing October 1, 2019 (each, an “Interest Payment Date”). The record date for payment of interest on the Series 2019A Bonds is the fifteenth day of the calendar month immediately preceding the Interest Payment Date.

Principal of the Series 2019A Bonds will be due as shown on the cover page of this Official Statement.

Mandatory Redemption..... The Series 2019A Bonds maturing on April 1, 2035 are subject to mandatory redemption prior to maturity, in part, on October 1, 2019 from proceeds of the Series 2019A Bonds remaining in the Loan Fund.

The Series 2019A Bonds are subject to redemption prior to maturity, in whole or in part, on each Interest Payment Date from amounts on deposit in the Redemption Fund from Excess Revenues (as defined herein).

See the caption “THE SERIES 2019A BONDS—Redemption—*Mandatory Redemption*” herein.

Optional Redemption ..... The Series 2019A Bonds are subject to redemption prior to maturity at the option of the Authority, in whole only, on any Interest Payment Date on and after the date on which

	<p>the principal amount of the Series 2019A Bonds is less than or equal to 10.00% of the original principal amount of the Series 2019A Bonds.</p> <p>See the caption “THE SERIES 2019A BONDS—Redemption—<i>Optional Redemption</i>” herein.</p>
Form and Denomination.....	<p>The Series 2019A Bonds will be issued only in fully registered form registered in the name of Cede &amp; Co. as nominee of The Depository Trust Company (“DTC”). The Series 2019A Bonds will be issued in denominations of \$100,000 or in any integral multiple of \$5,000 in excess thereof.</p>
The Offering.....	<p>The Series 2019A Bonds are being offered to the public, subject to prior sale, when, as and if issued by the Authority and accepted by the Underwriter.</p>
Purpose of Issue .....	<p>The Series 2019A Bonds are being issued (a) finance loans made by the Authority to fund (i) the installation of energy efficiency improvements and (ii) the installation of solar electric systems in one-to-four family residential structures for eligible applicants as a part of the Authority’s Green Jobs—Green New York Program (the “GJGNY Program”), (b) fund a Reserve Fund and (c) pay the costs of issuing the Series 2019A Bonds.</p>
Green Bond Principles .....	<p>The Authority has designated the Series 2019A Bonds as “Green Bonds” as the proceeds will be applied exclusively for projects and activities that promote renewable energy or energy efficiency purposes, and has received a “Second-Party Opinion of Alignment with Green Bond Principles for NYSERDA Series 2019A Bond Issuance” (attached as Appendix E hereto) from First Environment, Inc., an independent, third party auditor, that the Authority’s green bond framework is aligned with the Green Bond Principles as set by International Capital Market Association and has been consistently applied to the pre-issuance of the Series 2019A Bonds. See the caption “USE OF PROCEEDS—Green Bond Principles” herein.</p>
Trustee.....	<p>The Bank of New York Mellon, New York, New York, is the trustee, registrar and paying agent under the Indenture.</p>
The GJGNY Program.....	<p>The Authority has established a revolving loan fund and financing mechanisms to provide loans to finance (i) the installation of energy efficiency improvements and (ii) the installation of solar electric systems for residential 1-4 family dwellings (up to \$25,000), as well as multifamily buildings (program limit \$5,000 per unit or \$500,000 per building), small business (fewer than 101 employees) and not-for-profit structures (up to \$50,000) as a part of the GJGNY Program.</p> <p>The Pledged Loan Payments will include loan payments derived from a portfolio of Program Loans identified as the source of Pledged Loan Payments (the “Portfolio Loans”).</p>



See the caption “THE PORTFOLIO LOANS” for a description of the (i) Initial Portfolio Loans (as hereinafter defined) consisting of Program Loans issued and outstanding as of the date that is two Business Days prior to the Date of Issuance (the “Cutoff Date”) and (ii) Subsequent Portfolio Loans (as hereinafter defined) which will consist of Program Loans to be originated during an approximately three month period commencing the day after the Cutoff Date and ending on or prior to June 30, 2019 (the “Prefunding Period”). An amount equal to \$14,629,493 of proceeds of the Series 2019A Bonds will be deposited to the Loan Fund to reimburse the Authority’s revolving loan fund (the “GJGNY Revolving Fund”) for the assignment of Loan Payments from the Initial Portfolio Loans and Subsequent Portfolio Loans upon the assignment to the Trustee of the right to receive Loan Payments with respect to such Portfolio Loans. It is currently expected that approximately \$17.5 million of Program Loans will be included in the Initial Loan Portfolio and that approximately \$3.7 million of additional Program Loans will be included in the Subsequent Portfolio Loans.

The Portfolio Loans that will be the source of Pledged Loan Payments will be of two types. Based upon the Initial Portfolio Loans issued and outstanding as of the January 16, 2019 (the “Statistical Cutoff Date”), approximately 67.6% of the aggregate principal balance of the pool of Initial Portfolio Loans and Subsequent Portfolio Loans, as of their related cutoff dates, are anticipated to consist of “Smart Energy Loans” in which the residential obligor is billed monthly by the Servicer or pays the loan installment through an automated ACH payment. The balance of the Portfolio Loans will be “On-Bill Recovery Loans” wherein the monthly loan installment will be incorporated in the Borrower’s monthly or bimonthly utility bill and then transferred to the Servicer by the participating utility on a monthly basis.

Origination ..... Slipstream Group Incorporated, operating as Energy Finance Solutions (the “Originator”), will act as the originator of the Portfolio Loans.

Servicer ..... Concord Servicing Corporation (the “Servicer”) will service Smart Energy Loans and On-Bill Recovery Loans and act as the custodian of the original promissory note for each Portfolio Loan. For the On-Bill Recovery Loans, the participating utility acts as a subservicer, initially collecting the loan installment charge on its customer’s bill and remitting a payment to the Servicer on a monthly basis.

Backup Servicer ..... First Associates Loan Servicing, LLC (the “Backup Servicer”) will agree to assume the primary portfolio servicing responsibilities if the Servicer resigns or is removed by the Authority.

On-Bill Recovery Loan Servicing ..... The On-Bill Recovery Loan installment amount will be presented separately from any electricity/gas charges on a participating customer’s utility bill and will be subordinate to the billing and collection of the utility’s charges for

	<p>electricity/gas services. The participating utilities are Central Hudson Gas and Electric, Consolidated Edison Company of New York, Inc., Long Island Power Authority, New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation (doing business as National Grid), Orange and Rockland, and Rochester Gas and Electric Corporation. Each utility remits loan installment charges collected to the Servicer on a monthly basis.</p> <p>Utilities are obligated to collect the loan installment charges in the same manner as the collection of their service charges and in accordance with regulations adopted by the New York State Public Service Commission. The collection processes include requirements for issuing notice of termination for non-payment, entering into deferred payment arrangements, and ultimately termination of service.</p>
Not Debt of State.....	The Series 2019A Bonds shall not be a debt of the State nor shall the State be liable thereon.
Enabling Legislation .....	In addition to the pre-existing powers of the Authority, the Green Jobs—Green New York Act of 2009 established a revolving loan fund and other mechanisms to finance energy efficiency measures for residences, small businesses and not-for-profit corporations. The Power New York Act of 2011 authorized an on-bill recovery financing mechanism for repayment of the Authority’s loans issued through the GJGNY Program through a charge collected on the participating customer’s utility bill.
State Pledge and Agreement.....	The Indenture will include the State’s pledge to, and agreement with, the Owners of the Series 2019A Bonds that the State will not limit or alter the rights and powers vested in the Authority by the Act to fulfill the terms of any contract made by the Authority with such Owners, or in any way impair the rights and remedies of such Owners until such Series 2019A Bonds, together with the interest thereon, with interest on any unpaid installments of interest, and all costs and expenses in connection with any action or proceeding by or on behalf of such Owners, are fully met and discharged.
Indenture .....	The Indenture provides for the issuance of the Series 2019A Bonds pursuant to the Act, including the Authority’s pledge to the Trustee of the revenues, accounts and statutory and contractual covenants contained therein. The Trustee is authorized to enforce the Indenture and such covenants against the Authority. See “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.
Disposition and Defeasance .....	Generally, upon the sale, exchange, redemption, or other disposition (which would include a legal defeasance) of a Series 2019A Bond, an Owner generally will recognize taxable gain or loss in an amount equal to the difference between the amount realized (other than amounts attributable to accrued interest not previously includable in

	<p>income) and such Owner’s adjusted tax basis in the Series 2019A Bond.</p> <p>The Authority may cause the deposit of moneys or securities in escrow in such amount and manner as to cause the Series 2019A Bonds to be deemed to be no longer Outstanding under the Indenture (a “defeasance”). See the caption “Defeasance” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto. For Federal income tax purposes, such defeasance could result in a deemed exchange under Section 1001 of the Internal Revenue Code of 1986, as amended (the “Code”), and a recognition by such Owner of taxable income or loss, without any corresponding receipt of moneys. In addition, the character and timing of receipt of payments on the Series 2019A Bonds subsequent to any such defeasance could also be affected. See the caption “TAX MATTERS” herein.</p>
No Bankruptcy Authorization .....	Under current law, the Authority is not authorized to seek protection from its creditors pursuant to the United States Bankruptcy Code.
Tax Matters .....	In the opinion of Hawkins Delafield & Wood LLP and Law Offices of Joseph C. Reid, P.A., Co-Bond Counsel, interest on the Series 2019A Bonds (i) is included in gross income for Federal income tax purposes pursuant the Code, and (ii) is exempt from personal income taxes imposed by the State of New York or any political subdivision thereof (including The City of New York). See the caption “TAX MATTERS” herein.
Rating .....	The Series 2019A Bonds are expected to be rated “A(sf)” by Kroll Bond Rating Agency, Inc.
Authority Contact.....	Office of the Treasurer, New York State Energy Research and Development Authority, 17 Columbia Circle, Albany, New York 12203.

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## OFFICIAL STATEMENT

**\$15,510,000**

**NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY  
Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A  
(Federally Taxable) (Green Bonds)**

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### INTRODUCTORY STATEMENT

This Official Statement (this “Official Statement”) sets forth certain information with respect to \$15,510,000 Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A (the “Series 2019A Bonds”) to be issued by the New York State Energy Research and Development Authority (the “Authority”). The proceeds of the Series 2019A Bonds, together with moneys of the Authority, are being used to (a) finance loans made by the Authority to fund (i) the installation of energy efficiency improvements and (ii) the installation of solar electric systems in one-to-four family residential structures for eligible applicants as a part of the Authority’s Green Jobs—Green New York Program (the “GJGNY Program”), (b) fund a Reserve Fund and (c) pay the costs of issuance. For a more complete description of the entire GJGNY Program, see the caption “GREEN JOBS-GREEN NEW YORK PROGRAM” herein. See also the caption “THE PORTFOLIO LOANS” herein.

The Series 2019A Bonds will be issued under an Indenture of Trust, to be dated as of March 1, 2019 (the “Indenture”), between the Authority and The Bank of New York Mellon, as trustee (the “Trustee”). The Bank of New York Mellon will also act as the registrar and paying agent (the “Registrar and Paying Agent”) under the Indenture.

The Series 2019A Bonds will be limited obligations of the Authority, payable solely from and secured by Pledged Revenues and Pledged Funds held by the Trustee under the Indenture. The Authority will pledge and assign to the Trustee in respect of the Series 2019A Bonds: (i) all its right, title and interest in and to the Pledged Revenues (that is, all money, revenues and receipts to be received under the Indenture, including all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund) and to the extent provided in the Indenture, the rights of the Authority in and to the Program Agreements, to the extent applicable to Portfolio Loans; subject, however, to the Reserved Rights of the Authority; and (ii) all right, title, and interest in any Pledged Fund held by the Trustee under the Indenture and available under the terms of the Indenture for the payment of the Series 2019A Bonds. The New York State Energy Research and Development Authority Act, Title 9 of Article 8 of the Public Authorities Law of the State of New York, as amended (the “Act”), provides that it is the intention of the Act that any pledge made by the Authority shall be valid and binding from the time when the pledge is made, that the moneys so pledged and thereafter received by the Authority shall immediately be subject to the lien of such pledge without any physical delivery thereof or further act, and that the lien of any such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Authority irrespective of whether such parties have notice thereof. Under the Act, no instrument by which a pledge is created need be recorded.

There are no significant assets or sources of funds available to pay the Series 2019A Bonds other than the Pledged Revenues and the Pledged Funds established pursuant to the Indenture. The Series 2019A Bonds will not be guaranteed by the State. Consequently, the Owners of the Series 2019A Bonds must rely for repayment solely upon collection of the Pledged Revenues and any amounts held by the Trustee in the Pledged Funds pursuant to the Indenture. See the caption “INVESTMENT CONSIDERATIONS” herein.

The factors affecting the GJGNY Program and the Series 2019A Bonds described throughout this Official Statement are complex and are not intended to be fully described in the preceding Summary of Terms or this Introductory Statement. This Official Statement should be read in its entirety. Brief descriptions of the Authority, the GJGNY Program, the Series 2019A Bonds, the Indenture and certain related agreements are included in this Official Statement. The descriptions of such documents contained herein do not purport to be comprehensive or definitive and are qualified in their entirety by reference to the entire text of such documents, and references herein to the Series 2019A Bonds are qualified in their entirety by reference to the forms thereof included in the Indenture and the information with respect thereto included in such documents, all of which are available for inspection at the principal corporate trust office of the Trustee in New York, New York. A summary of the Indenture, together with defined terms used therein and in this

Official Statement, is contained in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

All such descriptions are further qualified in their entirety by the application of bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws and laws and principles of equity relating to or affecting generally the enforcement of creditors’ rights.

## THE AUTHORITY

The Authority is constituted pursuant to the Act (known as the New York State Energy Research and Development Authority Act). The purposes of the Authority include the development and implementation of new energy technologies consistent with economic, social and environmental objectives and the development and encouragement of energy conservation technologies. The Authority administers energy efficiency and renewable energy programs funded by charges imposed on electric and gas ratepayers, proceeds from the auction of carbon allowances, and Federal grants. It also administers a Renewable Energy Portfolio Standard Program that provides incentives for the construction of new renewable energy electric generating systems. The Authority’s staff also directs programs in research, development and the demonstration of new energy technologies in such areas as energy conservation, efficiency, storage and transmission, new sources of energy and conversion of or improvement in fossil fuel technologies. The Authority’s Energy Analysis program provides information to government leaders and stakeholders to enable informed energy-related decision-making. This program also evaluates the Authority’s energy efficiency deployment and research and development programs and provides evaluation reports to senior management and other stakeholders.

The Authority also holds title to two properties on behalf of the State of New York. One, the Western New York Nuclear Service Center, the site of a former plant for reprocessing used nuclear fuel, is now the site of a demonstration and remediation program being conducted by the United States Department of Energy and the Authority. The other, located in the Town of Malta, now known as the Saratoga Technology + Energy Park, is the subject of Authority plans to develop a campus for clean energy technology companies.

The Authority is authorized to finance projects suitable for or related to: the furnishing, generation, production, exploration, transmission, distribution, conservation, conversion or storage of energy or energy resources; the conversion of oil-burning facilities to alternate fuels; or the acquisition, extraction, conversion, transportation, storage, loading, unloading or reprocessing of fuel of any kind for industrial, manufacturing, warehousing, commercial, storage, research, recreational, educational, dormitory, health, mental hygiene or multi-family housing facilities or purposes, including, but not limited to, those projects which employ new energy technologies.

The Authority is further empowered to issue bonds, notes and other obligations, the proceeds of which are used to promote its purposes, to otherwise borrow money to promote its purposes, including for the purposes of refunding outstanding Authority bonds and notes and paying costs related thereto, and to enter into contracts with respect thereto.

Pursuant to such authorization, the Authority currently has \$1.8 billion of conduit revenue bonds outstanding that were issued for the benefit of certain investor owned utilities in the State for pollution control and local furnishing of energy purposes. Each such utility is the primary obligor on its respective separately secured Authority revenue bond issue and none of the loan payments made by any such utility to service and secure such outstanding Authority indebtedness are available to pay the debt service on the Series 2019A Bonds. Such conduit revenue bonds issued for the benefit of investor owned utilities are not general obligations of the Authority and do not constitute an indebtedness of or a charge against the general credit of the Authority or give rise to any pecuniary liability of the Authority. They are limited obligations of the Authority payable solely from and secured by payments made by such investor owned utilities for their respective revenue bond issues.

The Authority previously issued five series of bonds to finance residential loans authorized by the GJGNY Program, consisting of three series of Residential Energy Efficiency Revenue Bonds and two series of Residential Solar Loan Revenue Bonds. The trust estates for the previously issued series of Residential Energy Efficiency Revenue Bonds and Residential Solar Loan Revenue Bonds each consist of collateral, including all revenues and receipts therefrom, that is wholly distinct and separate from the trust estate for the Series 2019A Bonds created by the Indenture. However, each of these trust estates include covenants whereby the Authority may under certain circumstances, and only to the extent the GJGNY Revolving Fund has moneys legally available therefore, be required to make payments to such trust estate. As of January 1, 2019, the aggregate principal balance of the Authority’s Residential Energy Efficiency Revenue Bonds

outstanding was \$71,910,000 and the aggregate principal balance of the previously issued Residential Solar Loan Revenue Bonds outstanding was \$49,410,706.

The Authority may also issue additional bonds, notes and other obligations, the proceeds of which are used to promote its purposes including for the benefit of New York State's investor-owned utilities, or otherwise borrow money to promote its purposes, including the purposes of refunding outstanding Authority bonds and notes and paying costs related thereto, and to enter into contracts with respect thereto, including loans from bond proceeds for the construction, acquisition, installation, reconstruction, improvement, maintenance, equipping, furnishing or leasing of any special energy project or for the reimbursement of costs incurred in connection with a special energy project completed or not completed at the time of such loan. Solar electric installations and other residential energy efficiency improvements financed through the GJGNY Program are special energy projects.

Under the Act, the membership of the Authority consists of the Commissioner of the New York State Department of Transportation, the Commissioner of the New York State Department of Environmental Conservation, the Chair of the New York State Public Service Commission and the Chair of the Power Authority of the State of New York, all of whom serve *ex officio*, and nine persons appointed by the Governor of the State of New York with the advice and consent of the Senate of the State. The Chair of the Authority is appointed by the Governor of the State from among the members of the Authority. The present members of the Authority and certain Executive Staff of the Authority are listed on the inside cover page of this Official Statement.

Neither the members of the Authority nor any person executing the Series 2019A Bonds shall be liable personally on the Series 2019A Bonds or be subject to any personal liability or accountability by reason of the issuance of the Series 2019A Bonds.

Pursuant to the Act, the property of the Authority and its income and operations are exempt from State taxation.

Under current law, the Authority is not authorized to seek protection from its creditors pursuant to the United States Bankruptcy Code.

See also the caption "INVESTMENT CONSIDERATIONS—Legislative and Regulatory Investment Considerations" herein.

## **GREEN JOBS—GREEN NEW YORK PROGRAM**

### **Legislative Authorization**

The Authority's GJGNY Program was authorized by Title 9-A of Article 8 of the Public Authorities Law of the State of New York, as amended (known as the Green Jobs—Green New York Act of 2009 and hereinafter referred to as the "GJGNY Act") to establish a program to provide funding to support sustainable community development, create opportunities for green jobs, and establish a revolving loan fund to finance energy audits and energy efficiency retrofits or improvements for the owners or occupants of residential, multifamily, small business, and not-for-profit structures, including solar energy installations. The GJGNY Act allocated \$112 million from the proceeds of selling CO<sub>2</sub> allowances under the Regional Greenhouse Gas Initiative ("RGGI") to fund program initiatives. The Authority's Board subsequently approved approximately \$93.4 million in additional RGGI funds for funding program initiatives.

Sections 1 through 11 of Chapter 388 of the Laws of 2011, as amended by Part DD of Chapter 58 of the Laws of 2012 (hereinafter referred to as the "PNY Act") established an on-bill recovery mechanism for loans issued by the Authority pursuant to the GJGNY Act. The PNY Act directed and authorized the Authority to establish an on-bill recovery mechanism for repayment of loans for the performance of qualified energy efficiency services (as defined in the Act) for eligible projects through electric and gas corporations with annual revenues in excess of \$200 million and the Long Island Power Authority. The participating utilities are Central Hudson Gas and Electric, Consolidated Edison Company of New York, Inc., Long Island Power Authority, New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation (doing business as National Grid), Orange and Rockland, and Rochester Gas and Electric Corporation (each, a "utility"). The PNY Act initially limits the number of customers who may participate to no more than one-half of one percent of each utility's total customers, provided that prior to reaching such limit, the Authority is required to petition the New York State Public Service Commission ("PSC") to review said limit, and the PSC is required to increase such limit provided that it finds that the program has not caused significant harm to the utility or its ratepayers. The PSC may suspend such an electric and gas corporation's offering of the on-bill recovery charge provided that the

PSC, after conducting a hearing, makes a finding that there is a significant increase in arrears or utility service disconnections that the PSC determines is directly related to the on-bill recovery charge, or a finding of other good cause.

The PNY Act directed the Authority to pay a fee of \$100 per loan to the utility in whose service territory such customer is located to help defray the costs that are directly associated with implementing the program and to pay a servicing fee of 1.00% of the loan amount to the utility in whose service territory such customer is located to help defray the costs that are directly associated with the program.

The PNY Act provides that, unless fully satisfied prior to the sale or transfer of the property, the loan repayment shall survive such transfer and the remaining installments due shall be billed to the purchaser through their utility bill. The PNY Act requires that a seller must notify a prospective purchaser in writing and provide certain information about the obligation prior to accepting a sale for the property. Furthermore, the PNY Act requires the Authority to record, pursuant to article nine of the real property law, in the office of the appropriate recording officer, a declaration with respect to the property improved by such services of the existence of the loan and stating the total amount of the loan, the term of the loan, and that the loan is being repaid through a charge on an electric or gas meter associated with the property. The declaration is required to further state that it is being filed pursuant to the PNY Act and, unless fully satisfied prior to sale or transfer of the property, the loan repayment utility meter charge will survive changes in ownership, tenancy, or meter account responsibility and, until fully satisfied, will constitute the obligation of the person responsible for the meter account. Such declaration does not constitute a mortgage and will not create any security interest or lien on the property. Upon satisfaction of the loan, the Authority is required to file a declaration of repayment pursuant to article nine of the real property law.

The PNY Act requires that schedules for the collection and billing of on-bill recovery charges provide that:

- billing and collection services are available to all customers who have met the standards established by the Authority for participation and have executed an agreement for the performance of qualified energy efficiency services;
- for residential properties any such customer must hold primary ownership or represent the primary owner or owners of the premises and hold primary meter account responsibility or represent the primary holder or holders of meter account responsibility for all meters to which such on-bill recovery charges will apply;
- the responsibilities of such electric and gas corporation are limited to providing billing and collection services for on-bill recovery charges as directed by the Authority;
- the rights and responsibilities of residential customers paying on-bill recovery charges are governed by the provisions of Article 2 of the New York Public Service Law;
- unless fully satisfied prior to sale or transfer, the on-bill recovery charges for any services provided at the customer's premises will survive changes in ownership, tenancy or meter account responsibility, and arrears in on-bill recovery charges at the time of account closure or meter transfer will remain the responsibility of the incurring customer, unless expressly assumed by a subsequent purchaser of the property subject to such charges;
- not less than forty-five days after closure of an account that is subject to an on-bill recovery charge, and provided that the customer does not re-establish service with such utility, it is the responsibility of the Authority and not the utility to collect any arrears that are due and owing;
- a customer remitting less than the total amount due for electric and/or gas services and on-bill recovery charges will have such partial payment first applied as payment for electric and/or gas services and any remaining amount will be applied to the on-bill recovery charge;
- billing and collection services are available without regard to whether the energy or fuel delivered by the utility is the customer's primary energy source;
- unless otherwise precluded by law, participation in the GJGNY Program does not affect a customer's eligibility for any rebate or incentive offered by a utility; and



- the on-bill recovery charge will be collected on the bill from the customer's electric utility unless the qualified energy efficiency services at that customer's premises result in more projected energy savings on the customer's gas bill than the electric bill, in which case such charge will be collected on the customer's gas utility bill.

The PSC will not approve any application for the conversion to submetering of any master meter which is subject to any on-bill recovery charges.

The PNY Act also provides that the rights and responsibilities of residential customers participating in GJGNY Program on-bill recovery are substantially comparable to those of electric and gas customers not participating in on-bill recovery, and charges for on-bill recovery are treated as charges for utility service for the purpose of the PNY Act, provided that:

- all determinations and safeguards related to the termination and reconnection of service also apply to on-bill recovery charges billed by a utility;
- in the event that the responsibility for making utility payments has been assumed by occupants of a multiple dwelling or by occupants of a two-family dwelling, such occupants are not billed for any arrears of on-bill recovery charges or any prospective on-bill recovery charges, which will remain the responsibility of the incurring customer;
- deferred payment agreements are available to customers participating in on-bill recovery on the same terms as other customers, and the utility retains the same discretion to defer termination of service as for any other delinquent customer;
- where a customer has a budget billing plan or levelized payment plan, the utility is required to recalculate the payments under such plan to reflect the projected effects of installing energy efficiency measures as soon as practicable after receipt of information on the energy audit and qualified energy efficiency services selected;
- late payment charges on unpaid on-bill recovery charges are determined as provided in the New York Public Service Law or, as otherwise consented to by the customer in the agreement and any such charges are remitted to the Authority;
- when a complaint is related solely to work performed under the GJGNY Program or to the appropriate amount of on-bill recovery charges, the utility is only required to inform the customer of the complaint handling procedures of the Authority, which retains responsibility for handling such complaints, and such complaints are not deemed to be complaints about utility service in any other PSC action or proceeding;
- billing information is required to include information on the on-bill recovery charges, including the basis for such charges, and any information or inserts provided by the Authority related thereto; and
- at least annually the Authority is required to provide the utility with information for inclusion or insertion in the customer's bill that sets forth the amount and duration of remaining on-bill recovery charges and the Authority's contact information and procedures for resolving customer complaints with such charges.

## **Regulatory Approvals**

The PSC issued an Order effective December 15, 2011 approving tariff filings by each of the six major electric and gas corporations establishing the billing and collection procedures for the on-bill recovery charges, in compliance with the provisions of the amended statute. On April 19, 2012 the PSC issued an Order amending the tariffs to remove late payment charges on unpaid loan installment charges to avoid the pyramiding of late fees and ensure compliance with federal banking regulations (12 CFR, Part 226).

## **GJGNY Program**

The Authority is responsible for administering the GJGNY Program, which among other things authorized and directed the Authority to provide financing for residential energy efficiency improvement loans and loans to finance the installation of solar electric (also referred to as photovoltaic, or PV) systems in the State for owners of residential 1-4 family buildings. The GJGNY Program was funded initially with \$112 million in RGGI funds authorized by the GJGNY Act, and approximately \$93.4 million in additional RGGI funds approved by the Authority's Board, of which about \$112.2 million was allocated for a GJGNY Revolving Fund for residential loans (the balance of funding is used for workforce development initiatives, outreach and marketing, energy audit subsidies, and program administration, implementation and evaluation costs for other program activities authorized by the GJGNY Act). Consistent with such purpose, a portion of such funds is pledged under an agreement between the Authority and the New York State Environmental Facilities Corporation (the "NYSEFC") to reimburse NYSEFC for payments, if any, made under its guaranty of one series of the Authority's bonds and to secure the payment of two other series of Authority bonds issued to NYSEFC. All such bonds were issued to fund energy audits and energy efficiency improvements for eligible applicants. The amount so pledged is not available to pay the Series 2019A Bonds.

### **THE AUTHORITY'S RESIDENTIAL LOAN PROGRAM**

#### **General**

Through the GJGNY Act, the Authority offers loans to finance the installation of solar electric systems and other residential energy efficiency measures in 1-4 family residential homes. Pursuant to the GJGNY Act, residential loans are limited to not more than \$13,000 per Borrower, or not more than \$25,000 if the financed project payback is 15 years or less. Loans are offered at loan terms of 5, 10, or 15 years, and must meet project cost effectiveness criteria. Loans were originally offered with a 2.99% interest rate. Since January 1, 2013, loans have been offered with interest rates between 3.49% and 7.99% (plus 0.5% for Smart Energy Loans not repaid through ACH repayment) based upon the Borrower's household income as compared to the applicable county medium income. The GJGNY financing program offers both unsecured consumer loans, repaid through automated monthly ACH repayment or through statement billing, hereinafter referred to as "Smart Energy Loans," and loans repayable through an installment charge on the obligor's participating electric and gas utility bill, hereinafter referred to as "On-Bill Recovery Loans." Both loans are issued by the Originator (as defined herein) using loan underwriting criteria set by the Authority. The Authority reimburses the Originator for conforming Smart Energy Loans and funds On-Bill Recovery Loans and pays the Originator an origination fee. The Smart Energy Loans are serviced directly by the Servicer (as defined herein); the Servicer also services the On-Bill Recovery Loans, with initial billing and collections performed by the respective utility.

The contractual rights of the Authority under its respective agreements with the Originator, the Servicer, the Backup Servicer (as defined herein) and the participating utilities as described herein are not assigned or pledged by the Authority pursuant to the Indenture and cannot be enforced directly by the Trustee or by Owners. Amounts received by the Authority as a result of its exercise of such rights, other than any Pledged Loan Payments remitted to the Authority, do not constitute Pledged Revenues and are not assigned or pledged by the Authority under the Indenture. See the captions "DESCRIPTION OF THE INDENTURE—Enforcement of Loan Agreements" and "—Representations, Warranties and Covenants as to Program Agreements" herein.

Solar electric systems are installed by contractors approved through the NY-Sun Initiative. The NY-Sun Initiative has committed more than \$1 billion to stimulate the marketplace and increase the number of solar electric systems across the State over 10 years and aims to add more than 3 gigawatts of installed solar capacity in the State by 2023. The ultimate goal of the NY-Sun Initiative is the development of a sustainable, self-sufficient solar industry in the State. To get there, the NY-Sun Initiative has incentive programs that support solar projects for commercial and industrial companies, homes, multifamily buildings, small commercial, not-for-profit and municipal buildings. Funding for the program has been allocated by the New York State Public Service Commission through the Renewable Portfolio Standard and Clean Energy Fund (CEF) programs with additional funding made available through the Regional Greenhouse Gas Initiative.

The NY-Sun Initiative program establishes incentives based on a Megawatt (MW) Block structure that is designed to provide certainty and transparency to the solar industry and their customers regarding incentive levels. The structure provides a clear signal to the industry that New York State intends to eliminate cash incentives in a reasonable timeframe, and allow for the elimination of those incentives sooner in regions where market conditions can support it, based on market penetration, demand, and payback. The MW Block approach allocates megawatt targets to specific

regions of the State, breaks those targets into blocks, and assigns incentives per block. Incentives are awarded based on the block in effect at the time of submission. Once all blocks within a region/sector are fully subscribed, the incentive is no longer available to that region/sector. The program is divided into geographic regions (PSEG Long Island, Con Edison, and Upstate) and sectors (Residential, Small Commercial, and Commercial/Industrial). Incentives are only available for new solar electric systems designed and installed by participating contractors and builders. Incentives will be provided directly to the contractor of record for the project, not to the customer or builder.

The program relies on contractors to install new solar electric systems for customers seeking incentives through the program. Contractors are responsible for the contract with the customer, while builders are responsible for the installation of the system. A company that is approved as both a contractor and builder is responsible for all aspects of the project. Before a contractor and builder can work together, they must establish a contractor-builder relationship agreement through the program. To participate in the program, a company must submit a contractor application, enter into a Participation Agreement with the Authority and must meet requirements of the Authority's Residential and Small Commercial Program Manual. An average-sized residential solar electric system produces approximately 8,797 kilowatt hours (kWh) per year. The customer's savings on their electric bill is tied to the retail electric rate, which varies by utility company and region, with a rough estimate around \$0.1645/kWh, as a weighted average across the state. While actual bill savings will vary based on system size, design, equipment, and geographic location, an average residential solar electric system will generate approximately \$1,447 in electric bill savings per year.

In connection with the residential energy efficiency loan program, services are delivered through the Authority's Home Performance with ENERGY STAR® program, which identifies and installs cost-effective improvements to reduce energy consumption in New York State's one-to-four family residential structures. Contractors perform a comprehensive home energy assessment (audit), including health and safety testing, prior to performing work, and also a "test out" of the house after work is complete to ensure a safe and healthy environment after installation of energy-efficiency improvements. The GJGNY Program offers low-interest financing and homeowner cash-back incentives to encourage comprehensive work scopes, including a higher incentive level for those households qualifying for the Assisted Home Performance with ENERGY STAR® program. Residential energy efficiency improvements through this program include building shell improvements, high-efficiency heating and cooling improvements, ENERGY STAR® appliances and lighting.

Residential energy efficiency improvements are installed by participating Home Performance with ENERGY STAR® contractors which have entered into agreements with the Authority. Contractors delivering audits and performing services must be accredited by the Building Performance Institute ("BPI"). BPI accreditation includes a review of certain business standards and practices, in addition to technical certification requirements. The Authority performs quality assurance inspections on approximately 15 percent of projects to ensure contractor work meets program standards. In addition, BPI performs quality assurance inspections to ensure work meets BPI's technical standards. If projects fail to meet standards, BPI and/or the Authority follow up with the contractor to ensure remediation takes place. Failure to meet BPI and program standards may result in probation, suspension, loss of accreditation and/or removal from the Home Performance with ENERGY STAR® program, in accordance with BPI and the Authority's processes. Consumers select a participating contractor providing services in their area from a list of about 220 participating contractors available on the Authority's website. First year estimated savings for all Home Performance with ENERGY STAR® (including those not funded with a GJGNY loan) is on average \$645 or approximately 8% of the average project costs of \$8,117.

## **Sales and Marketing**

The GJGNY Program is marketed on a state-wide basis by the Authority through a print and social media campaign, through competitively selected constituency based organizations performing direct community outreach, and through marketing, sales and outreach activities conducted by solar installation contractors.

## **Originator and Origination Agreement**

Both Smart Energy Loans and On-Bill Recovery Loans are originated by Slipstream Group Incorporated (the "Originator"). The Originator was formed as a 501(c)(3) nonprofit corporation in 1980 with the mission to champion innovative energy efficiency initiatives that deliver short- and long-term economic and environmental benefits to consumers, businesses, and policy makers. In 1996, the Originator launched its turn-key renewable energy and energy efficiency financing program, known as Energy Finance Solutions ("EFS"). The Originator has more than 150 professional employees (22 of which are in the Residential EFS department) in eight states, and has its corporate headquarters located in Madison, Wisconsin. The Originator serves clients in 15 states, including New York, focusing on

three core product lines: energy efficiency and renewable energy program implementation; financing program development and implementation; and residential building science training, certification, and quality assurance. The Originator's services include program design; capital sourcing; lender management and fund administration; trade ally recruitment, management, and certification; project development and quality assurance; information/contact center; marketing; education and event management; customer, retailer, income verification and contractor incentive and loan payment processing; portfolio, program, and project tracking and reporting including energy and carbon metrics. The Originator is governed by a board of directors that currently numbers 15 members, and managed by an eight-member executive team. Since its inception, EFS has originated and financed more than \$500 million in loans, serving over 50,000 customers with energy efficiency and renewable energy projects.

The Originator originated, or will continue to originate, the Smart Energy Loans and On-Bill Recovery Loans pursuant to the terms and provisions of an Agreement, dated as of January 1, 2010, between the Authority and the Originator, and an Agreement, effective as of June 1, 2017, between the Authority and the Originator (collectively, as amended and supplemented, the "Origination Agreement") as described under this caption "THE AUTHORITY'S RESIDENTIAL LOAN PROGRAM." The current term of the Origination Agreement ends on May 31, 2020; however, the Origination Agreement may be terminated by the Authority at any time, with or without cause, upon 90 days prior written notice to the Originator. Pursuant to the Origination Agreement, the Originator directly funds each On-Bill Recovery and Smart Energy Loans in the name of the Authority. The Originator is responsible for assuring that each loan complies with the terms and conditions and loan underwriting standards at the time the applicable loan is underwritten, and the Originator is responsible for the total loss incurred by the Authority resulting from such non-compliance, not to exceed the outstanding loan balance and related interest.

#### **Underwriting—Loan Approval Process**

Applicants submit a credit application to the Originator on-line, mail or by fax. The credit application requires the applicant to document income stated on the credit application by providing copies of relevant income supporting documentation for each source of income or by providing a copy or transcript of the prior year's federal income tax return; provided, however, effective January 1, 2019 Borrowers with FICO® scores greater than 780 will not be required to document their income. The Originator reviews loan applications and originates loans pursuant to loan underwriting criteria established by the Authority. The Originator is paid an origination fee of \$165 per originated Smart Energy Loan (\$175 for Smart Energy Loans originated prior to June 1, 2017) and \$225 per originated On-Bill Recovery Loan; the Originator charges a fee of \$150 to the loan applicant for either loan, which may be included in the amount financed. Loans under the GJGNY Program are initially funded from the GJGNY Revolving Fund. The Authority's underwriting standards categorize loans as "Tier 1" and "Tier 2" loans. To be classified as a "Tier 1" loan, the underlying Borrowers must comply with the following at the time the loan is applied for:

- FICO® score of at least 640 (680 if the Borrower was self-employed two or more years and 720 if the Borrower was self-employed less than two years; provided, however, effective January 1, 2019, the higher FICO® score requirements for self-employed Borrowers are no longer applicable);
- Debt-to-income ratio not greater than 50.00% (effective January 1, 2019, Borrowers with FICO® scores greater than 780 do not have a debt-to-income ratio limitation);
- No reported bankruptcies, foreclosures, or repossessions within the prior seven years; and
- No reported combined outstanding collections, judgments or tax liens greater than \$2,500.

Consistent with provisions in the GJGNY Act and the legislation authorizing on-bill recovery financing, which directed the Authority to use its best efforts to broaden access to financing by consumers, the Authority developed alternative underwriting standards for approval of "Tier 2" loans in order to broaden those that qualify by reducing credit score requirements, substituting satisfactory energy bill and mortgage payment history, allowing for a higher level of debt-to-income, and requiring a shorter period for any prior bankruptcies. Borrowers of "Tier 2" loans must comply with the following at the time the loan is originated:

- FICO® score of at least 540;

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\* FICO® is a federally registered trademark of Fair Isaac Corporation.

- For Borrowers with FICO® scores of less than 640, the Borrower must have been current on all mortgage payments for the prior 12 months, with no payments being more than 60 days delinquent during the prior 24 months;
- Borrowers with FICO® scores less than 600 may not have a debt-to-income ratio greater than 70.00%; Borrowers with FICO® scores less than 680, but at least 600, may not have a debt-to-income ratio greater than 75.00%; and Borrowers with FICO® scores of 680 or greater may not have a debt-to-income ratio greater than 80.00%; provided, however, Borrowers who are income-qualified for Assisted Home Performance with ENERGY STAR incentives that fund up to \$4,000 or 50% of the project cost may have a debt-to-income ratio up to 100.00%, regardless of their FICO® score;
- No bankruptcies, foreclosures, or repossessions within the last two years; and
- No combined outstanding collections, judgments or tax liens greater than \$2,500.

The Indenture provides that Indenture funds may be applied to “Tier 2” loans only if such loans were originated at least five years prior to the date such “Tier 2” loan is pledged. It is expected that approximately 11% of the Portfolio Loan by aggregate principal amount will consist of “Tier 2” loan.

The Originator prepares loan documents to be signed by the Borrower(s) and disburses the loan proceeds to the contractor upon submission of a certification of completion signed by the contractor and the Borrower(s). On a weekly basis, the Originator submits completed loans to the Authority’s competitively selected master loan servicer (the “Servicer”), initially Concord Servicing Corporation, for servicing of the loans. The Servicer determines conformance with the Authority’s loan underwriting standards based on a sample of 15.00% of the loans issued by the Originator. Once accepted by the Servicer, the Authority reimburses the Originator for the loan disbursement from the GJGNY Revolving Fund. The Servicer is responsible for Borrower billing and collections.

#### **Underwriting—Pricing and Credit Scoring**

The Originator procures a credit report for each applicant. The loans are offered to consumers at fixed interest rates established by the Authority. As noted previously, prior to January 1, 2013, loans were offered with a 2.99% interest rate, and thereafter the interest rates on loans have varied depending on household income (ranging from 3.49% to 7.99% (plus 0.5% for Smart Energy Loans not repaid through ACH repayment)).

#### **Servicer and Servicing Agreement**

The Authority has a servicing agreement with Concord Servicing Corporation (“Concord”) to service the Portfolio Loans (defined and described more fully under the caption “THE PORTFOLIO LOANS” herein). Concord is a recognized leader in portfolio servicing and financial technology, delivering solutions to meet the demands of loan originators and capital providers (and their customers) in multiple asset classes. Founded in 1988, Concord delivers comprehensive portfolio servicing solutions, including billing, payment processing and critical reporting. Additional services include loan validation and audit services, electronic custodial services, third party customer service, delinquency collections and loss mitigation. Concord’s corporate headquarters and base of operations is in Scottsdale, Arizona, with a satellite office in Mexico City, Mexico.

With a staff of approximately 225 professionals, Concord has amassed nearly two million consumer obligations, with a portfolio size of approximately \$6.5 billion. In addition to primary loan servicing, Concord also serves as a master/backup servicer for approximately 175,000 loans with combined balances of \$2.57 billion.

As a financial technology service provider, Concord works to keep data safe and secure by investing in enterprise technologies, implementing stringent physical security controls and mandating strict procedural controls.

Concord is PCI Data Security Standard (DSS) compliant and has incorporated tokenization for credit cards through a third-party payment gateway. Concord’s platform includes a significant investment in disaster recovery processes to ensure business continuity in the event of a disruptive event.

Concord annually engages KPMG, LLP to perform a Statement on Standards for Attestation Engagements (SSAE 16) Service Organization Control Report 1 (SOC 1SM) over Concord's receivables servicing system and suitability of the design and operating effectiveness of its controls.

Concord fosters a workplace culture that values integrity and ethical conduct by operating an effective corporate compliance program that integrates all compliance efforts—from compliance with external regulations to compliance with internal rules and procedures. As an example, Concord's Contact Center maintains a formal Compliance Management System (CMS), which outlines the policies and procedures for activities within the Contact Center and identifies the systems and controls in place to ensure consistent compliance with all applicable laws and regulations, including the Fair Debt Collection Practices Act, Fair Credit Reporting Act, and the Telephone Consumer Protection Act. Concord's full-time Chief Compliance Officer oversees all efforts in this area.

The Authority has entered into an Agreement, dated as of the 3rd day of November, 2010 (as amended and supplemented, the "Servicing Agreement"), with the Servicer, to provide for the servicing of the Portfolio Loans. With respect to the Series 2019A Bonds, the Servicer agrees to remain the loan servicer of the Portfolio Loans until the Series 2019A Bonds are no longer outstanding or until such time as a new Servicer has been appointed by the Authority and is acting as Servicer with respect to the Portfolio Loans. The Servicing Agreement may be terminated by the non-defaulting party upon (a) thirty days prior written notice to the other party specifying such default and (b) failure of such defaulting party to cure such default within such thirty day period. Failure by the Authority to make any payment required under the Servicing Agreement when due is deemed a default thereunder.

The Servicing Agreement appoints the Servicer as custodian for the Loan Agreements, and the Servicer accepts such custodianship and agrees to segregate such Loan Agreements from its own and from its other clients' files and materials.

Pursuant to the Servicing Agreement, the Servicer agrees to indemnify and hold harmless the Authority from and against all liabilities, losses, claims, damages, judgments, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon or incurred by or asserted against the Authority resulting from or arising out of the Servicer's negligence in the performance of the Servicing Agreement.

The Servicer receives a weekly data file from the Originator posted through a secure File Transfer Protocol (FTP) site, containing information about loans for which it disbursed loan proceeds. The Originator also sends the original loan documents, and copies of loan application, credit report and other information supporting the credit approval for the weekly batch of new loans to the Servicer. The Servicer reviews the data file to determine that formatting requirements are met. Once the file has been reviewed, the Servicer imports the data into its servicing system. The loans are validated through a setup program in the servicing system. The Servicer then reviews a sample of approximately 15.00% of the new loans to determine that the loan approval complies with the Authority's loan underwriting standards, by reviewing the supplied credit application and supporting information. Exceptions are reported to the Authority and the Originator for resolution. Once the data validation and loan standards validation is complete, the Servicer posts the new loans into the active loan servicing system and provides balancing reports by email to the Authority for review.

On a weekly basis, the Servicer posts an On-Bill Recovery Loan Establishment file on its secure FTP site for any On-Bill Recovery Loans issued to customers for each utility to initiate billing of the On-Bill Recovery Loan installments on the customer's utility bill. Under the terms of the billing services agreement between each utility and the Authority, the utility agrees to commence the billing on the customer's bill no later than the second billing cycle commencing after the date the Servicer provides the new account file.

Once processed by the utility, the utility posts a weekly Account Opening File on the Servicer's secure FTP site confirming its establishment of the On-Bill Recovery Loan installment charge on the customer's bill, provides the customer's next scheduled meter reading date (which provides an indication of the billing cycle in which the installment charge is expected to commence). The file also reports any rejections of processing, which the Servicer reviews and follows up with the utility as appropriate.

Procedures for payment processing vary based on the type of loan. For each loan, payments collected by the Servicer are held in an account in the name of the Issuer and will be transferred to the Trustee for deposit in the Revenue Fund no less frequently than each Business Day (subject to retention of an amount not in excess of \$1,000).

## **On-Bill Servicing Parameters**

On-Bill Recovery Loans are billed and collected by the participating utility pursuant to a billing services agreement with the Authority. Each utility other than the Long Island Power Authority serves and bills its customers according to the general rules of its rate schedules, as filed with and approved by the PSC as the same may be modified or superseded from time to time, the New York Public Service Law, the PSC's regulations in Title 16 of the Codes, Rules and Regulations of the State of New York, the utility's business procedures, and the utility's Vendor Agreement with New York State Office of Temporary and Disability Assistance, and local Department(s) of Social Services within its service territory. The Long Island Power Authority serves and bills its customers according to the general rules of the Authority's Tariff for Electric Service, as the same may be modified or superseded from time to time, the New York Public Service Law and its business procedures.

Pursuant to its billing services agreement, each utility is obligated to:

- configure and upgrade its customer billing system to accommodate on-bill recovery of the Authority's loan installments;
- accept loan installment information from the Authority and commence billing, collecting, and remitting the On-Bill Recovery Loan installments in accordance with the provisions of a Process Document, which details the procedures to be followed by them in fulfilling their statutory and related duties with respect to the On-Bill Recovery ("OBR") Program, including a description of the mechanisms and requirements for the exchange of OBR Program-related information between the parties and their designated agents (a "Process Document");
- remit on the 15<sup>th</sup> day of the month all amounts paid by customers for the On-Bill Recovery Loan installments during the preceding month to the Authority or its designated agent by electronic (ACH) payment using account information provided in writing by the Authority;
- provide accurate information to the Authority in the files and by the methods defined and according to the due dates stated in the data exchange protocols, as the same may be amended from time to time;
- provide to customers with On-Bill Recovery Loans any bill inserts required by law, including the On-Bill Recovery Mechanism Process for Submission and Resolution of Customer Complaints ("Customer Dispute Resolution Procedure");
- advise the Authority of successor customers following the closing of the utility account for the premises' electric and/or gas utility meter(s) where the previous customer was being billed by a utility for the On-Bill Recovery Loan installments; and
- apply customer payments to its electric and/or gas charges before applying payments to the On-Bill Recovery Loan installments and comply with specific rules for the application of partial payments, payment in excess of the amount due and public assistance and Home Energy Assistance Program payments.

The utility is not responsible for billing or collection of any On-Bill Recovery Loan installments for a customer while the Authority is billing such customer directly and the utility will not accept for collection any arrears due to the Authority's direct billing of a customer or any arrears transferred to the Authority for collection.

The Authority's responsibilities under each billing services agreement are to:

- ensure that all customers for whom it transmits to the utility OBR Program loan establishment information have entered into valid, enforceable contractual obligations to repay loans for qualified energy efficiency services for eligible projects;
- on a monthly basis, report to each utility the number of loan applications in process, the number of loans outstanding, and the maximum number of accounts eligible for the utility OBR Program in the utility's service territory;

- provide each utility accurate information in a timely manner for: (i) use in the identification of customers with On-Bill Recovery Loan installment loans, (ii) the billing and collection of On-Bill Recovery Loan installments, and (iii) calculating the fees due from the Authority to the utility, and to provide information to each utility in the files and by the methods defined and according to the due dates stated in the Data Exchange Protocols, as the same may be amended from time to time;
- resolve directly with utility's customers any disputes related to the On-Bill Recovery Loan installments or the utility OBR Program;
- notify initial Borrowers subsequent to the closing of their loans that the On-Bill Recovery Loan installments will be appearing on their utility bills;
- notify successor customers of their obligation to pay the On-Bill Recovery Loan installments as part of their monthly utility bills and of the terms of payment and consequences of non-payment;
- requests by the Authority or its contractor for the utility to provide the Authority or its contractor with customer account billing and payment history information in connection with the utility OBR Program are based on written customer consent given to the Authority or its contractor, evidence of which the Authority or its contractor is required to retain for a minimum of six years; and
- annually provide the utility in both paper and electronic formats acceptable to the utility copies of its bill insert describing its Customer Dispute Resolution Procedures and, at other times as may be required, any other bill insert required by law.

The utility billing function responsibilities include:

- no earlier than the first bill for a billing period, and no later than the second billing cycle after the utility receives from the Authority a valid customer account number, monthly On-Bill Recovery Loan installment amount and number of the On-Bill Recovery Loan installments to be billed, the utility is required to issue to each customer so designated, in accordance with its normal business practices, bills for electric and/or gas service that include the monthly On-Bill Recovery Loan installment amount;
- billing of the On-Bill Recovery Loan installment shall continue until the number of loan installments billed equals the number of loan installments to be billed or the On-Bill Recovery Loan is satisfied, whichever occurs first, unless billing of On-Bill Recovery Loan installments is stopped earlier for any reason described in the Process Document; a customer receiving electric and/or gas utility bills on a bi-monthly basis will be billed for two On-Bill Recovery Loan installment amounts on each utility bill;
- the utility's cancellation of a customer's previously billed electric and/or gas service charges will not result in the cancellation of On-Bill Recovery Loan installment amounts previously billed;
- the utility will apply the same due dates to On-Bill Recovery Loan installment amounts as applicable to other utility charges;
- customers with unpaid On-Bill Recovery Loan installment amounts will be subject to the applicable provisions of the Governing Utility Service Documents regarding charges for collection, reconnection and dishonored payments, deferred payment agreements and termination/disconnection and reconnection of service;
- the utility will not bill occupants of a multiple dwelling or two-family dwelling, who pay utility charges otherwise due from the customer responsible for the premises in order to avoid termination of service to the entire premises or to restore service that was terminated, for any arrears of On-Bill Recovery Loan installment amounts or any prospective On-Bill Recovery Loan installment amounts, which are the responsibility of the incurring customer;



- the utility will not bill post-petition accounts opened for customers in bankruptcy unless the loan is assumed by the trustee in bankruptcy or not discharged in the judgment and the Authority notifies the utility that On-Bill Recovery Loan installments should be billed;
- the utility's bills to customers with On-Bill Recovery Loans will include a line item entitled "NYSERDA Loan Installment" and will include the Authority's contact information for questions related to On-Bill Recovery Loan installment or the OBR Program; and
- at least once annually, the utility is required to provide notice to customers with On-Bill Recovery Loans, for such payment installments that remain subject to on-bill recovery, the dollar amount of remaining unbilled On-Bill Recovery Loan installments and the number of unbilled On-Bill Recovery Loan installments remaining.

**Payment Application: Smart Energy Loan billing—pay by check**

Based on the Initial Portfolio Loans issued and outstanding as of the Statistical Cutoff Date, approximately 13.6% of the aggregate principal balance of Pledged Loan Payments are anticipated to be processed by check payment by the customer. For Portfolio Loans setup for payment by check with statement billing, the Servicer mails a statement to the Borrower 21 days in advance of the due date reporting the upcoming installment amount due and any unpaid prior balance. The statement includes a coupon with the customer loan number to be returned with payment made payable to the Authority. On a daily basis, payments are received at the Servicer's office. Payments are sorted for input by a services coordinator and delivered to the assigned account representative. Batches are input into the servicing system and ascertained through secondary entry of the payment amount. Once the batch has been ascertained and balanced, payments are systematically applied to consumer accounts, system assigned payment application is reviewed, updated as needed, and posted.

The account representative sorts the batch by a system assigned sequence number, which identifies the Demand Deposit Account (DDA). System generated deposit slips are printed in duplicate (one deposit slip is attached to the deposit and one is forwarded to the Treasury Management department). The account representative places completed deposits in a fireproof file cabinet for pickup by bank courier or overnight delivery. The Servicer performs client specific procedures for unidentified payments from consumers or payments that cannot be processed. Payments that cannot be processed are held in a secure file cabinet. Payments received on Portfolio Loans (based on a Developer/Project/Lender code structure used in the Servicer's servicing system) are deposited to a segregated demand deposit account of the Authority which is pledged to the Trustee under the Indenture (the "Dedicated Account"). The Authority shall cause the transfer of all such Loan Payments from the Dedicated Account to the Trustee for deposit in the Revenue Fund no less frequently than each Business Day (subject to retention of an amount not in excess of \$1,000).

**Payment Application: Smart Energy Loan billing—ACH payment**

Based on the Initial Portfolio Loans issued and outstanding as of the Statistical Cutoff Date, approximately 54.0% of the aggregate principal balance of Pledged Loan Payment processing is anticipated to be through automated clearing house (ACH) debit from the consumer's checking or savings account. ACH authorizations can be received as part of the loan application process or periodically from consumers. The signed authorization request includes a voided check or deposit slip to obtain the necessary information to debit the consumer's bank account. These authorizations are kept on file. Servicer personnel notify the consumer's bank prior to the first debit date to verify the accuracy of the account information. The Servicer mails the consumer a letter confirming the customers' intentions to make ACH payments. This letter will include a portion of the banking information the customer intends to use, the payment amount that will be debited and the date of the first debit. If the customer does not send in the authorization form, this letter must be mailed to confirm the setup.

On a daily basis, the servicing system automatically generates a report identifying the next due date for ACH consumers. This report is verified for accuracy by the Servicer's Treasury Management department. An electronic ACH file is created from the Servicer's servicing system and transmitted to the bank via FTP. Concurrently, an ACH Transmission report is generated. The dollar amounts and item counts are ascertained by telephone with the bank to determine a complete and accurate transmission. An edit report reflecting payments is generated and compared to the ACH Transmission report. Once the ACH payment information is determined to be accurate, payments are applied to loan accounts, system assigned payment application is reviewed, updated as needed, and posted. ACH return items are processed by way of an electronic file from the bank. The return item file includes the account number, amount, original

processing date, and return reason. The return item file is usually received one to two days after the ACH file original post date. The file is imported to the servicing system and reviewed for accuracy prior to updating the consumer payment history. ACH payments received on Portfolio Loans (based on a Developer/Project/Lender code structure used in the servicing system) are deposited into the Dedicated Account. The Authority shall cause the transfer of all such Loan Payments from the Dedicated Account to the Trustee for deposit in the Revenue Fund no less frequently than each Business Day (subject to retention of an amount not in excess of \$1,000).

#### **Payment Application: On-Bill Recovery Loans**

Based on the Initial Portfolio Loans issued and outstanding as of the Statistical Cutoff Date, approximately 32.4% of the aggregate principal balance of the Pledged Loan Payment processing is anticipated to be through billing and collection performed by utilities pursuant to billing services agreements with the Authority. By the fifteenth day of each calendar month, each utility is responsible for initiating an ACH payment to a segregated demand deposit account in the Authority's name representing the aggregate amount of collections of On-Bill Recovery Loan installments for the preceding month. By the same date, the utility must also post a detail file to the Servicer's secure FTP site with the remittance payment details. The Servicer processes the payment detail file and posts the payments received to loan account balances in its servicing system. At the end of each calendar month, the Authority is required to transfer such funds to the Dedicated Account. The Authority shall cause the transfer of all such Loan Payments from the Dedicated Account to the Trustee for deposit in the Revenue Fund no less frequently than each Business Day (subject to retention of an amount not in excess of \$1,000).

#### **Account Closure Provisions for On-Bill Recovery Loans**

The On-Bill Recovery Loans have provisions allowing for the transferability of the loan installment obligation upon sale or transfer of the property unless the obligation is satisfied prior to sale or transfer. On a weekly basis, the utility posts a Utility Account Closing file to the Servicer's secure FTP site indicating that a utility account has been closed (which could occur due to voluntary closure or temporary suspension of service by the customer, or involuntarily through termination of service by the utility for nonpayment). The utility also posts a Utility Successor Account File to report a customer who has established utility service at an address for which there was an On-Bill Recovery Loan obligation where there were remaining loan installments not yet billed.

In the case of outstanding arrears on an On-Bill Recovery Loan installment that exist when an account is closed, if the customer does not re-establish service with such utility within 45 days, it is the responsibility of the Authority, and not the utility, to collect any arrears that are due and owing, regardless of whether or not the customer subsequently re-establishes service with the utility. On a weekly basis, the utility posts to the Servicer's secure FTP site any arrears balance remaining after 45 days without the customer re-establishing service with such utility through a Utility Transfer of Uncollected Payment File. Upon notification of an uncollectible balance from the utility through the Utility Transfer of Uncollected Payment File, the Servicer commences statement billing of the arrears balance.

Upon notification of any account closure or temporary suspension of utility service by the utility, if a successor customer does not establish service within 60 days of such notice, the Servicer commences direct statement billing to the current property owner pursuant to the terms of the Loan Agreement. The Servicer requests the Authority's program title company to perform a last owner search within this 60-day period, which is reported by the title company to the Servicer for direct billing. This direct billing continues until a successor customer establishes service, or the existing customer re-establishes service, at the property address, at which time the billing will return to on-bill recovery billing through the successor account establishment process. Any amounts directly billed are collected by the Authority or the Servicer and are not subsequently transferred to the utility for billing and/or collection.

#### **Account Transfer Provisions for On-Bill Recovery Loans**

When utility service is opened or re-opened for a metered property that had a previous On-Bill Recovery Loan installment charge, the utility notifies the Servicer via a Successor Accounts File posted on the Servicer's secure FTP site. The account owner may be a new owner (a purchaser or tenant of the property) or may be the prior account owner (in the case of account closure through termination, or suspension of utility service for a seasonal customer). Upon receipt of the Successor Accounts File, the Servicer determines if the name of the successor customer is different from the current Borrower of record in the Servicer's system. If the name is different, the Servicer establishes a new loan number for the new customer for the remaining unbilled loan installments on the loan account; if there is no change in the name on the account, the loan number will remain the same. Once this determination is made, the Servicer will request the utility to

establish an On-Bill Recovery Loan installment charge on the successor customer's bill through the On-Bill Recovery Loan Establishment File as previously described. The utility will establish the On-Bill Recovery Loan installment charge on the customer account, and report back to the Servicer via posting a Utility Account Openings File on the secure FTP site; the Servicer reviews any exceptions or denials noted through this process. The Servicer will notify the customer of record via US mail that their utility bill will include an On-Bill Recovery Loan installment charge. This notification includes the On-Bill Recovery Loan installment monthly (or bimonthly) amount and the loan term in number of payments. The customer will be directed to contact the Authority/Servicer if they have any questions.

### **Other Unique Servicing Provisions of On-Bill Recovery Loans**

On-Bill Recovery Loans include other unique provisions related to servicing, including:

- the obligor's payment obligation is not a fixed monthly due date—the promissory note provides that the obligor's On-Bill Recovery Loan installment will be billed by the utility no later than the second billing cycle commencing after notification is submitted by the Servicer to the utility;
- the obligor's billing cycle does not end on the same date of each month, and varies from month to month based on the utility's meter reading and billing cycles;
- the installment charge is only included in a full billing cycle and no more than 12 installments will be billed per year—if the utility subsequently changes the obligor's billing cycle, one short billing cycle will result and this billing cycle will not include billing of the installment charge; and
- the obligor has the right to prepay the obligation, in whole or in part, without penalty, but must arrange for prepayment directly with the Servicer—an obligor who pays more than the amount billed through the utility billing process will be deemed to have prepaid their utility service charges.

### **Collection Procedures**

Accounts are past due if any amount is unpaid by the date upon which payment is due pursuant to the promissory note. For Smart Energy Loans, the Servicer is responsible for performing delinquency collections on accounts once they are 15 days past due and until they are 90 days past due. Under a collection plan set by the Authority, the Servicer calls or sends written notices to obligors every 15 days. The Servicer charges a transactional fee for these delinquency collections efforts that are included in its Servicing Fees. Once an account is 90 days past due, it is referred to Blackwell Recovery, a unit of the Servicer, for default collection on a contingency basis. Recoveries received from delinquency collections and default collections are netted against the remaining principal balance to report charge-offs on a net basis. The Servicer performs no delinquency collection activities on On-Bill Recovery Loans—these activities are performed by the respective utility.

Both On-Bill Recovery Loans and Smart Energy Loans ultimately allow the use of the State Attorney General's Office for collections under Section 18 of the New York State Finance Law, which includes the ability to collect an additional 22.00% of the balance outstanding (to cover fees for the Attorney General), and allow for referral of the debt for collection by the Department of Taxation and Finance under Section 171-f of the New York State Tax Law, which provides for the offset against State tax refunds or other State payments owed to the obligor.

### **Collection/Delinquency**

Collection activities are governed by the servicing and fee agreements between the Servicer and the Authority. The Servicer maintains errors and omissions insurance coverage for this service.

The Servicer is licensed or registered for collections in states as required or deemed necessary under state regulations. The Servicer is a standing member of the American Collectors Association (ACA) and adheres to the collection standards outlined within the federal Fair Debt Collection Practices Act, as amended ("FDCPA"). The collection and customer service personnel are required to attend an internal FDCPA training class and pass a FDCPA test. On-going FDCPA training is also conducted at least quarterly in the weekly collection and customer service department training meetings.

Each collector or customer service representative is also required to answer a random FDCPA question prior to logging into the servicing system. The answers to these random questions are reported to management for ongoing follow-up training with each employee.

### **Collection/Delinquency: Assessment of Late Charges**

Late charges are assessed on Smart Energy Loans when a customer's payment is not received by the allotted grace period of 10 days after the due date, which is written into the promissory note signed by the customer at time of purchase. No late charges are assessed on late payment of the On-Bill Recovery Loan installment charges collected by the utilities through their billing and collection systems.

### **Collection/Delinquency: Telephone Collection Efforts and Written Late Notices**

The Servicer's late notices are automatically generated based on the collection plan established between the Servicer and the Authority, which includes not more than ten phone calls and three written notices occurring approximately every 15 days commencing once the account is 15 days past due and concluding when such collection activities do not result in payment and the account is 90 days past due. The written notices advise the consumer of the payment due date and total amount past due. The late notice will automatically include a payment remittance form preprinted with the lockbox address, account number, and scan line. If appropriate and as determined within the FDCPA and specific state compliance regulations, the late notice will also include the required 30-day "Validation Notice". This notice validates that the customer is not currently disputing the contractual obligation or the validity of the debt the Servicer is collecting. This notice extends the consumer a 30-day opportunity to notify the Servicer with written notice of any contractual dispute. Upon receipt of the written notice, the Servicer will then follow FDCPA requirements to validate the debt with the Authority.

The Servicer collections are performed within a module that allows the collection personnel to easily move from account to account. This module is designed specifically for the collections environment and limits access according to collection department personnel's access privileges. The collection accounts of each portfolio are selected and segregated each evening automatically. The collection programs are set up and monitored by senior management.

### **Default Collections**

The Servicer has established a unit doing business as Blackwell Recovery to perform default collection services. Blackwell Recovery specializes in the collection of receivables that are more than 90 days past due and is compensated on a contingency fee basis. Collection programs are outlined in the servicing and fees and collections agreement with the Authority.

### **Charge-offs**

The Authority charges off accounts once they are 120 days past due.

### **Extensions and Workouts**

In performing delinquency collections, the Servicer is authorized to waive late payment charges but may not modify the terms of the loan without the Authority's consent. In performing default collections, Blackwell Recovery may offer to settle with the obligor under terms agreed to by the Authority.

### **Backup Servicer and Backup Servicing Agreement**

First Associates Loan Servicer LLC (the "Backup Servicer" and together with the Servicer, the "Servicers") will provide backup services for the Portfolio Loans pursuant to the terms and provisions of a Backup Servicing Agreement, dated as of July 1, 2013 (as amended and supplemented, the "Backup Servicing Agreement"), between the Authority and the Backup Servicer. The Backup Servicer was formed in 1986 and is a consumer loan servicing company that offers a range of solutions for a variety of asset classes including marketplace lending, automotive, motorsports, business, retail purchase finance, solar, timeshare and student loans. The Backup Servicer is headquartered in San Diego, California, and has approximately 400 employees in two locations and services over \$20 billion in loans. The Backup Servicer has advised the Authority that it believes that, as of the date hereof, the Backup Servicer is the only consumer servicer to have a servicer rating, having received Morningstar's top ranking.

Pursuant to the Backup Servicing Agreement, the Backup Servicer agrees to assume the primary portfolio servicing responsibilities under the Servicing Agreement within 45 days of receipt of written notice by the Authority that the Backup Servicer has been appointed the successor servicer; provided, however, the Backup Servicer will be entitled to receive the compensation set forth in the Backup Servicing Agreement rather than the compensation provided for under the Servicing Agreement. With respect to the Series 2019A Bonds, the Backup Servicing Agreement extends through the date the Series 2019A Bonds are no longer Outstanding.

The Backup Servicer agrees to maintain sufficient servicing and collection staff to commence full servicing upon the transfer of the Servicer's rights and obligations under the Servicing Agreement. In furtherance of such agreement, and until it is appointed the successor servicer, the Backup Servicer (i) receives and reviews a monthly report provided by the Servicer and determines that the report is complete, (ii) verifies the aggregate outstanding principal balance of Portfolio Loans at the beginning of the related calendar month, verifies the number and principal balance of delinquent and defaulted Portfolio Loans at the close of the related calendar month, and verifies the aggregate outstanding principal balance of Portfolio Loans at the close of the related calendar month and (iii) receives a complete month end servicing data file sent over via a secure FTP site and housed at the Backup Servicer. Except as provided in the Backup Servicing Agreement, the Backup Servicer does not have any obligation to supervise, verify, monitor or administer the performance of the Servicer, and will have no liability for any action taken or omitted by the Servicer.

## **THE PORTFOLIO LOANS**

### **General**

The Authority owns pools of "Tier 1" loans and "Tier 2" loans purchased or funded by the Authority to finance the installation of solar electric systems and other residential energy efficiency improvements in residential 1-4 family dwellings. On the date of issuance of the Series 2019A Bonds (the "Date of Issuance"), the Authority will assign to the Trustee the right to receive Loan Payments for certain Program Loans (the "Initial Portfolio Loans") that are then outstanding (and, with respect to any "Tier 2" loans, that have been outstanding for at least five years as of the Cutoff Date) and no more than 60 days delinquent as of the Cutoff Date. As of the Statistical Cutoff Date, approximately 34% of the aggregate principal balance of the Initial Portfolio Loans were loans to finance the installation of solar electric systems and the remaining approximately 66% of the aggregate principal balance of the Initial Portfolio Loans were loans to finance other residential energy efficiency improvements. During the prefunding period commencing on the day after the Cutoff Date and ending on or prior to June 30, 2019 (the "Prefunding Period"), on one or more dates subsequent to the Cutoff Date, the Authority will assign to the Trustee the right to receive Loan Payments for the aggregate amount of the outstanding principal balance of, and the accrued but unpaid interest on, additional Program Loans (the "Subsequent Portfolio Loans") that are no more than 30 days delinquent as of a date that is two Business Days prior to the date of such assignment (each a "Subsequent Cutoff Date") (and, with respect to any "Tier 2" loans, that have been outstanding for at least five years as of the Subsequent Cutoff Date) which, as a whole, meet the Portfolio Criteria as of the end of the Prefunding Period. See the caption "Portfolio Criteria" below. Such Pledged Loan Payments will be pledged to the Trustee pursuant to the Indenture on the related date or dates on which moneys are withdrawn from the Loan Fund. Any amounts remaining in the Loan Fund as of the end of the Prefunding Period will be deposited in the Redemption Fund as described under the caption "DESCRIPTION OF THE INDENTURE—Redemption Fund" herein. The Initial Portfolio Loans and the Subsequent Portfolio Loans are collectively referred to herein as the "Portfolio Loans". No expenses incurred in connection with the selection and acquisition of the Portfolio Loans will be payable from the proceeds of the issuance of the Series 2019A Bonds. It is currently expected that approximately \$17.5 million of Program Loans will be included in the Initial Loan Portfolio and that approximately \$3.7 million of additional Program Loans will be included in the Subsequent Portfolio Loans.

Other than the Trustee, as secured party under the Indenture, no party will have any material direct or contingent claim on any Pledged Loan Payments.

### **Loan Criteria**

Each Program Loan whose Loan Payments are to be pledged by the Authority to the Trustee on the Date of Issuance or subsequently during the Prefunding Period will satisfy each of the following criteria as of its date of origination and/or as of the Cutoff Date, in the case of Initial Portfolio Loans, or the corresponding Subsequent Cutoff Date, in the case of Subsequent Portfolio Loans, as applicable:

- each Program Loan is a valid and binding obligation of the obligor at each such time;

- no Program Loan is subject at either such time to a prior perfected lien;
- each Program Loan has an original maturity of not more than 180 months and a remaining maturity on such Cutoff Date or Subsequent Cutoff Date, as applicable, of at least three months and not more than 180 months;
- each Program Loan has a remaining principal balance on such Cutoff Date or Subsequent Cutoff Date, as applicable, of at least \$100 and not more than \$25,000;
- each Program Loan has an interest rate at each such time of at least 2.99%;
- each Program Loan provides at each such time for level scheduled monthly payments that fully amortize the amount financed over its original term to maturity;
- each Portfolio Loan was originated in the United States/State of New York and was not on such Cutoff Date or Subsequent Cutoff Date, as applicable, identified on the records of the Servicer as being subject to any pending bankruptcy proceeding;
- each Program Loan arose under a contract with respect to which the Authority on such Cutoff Date or Subsequent Cutoff Date, as applicable, has performed all obligations required to be performed by it thereunder;
- each Program Loan was originated and on such Cutoff Date or Subsequent Cutoff Date, as applicable, has been serviced in compliance with all applicable laws;
- each Program Loan: (a)(i) if an Initial Portfolio Loan and a “Tier 1” loan, was not more than sixty (60) days delinquent as of the Cutoff Date or (ii) if an Initial Portfolio Loan and a “Tier 2” loan, was originated no fewer than sixty (60) months prior to the Cutoff Date and was not more than sixty (60) days delinquent as of the Cutoff Date; or (b)(i) if a Subsequent Portfolio Loan and a “Tier 1” loan, was not more than thirty (30) days delinquent as of its Subsequent Cutoff Date or (ii) if a Subsequent Portfolio Loan and a “Tier 2” loan, was originated no fewer than sixty (60) months prior to its Subsequent Cutoff Date and was not more than thirty (30) days delinquent as of its Subsequent Cutoff Date, and
- the Borrower under each Program Loan met the underwriting criteria for the Program Loans described under the caption “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Underwriting—Loan Approval Process” herein at the time of origination of such Program Loan.

See the caption “INVESTMENT CONSIDERATIONS—Considerations Relating to the Pledged Revenues—*The Authority’s Obligation to Cause the Release of Certain Portfolio Loans by Effecting their Prepayment is Limited*” herein and the caption “Certain Covenants—*Representations, Warranties and Covenants as to Loans—Non-Eligible Loans*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

The Authority discovered in 2017 that a new software program used in the origination of loans under the Residential Loan Program implemented by the Originator during 2016 included features relating to the calculation of monthly loan payment amounts that, in conjunction with the Servicer’s systems, permitted a small balance on certain loans originated during such period, including approximately 41 Initial Portfolio Loans as of the Statistical Cutoff Date and other loans that are expected to become Portfolio Loans, to remain unpaid after their final scheduled monthly payment, which would result in the discharge of the surviving balance. The Authority projects the aggregate amount of such surviving balance on the Initial Portfolio Loans to be approximately \$267, or 0.0018% of the aggregate principal balance of such Initial Portfolio Loans as of the Statistical Cutoff Date, and no such surviving balance on any Portfolio Loan could exceed \$15.00. These features were corrected with respect to loans originated after December 12, 2017, but could exist for loans approved but not yet disbursed prior to this date. See “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE—Certain Covenants—Enforcement of Loan Agreements” hereto.

## Portfolio Criteria

In addition, the Loan Payments on a Subsequent Portfolio Loan may only be pledged by the Authority to the Trustee if such Subsequent Portfolio Loans, collectively, meet the following Portfolio Criteria as of the end of the Prefunding Period:

- the percentage of the aggregate unpaid principal amount of all “Tier 1” On-Bill Recovery Loans to finance the installation of energy efficiency measures shall be no greater than 4% of such Subsequent Portfolio Loans;
- the percentage of the aggregate unpaid principal amount of all “Tier 1” On-Bill Recovery Loans to finance the installation of solar electric systems shall be no greater than 41% of such Subsequent Portfolio Loans;
- the percentage of the aggregate unpaid principal amount of all “Tier 2” Smart Energy Loans to finance the installation of energy efficiency measures shall be no greater than 4% of such Subsequent Portfolio Loans;
- the percentage of the aggregate unpaid principal amount of all “Tier 2” On-Bill Recovery Loans to finance the installation of energy efficiency measures shall be no greater than 2% of such Subsequent Portfolio Loans;
- the weighted average debt to income ratio applicable to all such Subsequent Portfolio Loans, at the time of their respective origination, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans shall be no greater than 35%;
- the weighted average FICO® score applicable to all such Subsequent Portfolio Loans, at the time of their respective origination, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans shall be no less than 730; and
- the weighted average interest rates applicable to all such Subsequent Portfolio Loans, upon the applicable date of reimbursement, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans, upon completion of such reimbursement, shall be no less than 5.20% for all such Subsequent Portfolio Loans.

See the caption “INVESTMENT CONSIDERATIONS—Considerations Relating to the Pledged Revenues—*The Authority’s Obligation to Cause the Release of Certain Portfolio Loans by Effecting their Prepayment is Limited*” herein and the caption “Certain Covenants—*Representations, Warranties and Covenants as to Loans—Non-Eligible Loans*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

## Characteristics of the Initial Portfolio Loans as of the Statistical Cutoff Date

The following tables set forth information with respect to the Initial Portfolio Loans as of the close of business on the Statistical Cutoff Date. The percentages below are calculated based on the Statistical Cutoff Date pool balance. Additional Loans are expected to be originated subsequent to the Statistical Cutoff Date. The characteristics of such Subsequent Portfolio Loans will vary somewhat from those of the Initial Portfolio Loans. While the characteristics of the Portfolio Loans as of the end of the Prefunding Period will differ somewhat from the information set forth in these tables, the Authority anticipates that the variations will not be significant. The percentages set forth in the tables below may not always add to 100% and the balances may not always add to the total therefor due to rounding.

**Composition of the Initial Portfolio Loans  
as of the Statistical Cutoff Date**

	<b>On-Bill Recovery Loans</b>	<b>Smart Energy Loans</b>	<b>Total</b>
Original Principal Balance	\$5,126,989	\$11,146,153	\$16,273,142
Principal Balance as of the Statistical Cutoff Date	\$4,766,765	\$9,955,148	\$14,721,913
Percentage of Pool Balance	32.38%	67.62%	100%
Number of Initial Portfolio Loans	386	1,261	1,647
Average Principal Balance as of the Statistical Cutoff Date	\$12,349	\$7,895	\$8,939
Weighted Average Coupon Rate	6.33%	4.93%	5.38%
Coupon Rate (Range)	2.99%-7.99%	3.49%-8.49%	2.99%-8.49%
Weighted Average Original Term (months)	179.20	175.83	176.92
Original Term (Range) (months)	60-180 months	60-180 months	60-180 months
Weighted Average Remaining Term (months)	168.10	160.04	162.65
Weighted Average FICO® Score*	756.95	737.99	744.13
Weighted Average Debt-to-Income	30.2%	30.3%	30.3%

\*Based upon the FICO® score at the origination of each Initial Portfolio Loan and the outstanding principal amounts of each Initial Portfolio Loan as of the Statistical Cutoff Date. FICO® is a federally registered service mark of Fair Isaac Corporation. FICO® scores generated by credit reporting agencies. The Originator utilizes TransUnion, Equifax or Experian credit reports depending on location of the obligor. FICO® scores were unavailable for some obligors at the time of application of the related Portfolio Loan. A FICO® score is a measurement determined by Fair Isaac Corporation using information collected by the major credit bureaus to assess credit risk. Data from an independent credit reporting agency, such as a FICO® score, is one of several factors that may be used by the Authority in its credit scoring system to assess the credit risk associated with each applicant. See the caption “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Underwriting—Pricing and Credit Scoring” herein. FICO® scores are intended to show the likelihood that an individual might default on a debt based on past credit history. An individual’s credit history may not reliably predict his or her future creditworthiness. Additionally, the reliability of the credit scoring the FICO® scores provide is limited by the accuracy of the data contained within the credit bureau files. Accordingly, FICO® scores should not necessarily be relied upon as a meaningful predictor of the performance of the Portfolio Loans.

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**Composition of “Tier 1” Loans within the Initial Portfolio  
as of the Statistical Cutoff Date**

	<b>On-Bill Recovery Loans</b>	<b>Smart Energy Loans</b>	<b>Total</b>
Original Principal Balance	\$4,223,995	\$8,933,363	\$13,157,358
Principal Balance as of the Statistical Cutoff Date	\$4,170,223	\$8,631,562	\$12,801,786
Percentage of “Tier 1” Pool Balance	32.58%	67.42%	100.00%
Number of Initial Portfolio Loans	298	1,047	1,345
Average Principal Balance as of the Statistical Cutoff Date	\$13,994	\$8,244	\$9,518
Weighted Average Coupon Rate	6.79%	5.14%	5.67%
Coupon Rate (Range)	3.49%-7.99%	3.49%-8.49%	3.49%-8.49%
Weighted Average Original Term (months)	179.49	175.98	177.12
Original Term (Range) (months)	60-180 months	60-180 months	60-180 months
Weighted Average Remaining Term (months)	176.45	169.30	171.63
Weighted Average FICO® Score*	761.96	743.16	749.28
Weighted Average Debt-to-Income	26.5%	26.8%	26.7%

\*Based upon the FICO® score at the origination of each Initial Portfolio Loan and the outstanding principal amounts of each Initial Portfolio Loan as of the Statistical Cutoff Date. FICO® is a federally registered service mark of Fair Isaac Corporation. FICO® scores generated by credit reporting agencies. The Originator utilizes TransUnion, Equifax or Experian credit reports depending on location of the obligor. FICO® scores were unavailable for some obligors at the time of application of the related Portfolio Loan. A FICO® score is a measurement determined by Fair Isaac Corporation using information collected by the major credit bureaus to assess credit risk. Data from an independent credit reporting agency, such as a FICO® score, is one of several factors that may be used by the Authority in its credit scoring system to assess the credit risk associated with each applicant. See the caption “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Underwriting—Pricing and Credit Scoring” herein. FICO® scores are intended to show the likelihood that an individual might default on a debt based on past credit history. An individual’s credit history may not reliably predict his or her future creditworthiness. Additionally, the reliability of the credit scoring the FICO® scores provide is limited by the accuracy of the data contained within the credit bureau files. Accordingly, FICO® scores should not necessarily be relied upon as a meaningful predictor of the performance of the Portfolio Loans.

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**Composition of “Tier 2” Loans within the Initial Portfolio  
as of the Statistical Cutoff Date**

	<b>On-Bill Recovery Loans</b>	<b>Smart Energy Loans</b>	<b>Total</b>
Original Principal Balance	\$902,994	\$2,212,791	\$3,115,785
Principal Balance as of the Statistical Cutoff Date	\$596,542	\$1,323,586	\$1,920,128
Percentage of “Tier 2” Pool Balance	31.07%	68.93%	100.0%
Number of Initial Portfolio Loans	88	214	302
Average Principal Balance as of the Statistical Cutoff Date	\$6,779	\$6,185	\$6,358
Weighted Average Coupon Rate	3.14%	3.56%	3.43%
Coupon Rate (Range)	2.99%-3.49%	3.49%-3.99%	2.99%-3.99%
Weighted Average Original Term (months)	177.21	174.84	175.57
Original Term (Range) (months)	60-180 months	120-180 months	60-180 months
Weighted Average Remaining Term (months)	109.76	99.69	102.82
Weighted Average FICO® Score*	721.75	703.69	709.35
Weighted Average Debt-to-Income	56.2%	53.5%	54.4%

\*Based upon the FICO® score at the origination of each Initial Portfolio Loan and the outstanding principal amounts of each Initial Portfolio Loan as of the Statistical Cutoff Date. FICO® is a federally registered service mark of Fair Isaac Corporation. FICO® scores generated by credit reporting agencies. The Originator utilizes TransUnion, Equifax or Experian credit reports depending on location of the obligor. FICO® scores were unavailable for some obligors at the time of application of the related Portfolio Loan. A FICO® score is a measurement determined by Fair Isaac Corporation using information collected by the major credit bureaus to assess credit risk. Data from an independent credit reporting agency, such as a FICO® score, is one of several factors that may be used by the Authority in its credit scoring system to assess the credit risk associated with each applicant. See the caption “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Underwriting—Pricing and Credit Scoring” herein. FICO® scores are intended to show the likelihood that an individual might default on a debt based on past credit history. An individual’s credit history may not reliably predict his or her future creditworthiness. Additionally, the reliability of the credit scoring the FICO® scores provide is limited by the accuracy of the data contained within the credit bureau files. Accordingly, FICO® scores should not necessarily be relied upon as a meaningful predictor of the performance of the Portfolio Loans.

**Distribution of the Initial Portfolio Loans by Project Type  
as of the Statistical Cutoff Date**

<b>Project Type</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
Energy Efficiency	1,311	79.6%	\$ 9,726,693	66.1%
Solar Photovoltaic	<u>336</u>	<u>20.4</u>	<u>4,995,221</u>	<u>33.9</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

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**Distribution of the Initial Portfolio Loans by Underwriting Tier  
as of the Statistical Cutoff Date**

<b>Underwriting Tier</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
Tier 1	1,345	81.7%	\$12,801,786	87.0%
Tier 2	<u>302</u>	<u>18.3</u>	<u>1,920,128</u>	<u>13.0</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

**Distribution of the Initial Portfolio Loans by Original Principal Balance  
as of the Statistical Cutoff Date**

<b>Original Principal Balance Range</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Original Principal Balance</b>	<b>Percentage of Total</b>
\$0 - \$2,000	20	1.2%	\$ 34,884	0.2%
\$2,001 - \$4,000	268	16.3	814,301	5.0
\$4,001 - \$6,000	246	14.9	1,214,228	7.5
\$6,001 - \$8,000	229	13.9	1,607,742	9.9
\$8,001 - \$10,000	196	11.9	1,751,910	10.8
\$10,001 - \$12,000	163	9.9	1,781,467	10.9
\$12,001 - \$14,000	165	10.0	2,131,776	13.1
\$14,001 - \$16,000	86	5.2	1,282,886	7.9
\$16,001 - \$18,000	77	4.7	1,303,897	8.0
\$18,001 - \$20,000	47	2.9	894,704	5.5
\$20,001 - \$22,000	46	2.8	964,827	5.9
\$22,001 - \$24,000	47	2.9	1,072,401	6.6
\$24,001 - \$25,000	<u>57</u>	<u>3.5</u>	<u>1,418,120</u>	<u>8.7</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$16,273,142</u>	<u>100.0%</u>

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**Distribution of the Initial Portfolio Loans by Current Principal Balance  
as of the Statistical Cutoff Date**

<b>Current Principal Balance Range</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
\$1 - \$2,000	64	3.9%	\$ 98,691	0.7%
\$2,001 - \$4,000	321	19.5	969,983	6.6
\$4,001 - \$6,000	252	15.3	1,259,596	8.6
\$6,001 - \$8,000	244	14.8	1,721,075	11.7
\$8,001 - \$10,000	184	11.2	1,648,948	11.2
\$10,001 - \$12,000	142	8.6	1,543,721	10.5
\$12,001 - \$14,000	143	8.7	1,841,112	12.5
\$14,001 - \$16,000	74	4.5	1,100,148	7.5
\$16,001 - \$18,000	67	4.1	1,131,283	7.7
\$18,001 - \$20,000	42	2.6	801,358	5.4
\$20,001 - \$22,000	42	2.6	887,993	6.0
\$22,001 - \$24,000	33	2.0	758,025	5.1
\$24,001 - \$25,000	<u>39</u>	<u>2.4</u>	<u>959,980</u>	<u>6.5</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

**Distribution of the Initial Portfolio Loans by Original Term to Maturity  
as of the Statistical Cutoff Date\***

<b>Original Term Range (months)</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
0-60	36	2.2%	\$ 153,743	1.0%
61-120	88	5.3	446,922	3.0
121-180	<u>1,523</u>	<u>92.5</u>	<u>14,121,248</u>	<u>95.9</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

\*See the caption "PORTFOLIO LOANS—Loan Criteria" for information concerning the maturity dates for certain Portfolio Loans.

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**Distribution of the Initial Portfolio Loans by Number of Payments Made  
as of the Statistical Cutoff Date**

<b>Number of Payments Made</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
0-12	1,235	75.0%	\$12,122,379	82.3%
13-24	60	3.6	417,790	2.8
25-36	19	1.2	110,189	0.7
37-48	4	0.2	31,849	0.2
49-60	17	1.0	111,208	0.8
61-72	153	9.3	1,065,299	7.2
73-84	108	6.6	654,515	4.4
85-96	27	1.6	118,706	0.8
97-108	7	0.4	37,859	0.3
109-120	6	0.4	32,345	0.2
121-132	2	0.1	4,303	0.0*
133-144	2	0.1	9,816	0.1
145-156	2	0.1	1,349	0.0*
157-168	<u>5</u>	<u>0.3</u>	<u>4,305</u>	<u>0.0*</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

\* Less than 0.05%, but greater than 0.00%.

**Distribution of the Initial Portfolio Loans by Remaining Term to Maturity  
as of the Statistical Cutoff Date\***

<b>Remaining Term Range (Months)</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
1-12	2	0.1%	\$ 1,343	0.0%**
13-24	4	0.2	8,093	0.1
25-36	13	0.8	33,888	0.2
37-48	30	1.8	112,476	0.8
49-60	41	2.5	161,652	1.1
61-72	7	0.4	40,284	0.3
73-84	6	0.4	32,728	0.2
85-96	26	1.6	137,734	0.9
97-108	95	5.8	629,584	4.3
109-120	176	10.7	1,258,297	8.5
121-132	9	0.5	72,418	0.5
133-144	7	0.4	45,548	0.3
145-156	18	1.1	118,380	0.8
157-168	66	4.0	489,276	3.3
169-180	<u>1,147</u>	<u>69.6</u>	<u>11,580,212</u>	<u>78.7</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

\*See the caption "PORTFOLIO LOANS—Loan Criteria" for information concerning the maturity dates for certain Portfolio Loans.

\*\* Less than 0.05%, but greater than 0.00%.

**Distribution of the Initial Portfolio Loans by Debt-To-Income (DTI)\*  
as of the Statistical Cutoff Date**

<b>DTI Range*</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
0%–25%	611	37.1%	\$ 5,459,721	37.1%
26%–50%	815	49.5	7,854,690	53.4
51%–75%	178	10.8	1,183,587	8.0
76% +	42	2.6	220,724	1.5
Not available**	<u>1</u>	<u>0.1</u>	<u>3,192</u>	<u>0.0</u> ***
<b>Total</b>	<b><u>1,647</u></b>	<b><u>100.0%</u></b>	<b><u>\$14,721,913</u></b>	<b><u>100.0%</u></b>

\*Based upon the DTI at the origination of each Initial Portfolio Loan and the outstanding principal amounts of each Initial Portfolio Loan as of the Statistical Cutoff Date. DTI is calculated by dividing the customer's total regular monthly income by the sum of the minimum monthly payments listed on the customer's credit report.

\*\*Debt-to-income information is not collected on On-Bill Recovery Loans that have been assumed by subsequent purchasers of the related property.

\*\*\* Less than 0.05%, but greater than 0.00%.

**Distribution of the Initial Portfolio Loans by FICO® Score  
as of the Statistical Cutoff Date**

<b>FICO® Score Range*</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
0-539	2	0.1%	\$ 10,340	0.1%
540-639	47	2.9	325,403	2.2
640-699	322	19.6	2,504,820	17.0
700-749	444	27.0	4,023,775	27.3
750-799	707	42.9	6,781,767	46.1
800+	122	7.4	1,050,300	7.1
Not available**	<u>3</u>	<u>0.2</u>	<u>25,508</u>	<u>0.2</u>
<b>Total</b>	<b><u>1,647</u></b>	<b><u>100.0%</u></b>	<b><u>\$14,721,913</u></b>	<b><u>100.0%</u></b>

\*Based upon the FICO® score at the origination of the Initial Portfolio Loan.

\*\*FICO® scores are not collected on On-Bill Recovery Loans that have been assumed by subsequent purchasers of the related property.

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**Distribution of the Initial Portfolio Loans by Year of Origination  
as of the Statistical Cutoff Date**

<b>Year of Origination</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
2011	31	1.9%	\$ 145,472	1.0%
2012	117	7.1	711,239	4.8
2013	149	9.0	1,042,828	7.1
2014	5	0.3	20,589	0.1
2016	4	0.2	58,687	0.4
2017	26	1.6	156,539	1.1
2018	1,246	75.7	11,797,521	80.1
2019	69	4.2	789,038	5.4
<b>Total</b>	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

**Distribution of the Initial Portfolio Loans by Payment Method  
as of the Statistical Cutoff Date**

<b>Payment Method</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
On-Bill Recovery Loan	386	23.4%	\$ 4,766,765	32.4%
Smart Energy Loan-ACH	937	56.9	7,955,560	54.0
Smart Energy Loan-Check	324	19.7	1,999,588	13.6
<b>Total</b>	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

**Distribution of the Initial Portfolio Loans by Coupon Rate  
as of the Statistical Cutoff Date**

<b>Contract Rate</b>	<b>Number of Initial Portfolio Loans</b>	<b>Percentage of Total Number of Initial Portfolio Loans</b>	<b>Principal Balance as of the Statistical Cutoff Date</b>	<b>Percentage of Statistical Cutoff Date Pool Balance</b>
2.99%	61	3.7%	\$ 422,675	2.9%
3.49%	676	41.0	4,868,539	33.1
3.99%	255	15.5	1,275,291	8.7
4.99%	168	10.2	2,018,363	13.7
5.49%	25	1.5	225,265	1.5
6.99%	228	13.8	2,568,796	17.4
7.49%	26	1.6	262,145	1.8
7.99%	204	12.4	3,022,771	20.5
8.49%	4	0.2	58,068	0.4
<b>Total</b>	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

**Distribution of the Initial Portfolio Loans by County of Obligor  
as of the Statistical Cutoff Date**

County of Obligor	Number of Initial Portfolio Loans	Percentage of Total Number of Initial Portfolio Loans	Principal Balance as of the Statistical Cutoff Date	Percentage of Statistical Cutoff Date Pool Balance
Nassau	243	14.8%	\$ 3,486,866	23.7%
Suffolk	263	16.0	2,873,174	19.5
Monroe	244	14.8	1,508,429	10.2
Erie	150	9.1	811,484	5.5
Westchester	55	3.3	626,655	4.3
Onondaga	92	5.6	488,132	3.3
Ontario	46	2.8	355,143	2.4
Oneida	41	2.5	310,802	2.1
Other*	<u>513</u>	<u>31.1</u>	<u>4,261,229</u>	<u>28.9</u>
Total	<u>1,647</u>	<u>100.0%</u>	<u>\$14,721,913</u>	<u>100.0%</u>

\*The aggregate principal balance, as of the Statistical Cutoff Date, of the Initial Portfolio Loans associated with each County that is included in the "Other" category accounted for less than 2.00% of the Statistical Cutoff Date pool balance.

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## Delinquency and Loss Information

Although the repayment history of the Initial Portfolio Loans is limited, the Authority has been making loans under its residential loan programs since December 2010, and believes the terms and origination criteria of such previously originated loans to be materially similar to those of the Initial Portfolio Loans. Set forth below is delinquency and credit loss information relating to: (a) the Initial Portfolio Loans originated as of the Statistical Cutoff Date (including a breakdown between “Tier 1” and “Tier 2” loans); and (b) all of the Authority’s Program Loans, including such Initial Portfolio Loans, as of the Statistical Cutoff Date (including a breakdown between “Tier 1” and “Tier 2” loans). There can be no assurance that the delinquency and credit loss experience with respect to the Portfolio Loans owned or to be owned by the Authority will correspond to the delinquency and credit loss experience of the total portfolio of Program Loans set forth in the following tables. The percentages in these tables may not add up to 100% due to rounding.

On-Bill Recovery Loans provide for billing by a utility upon its normal service billing cycle, commencing with the first billing period after the date on which the On-Bill Recovery Loan is fully disbursed, and requires the utility to remit monthly collections by the 15th day of the next calendar month. In the Servicer’s system, the 15<sup>th</sup> day of the third calendar month from the date that each On-Bill Recovery Loan is established as its projected remittance due date. However, because actual utility billing cycles differ from this projected cycle, an On-Bill Recovery Loan’s actual first utility billing cycle can commence later than expected, which may cause the Servicer’s system to report the On-Bill Recovery Loan as delinquent even if the utility bill payment was timely made, due to this disparity between the projected and the actual installment due date. This disparity can continue in future reporting periods. As a result, certain of the Program Loans (being those On-Bill Recovery Loans) in the tables below may be reported as being 31-60 days delinquent when, in fact, such Program Loans were current or, if they were actually delinquent, as being more delinquent than they really were.

### Delinquency Experience - All “Tier 1” Program Loans

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
December 31, 2011	\$ 7,162,607	\$ 48,981	0.68%	\$ 8,638	0.12%	\$ -	0.00%	\$ 4,382	0.06%
March 31, 2012	10,563,065	-	0.00	-	0.00	-	0.00	4,382	0.04
March 31, 2013	24,292,962	148,703	0.61	51,094	0.21	29,516	0.12	64,868	0.27
March 31, 2014	38,731,987	273,821	0.71	149,941	0.39	94,367	0.24	338,159	0.87
March 31, 2015	65,602,479	458,810	0.70	260,462	0.40	219,764	0.33	1,047,086	1.60
March 31, 2015	120,870,064	735,320	0.61	372,203	0.31	329,516	0.27	1,452,581	1.20
March 31, 2017	166,103,685	2,717,542	1.64	777,243	0.47	611,928	0.37	2,352,142	1.42
March 31, 2018	166,148,210	2,261,356	1.36	1,105,389	0.67	428,842	0.26	3,444,830	2.07
January 16, 2019	164,000,601	2,032,055	1.24	1,114,284	0.68	561,690	0.34	4,382,542	2.67

**Delinquency Experience - All "Tier 2" Program Loans\***

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
December 31, 2011	\$ 411,883	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ 5,218	1.27%
March 31, 2012	870,123	-	0.00	-	0.00	-	0.00	5,218	0.60
March 31, 2013	2,766,144	57,675	2.09	27,795	1.00	-	0.00	4,925	0.18
March 31, 2014	4,321,317	46,677	1.08	10,929	0.25	-	0.00	80,014	1.85
March 31, 2015	8,849,448	52,407	0.59	27,901	0.32	30,971	0.35	173,465	1.96
March 31, 2015	22,397,147	168,819	0.75	161,128	0.72	63,541	0.28	425,316	1.90
March 31, 2017	32,798,387	631,089	1.92	340,073	1.04	213,621	0.65	983,017	3.00
March 31, 2018	36,382,539	652,818	1.79	434,682	1.19	199,368	0.55	1,598,618	4.39
January 16, 2019	38,506,997	616,586	1.60	505,309	1.31	329,564	0.86	2,308,156	5.99

\*For the Loan Payments on a "Tier 2" Program Loan to be pledged as part of the trust estate securing the Series 2019A Bonds, such "Tier 2" Program Loan must have been originated no fewer than sixty (60) months prior to the applicable Cutoff Date.

**Delinquency Experience - All Program Loans**

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
December 31, 2011	\$ 7,574,490	\$ 48,981	0.65%	\$ 8,638	0.11%	\$ -	0.00%	\$ 9,600	0.13%
March 31, 2012	11,433,188	-	0.00	-	0.00	-	0.00	9,600	0.08
March 31, 2013	27,059,105	206,378	0.76	78,889	0.29	29,516	0.11	69,793	0.26
March 31, 2014	43,053,303	320,497	0.74	160,870	0.37	94,367	0.22	418,173	0.97
March 31, 2015	74,451,928	511,217	0.69	288,363	0.39	250,735	0.34	1,220,551	1.64
March 31, 2015	143,267,211	904,140	0.63	533,331	0.37	393,057	0.27	1,877,897	1.31
March 31, 2017	198,902,072	3,348,631	1.68	1,117,316	0.56	825,549	0.42	3,335,159	1.68
March 31, 2018	202,530,748	2,914,174	1.44	1,540,070	0.76	628,210	0.31	5,043,448	2.49
January 16, 2019	202,507,598	2,648,641	1.31	1,619,593	0.80	891,254	0.44	6,690,698	3.30

**Delinquency Experience – Initial "Tier 1" Portfolio Loans**

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
January 16, 2019	\$12,801,786	\$196,375	1.5%	\$ -*	0.0%*	\$ -*	0.0%*	\$ -*	0.0%*

\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

**Delinquency Experience – Initial “Tier 2” Portfolio Loans**

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
January 16, 2019	\$1,920,128	\$38,189	2.0%	\$ - *	0.0%*	\$ - *	0.0%*	\$ - *	0.0%*

\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

**Delinquency Experience – Initial Portfolio Loans**

Date	Principal Amount Outstanding	31-60 days	Percent of Total	61-90 days	Percent of Total	91-120 days	Percent of Total	121 days or more	Percent of Total
January 16, 2019	\$14,721,913	\$234,564	1.6%	\$ - *	0.0%*	\$ - *	0.0%*	\$ - *	0.0%*

\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

**Net Loss Experience - All “Tier 1” Program Loans  
as of January 16, 2019\***

Year of Origination	Number of Loans	Original Loan Principal	Weighted Average Interest Rate	Weighted Average FICO**	Weighted Average DTI**	Weighted Average Original Term	Weighted Average Payments Made	Weighted Average Remaining Term	Outstanding Principal Balance	Cumulative Net Charge-offs	Cumulative Net Charge-off Percent
2010	6	\$ 53,986	3.53%	723.2	32.1%	155.5	97.5	58.0	\$ 21,403	\$ -	0.00%
2011	852	7,384,160	3.60	751.4	33.1	141.0	95.0	46.0	2,319,375	244,559	3.31
2012	1,414	14,081,911	3.40	751.1	31.3	158.7	92.8	66.0	5,948,262	537,251	3.82
2013	1,787	17,754,743	3.42	750.9	28.9	170.9	85.5	85.4	9,317,449	578,967	3.26
2014	2,165	24,148,927	3.52	752.1	28.7	171.3	70.0	101.3	14,859,143	670,772	2.78
2015	4,317	59,120,366	3.51	755.7	26.5	173.0	58.3	114.6	40,602,906	919,493	1.56
2016	5,200	69,215,124	3.53	755.8	24.8	174.1	43.6	130.5	53,380,700	1,015,581	1.47
2017	2,252	25,866,704	4.58	748.8	25.7	175.2	31.7	143.5	21,806,170	339,744	1.31
2018	1,582	15,982,492	5.57	748.6	26.4	175.6	13.0	162.5	14,956,156	142,336	0.89
2019	69	789,182	6.16	757.4	27.8	178.4	0.1	178.4	789,038	-	0.00
Total/Average	<u>19,644</u>	<u>\$234,397,595</u>	<u>3.77</u>	<u>753.4</u>	<u>26.8</u>	<u>171.6</u>	<u>54.3</u>	<u>117.3</u>	<u>\$164,000,601</u>	<u>\$4,448,703</u>	<u>1.90</u>

\*All weighted averages are calculated using the original principal amount of each Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Program Loan.

**Net Loss Experience - All "Tier 2" Program Loans  
as of January 16, 2019\***

Year of Origination	Number of Loans	Original Loan Principal	Weighted Average Interest Rate	Weighted Average FICO**	Weighted Average DTI**	Weighted Average Original Term	Weighted Average Payments Made	Weighted Average Remaining Term	Outstanding Principal Balance	Cumulative Net Charge-offs	Cumulative Net Charge-off Percent
2011	50	\$ 428,256	3.60%	708.1	48.5%	165.5	108.9	56.6	\$ 159,635	\$ 14,163	3.31%
2012	181	1,771,906	3.44	713.8	59.8	162.5	85.9	76.6	865,085	144,508	8.16
2013	216	2,106,491	3.43	710.0	56.8	174.0	80.9	93.1	1,196,302	97,948	4.65
2014	267	2,686,380	3.51	716.0	57.9	175.1	64.6	110.5	1,779,022	115,226	4.29
2015	1,048	13,162,451	3.53	707.0	53.4	175.5	51.5	124.0	9,671,665	722,974	5.49
2016	1,194	14,226,547	3.54	705.6	52.2	175.1	36.7	138.4	11,585,954	679,814	4.78
2017	775	8,010,225	4.11	696.7	51.1	176.6	25.6	151.1	7,043,629	423,655	5.29
2018	659	5,970,156	4.35	695.4	52.3	176.9	9.9	166.9	5,683,703	145,903	2.44
2019	<u>33</u>	<u>310,733</u>	<u>4.82</u>	<u>718.2</u>	<u>55.2</u>	<u>169.4</u>	<u>0.0</u>	<u>169.4</u>	<u>310,733</u>	<u>-</u>	<u>0.00</u>
Total/Average	<u>4,423</u>	<u>\$48,673,145</u>	<u>3.73%</u>	<u>704.5</u>	<u>53.1%</u>	<u>175.0</u>	<u>41.2</u>	<u>133.8</u>	<u>\$38,295,728</u>	<u>\$2,344,190</u>	<u>4.82%</u>

\*All weighted averages are calculated using the original principal amount of each Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Program Loan.

**Net Loss Experience - All Program Loans  
as of January 16, 2019\***

Year of Origination	Number of Loans	Original Loan Principal	Weighted Average Interest Rate	Weighted Average FICO**	Weighted Average DTI**	Weighted Average Original Term	Weighted Average Payments Made	Weighted Average Remaining Term	Outstanding Principal Balance	Cumulative Net Charge-offs	Cumulative Net Charge-off Percent
2010	6	\$ 53,986	3.53%	723.2	32.1%	155.5	97.5	58.0	\$ 21,403	\$ -	0.00%
2011	902	7,812,416	3.60	749.0	33.9	142.3	95.8	46.6	2,479,010	258,722	0.09
2012	1,595	15,853,817	3.40	747.1	34.4	159.2	92.0	67.2	6,813,346	681,759	0.24
2013	2,003	19,861,233	3.42	746.5	31.9	171.2	85.0	86.2	10,513,751	676,915	0.24
2014	2,432	26,835,307	3.52	748.5	31.6	171.7	69.5	102.2	16,638,164	785,998	0.28
2015	5,365	72,282,818	3.52	746.8	31.4	173.4	57.1	116.3	50,274,571	1,642,467	0.58
2016	6,394	83,441,671	3.53	747.3	29.5	174.3	42.5	131.9	64,966,654	1,695,395	0.60
2017	3,027	33,876,930	4.47	736.2	31.8	175.5	30.2	145.3	28,849,799	763,399	0.27
2018	2,241	21,952,648	5.24	734.0	33.5	175.9	12.2	163.7	20,639,859	288,239	0.10
2019	<u>102</u>	<u>1,099,915</u>	<u>5.78</u>	<u>746.3</u>	<u>35.5</u>	<u>175.9</u>	<u>0.0</u>	<u>175.8</u>	<u>1,099,771</u>	<u>-</u>	<u>0.00</u>
Total/Average	<u>24,067</u>	<u>\$283,070,741</u>	<u>3.77%</u>	<u>744.9</u>	<u>31.4%</u>	<u>172.2</u>	<u>52.0</u>	<u>120.1</u>	<u>\$202,296,329</u>	<u>\$6,792,893</u>	<u>2.40%</u>

\*All weighted averages are calculated using the original principal amount of each Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Program Loan.

**Net Loss Experience – Initial “Tier 1” Portfolio Loans  
as of the Statistical Cutoff Date\***

<b>Year of Origination</b>	<b>Number of Loans</b>	<b>Original Loan Principal</b>	<b>Weighted Average Interest Rate</b>	<b>Weighted Average FICO**</b>	<b>Weighted Average DTI**</b>	<b>Weighted Average Original Term</b>	<b>Weighted Average Payments Made</b>	<b>Weighted Average Remaining Term</b>	<b>Outstanding Principal Balance</b>	<b>Cumulative Net Charge-offs</b>	<b>Cumulative Net Charge-off Percent</b>
2016	4	\$ 67,532	3.52%	748.5	31.7%	180.0	27.9	152.1	\$ 58,687	n/a***	n/a***
2017	26	171,698	4.11	734.3	23.8	169.9	17.6	152.4	156,539	n/a***	n/a***
2018	1,246	12,128,945	5.66	749.0	26.6	176.9	6.5	170.4	11,797,521	n/a***	n/a***
2019	69	789,182	6.16	757.4	27.8	178.4	0.1	178.4	789,038	n/a***	n/a***
Total/Average	<u>1,345</u>	<u>\$13,157,358</u>	<u>5.66%</u>	<u>749.3</u>	<u>26.7%</u>	<u>176.9</u>	<u>6.4</u>	<u>170.6</u>	<u>\$12,801,786</u>	n/a***	n/a***

\*All weighted averages are calculated using the original principal amount of each Initial Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Initial Portfolio Loan.

\*\*\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

**Net Loss Experience – Initial “Tier 2” Portfolio Loans  
as of the Statistical Cutoff Date\***

<b>Year of Origination</b>	<b>Number of Loans</b>	<b>Original Loan Principal</b>	<b>Weighted Average Interest Rate</b>	<b>Weighted Average FICO**</b>	<b>Weighted Average DTI**</b>	<b>Weighted Average Original Term</b>	<b>Weighted Average Payments Made</b>	<b>Weighted Average Remaining Term</b>	<b>Outstanding Principal Balance</b>	<b>Cumulative Net Charge-offs</b>	<b>Cumulative Net Charge-off Percent</b>
2011	31	\$ 295,846	3.58%	698.3	51.1%	166.4	92.0	74.5	\$ 145,472	n/a***	n/a***
2012	117	1,229,460	3.41	714.4	51.6	169.1	79.1	90.0	711,239	n/a***	n/a***
2013	149	1,562,028	3.42	708.9	55.7	176.7	67.9	108.8	1,042,828	n/a***	n/a***
2014	5	28,451	3.53	709.5	57.1	177.7	59.0	118.6	20,589	n/a***	n/a***
Total/Average	<u>302</u>	<u>\$3,115,785</u>	<u>3.43%</u>	<u>710.1</u>	<u>53.7%</u>	<u>172.8</u>	<u>74.5</u>	<u>98.2</u>	<u>\$1,920,128</u>	n/a***	n/a***

\*All weighted averages are calculated using the original principal amount of each Initial Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Initial Portfolio Loan.

\*\*\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

**Net Loss Experience – Initial Portfolio Loans  
as of the Statistical Cutoff Date\***

<b>Year of Origination</b>	<b>Number of Loans</b>	<b>Original Loan Principal</b>	<b>Weighted Average Interest Rate</b>	<b>Weighted Average FICO**</b>	<b>Weighted Average DTI**</b>	<b>Weighted Average Original Term</b>	<b>Weighted Average Payments Made</b>	<b>Weighted Average Remaining Term</b>	<b>Outstanding Principal Balance</b>	<b>Cumulative Net Charge-offs</b>	<b>Cumulative Net Charge-off Percent</b>
2011	31	\$ 295,846	3.58%	698.3	51.1%	166.4	92.0	74.5	\$ 145,472	n/a***	n/a***
2012	117	1,229,460	3.41	714.4	51.6	169.1	79.1	90.0	711,239	n/a***	n/a***
2013	149	1,562,028	3.42	708.9	55.7	176.7	67.9	108.8	1,042,828	n/a***	n/a***
2014	5	28,451	3.53	709.5	57.1	177.7	59.0	118.6	20,589	n/a***	n/a***
2016	4	67,532	3.52	748.5	31.7	180.0	27.9	152.1	58,687	n/a***	n/a***
2017	26	171,698	4.11	734.3	23.8	169.9	17.6	152.4	156,539	n/a***	n/a***
2018	1,246	12,128,945	5.66	749.0	26.6	176.9	6.5	170.4	11,797,521	n/a***	n/a***
2019	69	789,182	6.16	757.4	27.8	178.4	0.1	178.4	789,038	n/a***	n/a***
<b>Total/Average</b>	<u>1,647</u>	<u>\$16,273,142</u>	<u>5.24%</u>	<u>741.9</u>	<u>31.8%</u>	<u>176.1</u>	<u>19.4</u>	<u>156.7</u>	<u>\$14,721,913</u>	n/a***	n/a***

\*All weighted averages are calculated using the original principal amount of each Initial Program Loan.

\*\*Based upon the FICO® score or debt-to-income (DTI), as applicable, at the origination of each Initial Portfolio Loan.

\*\*\*Based on the Loan Criteria, no Initial Portfolio Loans were more than 60 days past due as of the Statistical Cutoff Date, and no Loans more than 60 days past due as of the Cutoff Date or more than 30 days past due as of any Subsequent Cutoff Date, as applicable, will be included in the Portfolio Loans.

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## USE OF PROCEEDS

### Sources and Uses

The proceeds of the Series 2019A Bonds, together with moneys of the Authority, are being used: (a) to finance Loans made by the Authority to fund (i) the installation of energy efficiency improvements and (ii) the installation of solar electric systems for eligible participants pursuant to the GJGNY Program for one-to-four family residential structures; (b) to fund a Reserve Fund; and (c) to pay the costs of issuing the Series 2019A Bonds. A portion of the proceeds of the Series 2019A Bonds equal to the Reserve Fund Requirement will be deposited to the Reserve Fund, a portion of the proceeds of the Series 2019A Bonds equal to approximately \$570,307 will be deposited to the Costs of Issuance Fund and the remainder of the proceeds of the Series 2019A Bonds will be deposited to the Loan Fund. The amounts on deposit in the Loan Fund will be used to reimburse the Authority's GJGNY Revolving Fund for a portion of the amounts advanced under the Initial Portfolio Loans and Subsequent Portfolio Loans upon the assignment to the Trustee of the right to receive Loan Payments with respect to such Portfolio Loans. The Loan Payments for the Initial Portfolio Loans will be pledged by the Authority in exchange for an amount equal to approximately 62.2% of the aggregate principal amount of such Initial Portfolio Loans, plus accrued interest, such that, on the Date of Issuance, the Value of the Initial Portfolio Loans plus all cash and investments on deposit to the credit of the Pledged Funds will not be less than 139% of the aggregate amount of the outstanding principal amount of the Series 2019A Bonds. Any amounts remaining in the Loan Fund not used to finance the Initial Portfolio Loans, will be used to finance the Subsequent Portfolio Loans, and the Loan Payments for the Subsequent Portfolio Loans will be pledged by the Authority in exchange for an amount equal to 100% of the aggregate principal amount of such Subsequent Portfolio Loans, plus accrued interest.

### Green Bond Principles

The Series 2019A Bonds are being designated by the Authority, as "Green Bonds." The purpose of designating the Series 2019A Bonds as "Green Bonds" is to allow investors to invest directly in bonds which finance projects which the Authority believes are environmentally beneficial ("Green Projects"). The Green Projects to be financed with the proceeds of the Series 2019A Bonds include the (i) the installation of energy efficiency improvements and (ii) the installation of solar electric systems for eligible participants pursuant to the GJGNY Program for one-to-four family residential structures. Approximately 74% of the principal amount of the Series 2019A Bonds will be used to finance loans previously funded by the Authority, and the remaining 26% of the principal amount of the Series 2019A Bonds will be used finance newly originated loans. The term "Green Bonds" and "Green Projects" are neither defined in, nor related to, the Indenture, and their use herein is solely for identification purposes and is not intended to provide or imply that the Owners of the Series 2019A Bonds are entitled to any security other than that described under the heading "SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2019A BONDS." The Authority makes no representation that every component of the projects being financed with the Series 2019A Bonds meets the classification of a Green Project. The Authority assumes no obligation to ensure compliance with any legal or other principles of Green Bonds as such principles may evolve over time.

The Authority has established a green bond framework (the "Framework") in accordance with the "Green Bond Principles 2018" promulgated by the International Capital Market Association (the "Green Bond Principles") for use in connection with the Series 2019A Bonds. Pursuant to the Framework, the Authority's mission is to advance innovative energy solutions in ways that improve New York's economy and environment through promoting energy efficiency and the use of renewable energy sources. The Authority works with residents, business owners, developers, community leaders, local government officials, university researchers, utility representatives, investors, and entrepreneurs to develop, invest, and foster the conditions that: (a) attract the private sector capital investment needed expand New York's clean energy economy, (b) overcome barriers to using clean energy at a large-scale in New York and (c) enable New York's communities and residents to benefit from energy efficiency and renewable energy.

In connection with the Series 2019A Bonds and the Green Projects to be financed with the Series 2019A Bonds, the Authority has contracted with First Environment, Inc. ("First Environment") to assess the alignment of the Series 2019A Bonds with the Green Bond Principles. First Environment, Inc. is an environmental engineering and consulting firm headquartered in New Jersey that has been providing environmental solutions since 1987. First Environment has extensive credentials in validation and verification of climate-related assertions including international accreditation under ISO 14065 (Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition). In addition, First Environment has been approved by the Climate Bonds Standard Board as a Climate Bonds Verifier since March 2017.

The Green Bond Principles 2018 are voluntary process guidelines that recommend transparency and disclosure of information by issuers to stakeholders with respect to “Green Bonds.” The Green Bond Principles 2018 have four main components: (i) use of bond proceeds, (ii) process for project evaluation and selection, (iii) management of bond proceeds, and (iv) reporting the use of the bond proceeds. First Environment has provided the Authority with a “Second-Party Opinion of Alignment with Green Bond Principles for NYSERDA Series 2019A Bond Issuance” indicating that the Framework is aligned with the Green Bond Principles and has been consistently applied to the pre-issuance of the Series 2019A Bonds. See “APPENDIX E—SECOND PARTY OPINION OF ALIGNMENT WITH GREEN BOND PRINCIPLES FOR NYSERDA SERIES 2019A BOND ISSUANCE” hereto. See the captions “GREEN JOBS—GREEN NEW YORK PROGRAM” and “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM” herein for a description of process for evaluating and selecting the Green Projects. It is the Authority’s obligation to track the net proceeds of the Series 2019A Bonds and confirm that such proceeds are used for eligible Green Projects. Pending such expenditures, such net proceeds will be invested as described under the caption “Funds Created under the Indenture—*Security for and Investment of Moneys*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

The opinion of First Environment reflects only the views of First Environment. Any explanation of the significance of its opinion may be obtained from First Environment, which opinion was based upon First Environment’s own investigation, studies, assumptions and criteria. The Authority furnished certain information to First Environment with respect to the Series 2019A Bonds and the Green Projects to be financed with the Series 2019A Bonds.

The Authority will provide a final report describing the Green Projects financed with the proceeds of the Series 2019A Bonds in connection with its first annual report delivered pursuant to its continuing disclosure requirement. See the caption “CONTINUING DISCLOSURE” herein.

#### **SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2019A BONDS**

The Series 2019A Bonds will be limited obligations of the Authority, payable solely from and secured by the all money, revenues and receipts to be received under the Indenture, including all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund, including amounts on deposit in the Reserve Fund.

**The Series 2019A Bonds will not be general obligations of the Authority. The Series 2019A Bonds will not constitute an indebtedness of or a charge against the general credit of the Authority. The Series 2019A Bonds will not constitute a debt of the State of New York or any Borrower, and neither the State of New York nor any Borrower will be liable on the Series 2019A Bonds. No Owner of any Series 2019A Bonds will have the right to demand payment of the principal of, or premium, if any, or interest on, the Series 2019A Bonds out of any funds to be raised by taxation.**

The Authority will pledge and assign to the Trustee in respect of the Series 2019A Bonds all its right, title and interest in and to the Pledged Funds and the Pledged Revenues; that is, all money, revenues and receipts to be received under the Indenture, including all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund.

Specifically, the Pledged Loan Payments will include loan payments derived from the Portfolio Loans identified as the source of Pledged Loan Payments. It is currently expected that approximately \$17.5 million of Program Loans will be included in the Initial Loan Portfolio and that approximately \$3.7 million of additional Program Loans will be included in the Subsequent Portfolio Loans. See the caption “THE PORTFOLIO LOANS” herein. Series 2019A Bond proceeds in an equivalent amount will be deposited to the Loan Fund until applied with respect to such Subsequent Portfolio Loans. The Portfolio Loans are not pledged to the repayment of the Series 2019A Bonds, only the Pledged Loan Payments received therefrom are pledged to the repayment of the Series 2019A Bonds. The Trustee has no right to sell Portfolio Loans which are the source of the Pledged Loan Payments and apply the proceeds thereof to pay the Owners of the Series 2019A Bonds, even if an Event of Default under the Indenture has occurred. Upon the issuance of the Series 2019A Bonds, the Value of the Initial Portfolio Loans plus all cash and investments on deposit to the credit of the Pledged Funds will not be less than 139% of the aggregate amount of the outstanding principal amount of the Series 2019A Bonds.



## THE SERIES 2019A BONDS

The following is a summary of certain provisions of the Series 2019A Bonds. Reference is hereby made to the Indenture and the Series 2019A Bonds in their entirety for the detailed provisions thereof. The Series 2019A Bonds will be issued in the aggregate principal amount shown on the cover page of this Official Statement.

### General

The Series 2019A Bonds will be issued initially in the form of one fully registered bond for each stated maturity, without coupons, in a denomination equal to the aggregate principal amount of such stated maturity and will be registered in the name of Cede & Co., as nominee of DTC. DTC will act as securities depository for the Series 2019A Bonds (together with any successor securities depository, the “Securities Depository”). See the caption “Securities Depository” below. Beneficial interests in the Series 2019A Bonds may be purchased in book-entry-only form, in denominations of \$100,000 or in any integral multiple of \$5,000 in excess thereof.

Payment of the principal of, and interest on, the Series 2019A Bonds at maturity shall be made upon the presentation and surrender of the Series 2019A Bonds as hereinafter described. All payments of interest and premium, if any, on, and of principal upon redemption of, the Series 2019A Bonds prior to maturity shall be paid through the Securities Depository in accordance with its normal procedures, which now provide for payment by the Securities Depository to its participants in same-day funds.

In accordance with DTC procedures, conveyance of notices and other communications are to be made by the Trustee to DTC and by DTC to Direct Participants (as hereinafter defined), by Direct Participants to Indirect Participants (as hereinafter defined), and by Direct and Indirect Participants to beneficial owners. Cede & Co. is the Registered Owner for all purposes under the Series 2019A Bond documents, including for the purposes of granting consents and for changes to the Series 2019A Bond documents. Beneficial owners may wish to take steps to ensure the transmission to them of notices of significant events with respect to the Series 2019A Bonds, such as redemptions, tenders, tender offers, defaults, and proposed amendments to the Series 2019A Bond documents. Each beneficial owner of Series 2019A Bonds must make arrangements with its participant to receive notices and payments with respect to the Series 2019A Bonds.

### Securities Depository

The information contained in the following paragraphs under this caption “Securities Depository” has been extracted from a schedule prepared by DTC entitled “SAMPLE OFFERING DOCUMENT LANGUAGE DESCRIBING BOOK-ENTRY-ONLY ISSUANCE.” The Authority and the Underwriter make no representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

DTC, New York, New York, will act as Securities Depository for the Series 2019A Bonds. The Series 2019A Bonds will be issued as fully-registered bonds registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each stated maturity of the Series 2019A Bonds, and will be deposited with DTC.

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or

indirectly (“Indirect Participants”). The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission (“SEC”). More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com) (it being understood that information available at this website is not incorporated herein by reference).

Purchases of Series 2019A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2019A Bonds on DTC’s records. The ownership interest of each actual purchaser of each Series 2019A Bond (the “beneficial owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial owners will not receive written confirmation from DTC of their purchase, but beneficial owners are expected to receive written confirmation providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the beneficial owner entered into the transaction. Transfers of ownership interests in the Series 2019A Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in Series 2019A Bonds, except in the event that use of the book-entry-only system for the Series 2019A Bonds is discontinued.

To facilitate subsequent transfers, all Series 2019A Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2019A Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the Series 2019A Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Series 2019A Bonds are credited, which may or may not be the beneficial owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial owners of Series 2019A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2019A Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2019A Bond documents. For example, beneficial owners of the Series 2019A Bonds may wish to ascertain that the nominee holding the Series 2019A Bonds for their benefit has agreed to obtain and transmit notices to beneficial owners. In the alternative, beneficial owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2019A Bonds within a maturity are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such Series 2019A Bond to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2019A Bonds unless authorized by a Direct Participant in accordance with DTC’s Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.’s consenting or voting rights to those Direct Participants to whose accounts Series 2019A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds and principal and interest payments on the Series 2019A Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC’s practice is to credit Direct Participants’ accounts upon DTC’s receipt of funds and corresponding detailed information from the Authority or the Trustee, on each payable date in accordance with their respective holdings shown on DTC’s records. Payments by Participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in “street name,” and will be the responsibility of such Participant and not of DTC, the Trustee or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the beneficial owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2019A Bonds at any time by giving reasonable notice to the Authority or the Trustee. Under such circumstances, in the event that a successor

depository is not obtained, certificates for the Series 2019A Bonds are required to be printed and delivered and thereafter, transfer, exchange and replacement of Series 2019A Bonds would be governed by the applicable terms of the Indenture.

The Authority may decide to discontinue use of the system of book entry transfers through DTC (or a successor depository). In that event, certificates for the Series 2019A Bonds will be printed and delivered.

The above information concerning DTC and DTC's book-entry-only system has been obtained from sources that the Authority and the Underwriter believe to be reliable, but neither of the Authority or the Underwriter takes responsibility for the accuracy thereof.

THE AUTHORITY, THE TRUSTEE, THE REGISTRAR AND PAYING AGENT AND THE UNDERWRITER HAVE NO RESPONSIBILITY WITH RESPECT TO: (I) THE ACCURACY OF THE RECORDS OF THE SECURITIES DEPOSITORY OR ANY PARTICIPANT AS TO THE BENEFICIAL OWNERSHIP OF THE SERIES 2019A BONDS; (II) THE DELIVERY OF EITHER NOTICES OR PAYMENT TO ANY PARTY OTHER THAN THE SECURITIES DEPOSITORY OR ITS NOMINEE AS REGISTERED OWNER OF THE SERIES 2019A BONDS; (III) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY THE SECURITIES DEPOSITORY OR ITS NOMINEE AS THE OWNER OF RECORD OF ALL ISSUED AND OUTSTANDING SERIES 2019A BONDS; OR (IV) THE SELECTION BY THE SECURITIES DEPOSITORY OR ANY PARTICIPANTS OR ANY BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF SERIES 2019A BONDS.

### **Interest**

Interest will be computed on the basis of a 360-day year, consisting of twelve 30-day months. Interest on the Series 2019A Bonds will be payable semi-annually on April 1 and October 1 of each year, commencing October 1, 2019 (each, an "Interest Payment Date"). The record date for payment of interest on the Series 2019A Bonds is the fifteenth day of the calendar month immediately preceding the Interest Payment Date.

### **Redemption**

*Mandatory Redemption.* The Series 2019A Bonds maturing on April 1, 2035 are subject to mandatory redemption, in part, on October 1, 2019 from amounts remaining on deposit in the Redemption Fund equal to the lesser of (x) the amount transferred from the Loan Fund to the Redemption Fund as described under the caption "DESCRIPTION OF THE INDENTURE—Loan Fund" herein or (y) the balance then on deposit in the Redemption Fund, at a redemption price equal to 100% of the principal amount of such Series 2019A Bonds to be redeemed, plus any interest accrued to the date fixed for redemption.

The Series 2019A Bonds are subject to redemption prior to maturity, in whole or in part, on each Interest Payment Date, commencing October 1, 2019, from amounts remaining on deposit in the Redemption Fund representing "Excess Revenues" as described below, at a redemption price equal to 100% of the principal amount of such Series 2019A Bonds or portions thereof to be redeemed, together with accrued and unpaid interest to the date fixed for redemption. "Excess Revenues" means, on each Interest Payment Date, the lesser of (x) the amount transferred from the Revenue Fund to the Redemption Fund pursuant to clause (d) described under the caption "DESCRIPTION OF THE INDENTURE—Application of Pledged Revenues held in the Revenue Fund" herein on the first Business Day of the next preceding March or September, as applicable, or (y) the balance then on deposit in the Redemption Fund (determined, with respect to the Interest Payment Date in October 2019, after completion of any redemption of Series 2019A Bonds described in the immediately preceding paragraph on such date). Moneys to be applied to the redemption of the Series 2019A Bonds pursuant to this paragraph shall be applied: *first*, on each Interest Payment Date in October, commencing in October 2019, to the redemption of Series 2019A Bonds, if any, that mature on the Interest Payment Date in the following April; *second*, to the redemption of Series 2019A Bonds that mature on April 1, 2035; and *third*, to the remaining Series 2019A Bonds ratably according to the outstanding principal amount of Series 2019A Bonds of each maturity. See "APPENDIX D—WEIGHTED AVERAGE LIVES AND EXPECTED REDEMPTION PERIODS FOR THE TERM SERIES 2019A BONDS" hereto.

The Authority may from time to time direct the Trustee to purchase Series 2019A Bonds with moneys in the Redemption Fund, at a price not greater than par, plus accrued interest to the date of such purchase. The Authority may also purchase or redeem Series 2019A Bonds prior to maturity with other moneys available to do so. See the caption "Purchase of Series 2019A Bonds" below.

*Optional Redemption.* The Series 2019A Bonds are subject to redemption prior to maturity at the option of the Authority, in whole only, on each Interest Payment Date on which the aggregate principal amount of Outstanding Series 2019A Bonds, after giving effect to all other principal payment of Series 2019A Bonds on such date, is no greater than ten percent (10%) of the original principal amount of the Series 2019A Bonds on the Date of Issuance, at a redemption price equal to one hundred percent (100%) of the principal amount of Series 2019A Bonds being redeemed, together with accrued and unpaid interest to the date fixed for redemption, from any source available to the Authority, including without limitation amounts on deposit in any Pledged Fund and available therefor.

*Notice of Redemption; Redemption Conditional.* Except as otherwise set forth in the Indenture, notice of redemption shall be given by the Trustee by mailing a copy of the redemption notice by first-class mail at least 20 days but not more than 60 days prior to the date fixed for redemption to the Registered Owners of the Series 2019A Bonds to be redeemed at the addresses shown on the books of registry maintained by the Registrar and Paying Agent. Any redemption notice may state that such redemption is conditional on the receipt by the Registrar and Paying Agent of money required to pay the redemption price on the redemption date or upon the satisfaction of any other conditions, or that it may be rescinded upon the occurrence of any other event.

*Effect of Redemption.* If the Series 2019A Bonds (or portions thereto) have been duly called for redemption and notice of the redemption thereof has been duly given or provided for and if moneys for the payment of such Series 2019A Bonds (or the principal amount thereof to be redeemed) and the premium (if any) and interest thereon to the date fixed for redemption have been paid or are held by the Trustee, then such Series 2019A Bonds (or the principal amount of such Series 2019A Bonds called for redemption) shall on the redemption date become due and payable and interest on such Series 2019A Bonds (or the principal amount thereof to be redeemed) shall cease to accrue from the redemption date and the Registered Owner shall have no rights under the Indenture as the Registered Owner of such Series 2019A Bonds (or the principal amount thereof to be redeemed) except to receive the principal amount thereof and premium, if any, and interest thereon to the redemption date.

#### **Purchase of Series 2019A Bonds**

The Trustee, acting on behalf of the Authority, as the Authority's agent and with the Authority's funds, will, if and to the extent practicable, purchase Series 2019A Bonds at the written direction of an Authorized Officer at such time, in such manner and at such price as may be specified in an Officer's Certificate. The Trustee may so purchase Series 2019A Bonds with any moneys then held by it and available for the redemption or purchase of Series 2019A Bonds as described under the captions "Debt Service Fund" and "Redemption Fund" in "APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE" hereto, provided that subsequent to the giving of notice of redemption of any Series 2019A Bonds moneys held for the redemption of such Series 2019A Bonds may not be applied to any such purchase and provided further that moneys held for the defeasance of Series 2019A Bonds as described under the caption "Defeasance" in "APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE" hereto shall not be deemed to be held and available for the redemption or purchase of Series 2019A Bonds. All such Series 2019A Bonds so purchased shall be cancelled by the Trustee in accordance with the Indenture.

#### **DESCRIPTION OF THE INDENTURE**

The following is a brief summary of certain provisions of the Indenture. For a more detailed description, see "APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE" hereto. Neither the following brief summary nor Appendix A hereto, however, are to be considered a full statement of the terms of the Indenture and, accordingly, both are qualified by reference thereto and are subject to the full text thereof. Capitalized terms not otherwise previously defined in this Official Statement or defined below have the meaning set forth in Appendix A hereto.

#### **Funds**

Each of the following Funds is established under and governed by the terms of the Indenture:

- (a) Loan Fund;
- (b) Revenue Fund;
- (c) Debt Service Fund;

- (d) Reserve Fund;
- (e) Redemption Fund; and
- (f) Cost of Issuance Fund.

All such Funds are held by the Trustee and all such Funds, other than the Cost of Issuance Fund, constitute Pledged Funds.

The Authority covenants in the Indenture to cause all Pledged Revenues to be paid to the Trustee for deposit in the Revenue Fund. The Trustee is obligated to deposit all Pledged Revenues in the Revenue Fund upon receipt by the Trustee.

#### **Application of Pledged Revenues held in the Revenue Fund**

The Indenture provides that the Trustee will apply any monies in the Revenue Fund to make deposits as follows and in the following order of priority:

(a) on the first Business Day of each month, to the order of the Authority, in an amount certified to the Trustee by an Authorized Officer, which amount shall not be in excess of the aggregate amount of Scheduled Administrative Expenses then payable or projected to become payable through the end of such calendar month; provided, however, that if there are insufficient funds in the Revenue Fund for payment of Scheduled Administrative Expenses pursuant to this clause (a), the Trustee will draw the required amounts as described under the caption “Funds Created under the Indenture—*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto;

(b) on the first Business Day of each March and September, to the Debt Service Fund, as necessary so that the amounts on deposit are equal to the sum of: (i) interest accrued and to accrue on Series 2019A Bonds through the next succeeding Interest Payment Date; plus (ii) with respect to each such Interest Payment Date on which a Principal Installment is due on such Series 2019A Bonds, such Principal Installment; provided, however, that if there are insufficient funds in the Revenue Fund for payment in respect of interest or Principal Installment on the Series 2019A Bonds pursuant to this clause (b), the Trustee will draw the required amounts as described under the caption “Funds Created under the Indenture—*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto;

(c) on the first Business Day of each March and September, to the Reserve Fund, in the manner described under the caption “Funds Created under the Indenture—*Reserve Fund*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto, if the amount therein is less than the Reserve Fund Requirement, the moneys available therefor so that the balance therein shall equal the Reserve Fund Requirement; and

(d) on the first Business Day of each March and September, to the Redemption Fund, the remaining balance in the Revenue Fund.

All amounts deposited to the Redemption Fund pursuant to clause (d) above shall be used to optionally or mandatorily redeem Series 2019A Bonds on the next Interest Payment Date for which notice can be given.

#### **Loan Fund**

A portion of the proceeds of the Series 2019A Bonds will be deposited in the Loan Fund. All amounts deposited in the Loan Fund will be applied to fund or reimburse the GJGNY Revolving Fund on the Date of Issuance and on subsequent Business Days, designated by the Authority, on or prior to June 30, 2019 for all or a portion of the aggregate amount of the outstanding principal balance of, and the accrued but unpaid interest on, Program Loans upon the assignment to the Trustee of the right to receive Loan Payments with respect to such Program Loans. All amounts remaining in the Loan Fund will be transferred to the Redemption Fund after the completion of all other transfers on the earlier of: (a) the Business Day following the date of receipt by the Trustee of an Officer’s Certificate evidencing that no

additional reimbursements are to be funded therefrom; or (b) June 30, 2019 or, if such date is not a Business Day, the next succeeding Business Day, and used to redeem Series 2019A Bonds as described under the caption “SERIES 2019A BONDS—Redemption—Mandatory Redemption” herein. See the caption “USE OF PROCEEDS—Sources and Uses” herein and the caption “Funds Created under the Indenture—Loan Fund” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

### **Debt Service Fund**

The Debt Service Fund is established to pay the Principal Installments of and interest on the Series 2019A Bonds. See the caption “Funds Created under the Indenture—Debt Service Fund” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

### **Redemption Fund**

The Redemption Fund is established to pay the principal component of the Redemption Price of the Series 2019A Bonds. See the caption “Funds Created under the Indenture—Redemption Fund” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

### **Reserve Fund**

The Reserve Fund will initially be funded in an amount equal to \$310,200 from the proceeds of the Series 2019A Bonds. The Indenture provides that the Reserve Fund is to be maintained at an amount equal to the greater of: (a) two percent (2.00%) of the aggregate amount of all Outstanding Series 2019A Bonds; or (b) \$50,000 (the “Reserve Fund Requirement”). The Reserve Fund is established to pay Scheduled Administrative Expenses and Required Debt Service on the Series 2019A Bonds to the extent funds are not sufficient to make such payments from the Revenue Fund, the Redemption Fund and the Loan Fund. See the caption “USE OF PROCEEDS—Sources and Uses” herein and the caption “Funds Created under the Indenture—Reserve Fund” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

### **Cost of Issuance Fund**

The Cost of Issuance Fund is established to pay the costs of issuing the Series 2019A Bonds. See the caption “USE OF PROCEEDS—Sources and Uses” herein and the caption “Funds Created under the Indenture—Cost of Issuance Fund” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

### **Enforcement of Loan Agreements**

The Indenture provides that the Authority will diligently enforce or cause to be enforced, and take or cause to be taken all reasonable steps, actions and proceedings necessary for the enforcement of, all terms, covenants and conditions of the Loan Agreements as and when due, including prompt collection of all Pledged Loan Payments and including enforcement by the Authority of all On-Bill Recovery Agreements, as provided in the next sentence; provided, however, that the Authority reserves the right, at its sole option, with respect to any Portfolio Loan upon which currently payable principal or interest has remained unpaid for a period of no less than ninety (90) days, while such amount remains unpaid to effect the release of any future Loan Payments upon such Portfolio Loan from the lien hereof by depositing with the Trustee the aggregate amount of unpaid principal thereof and interest thereon and any such Program Loan shall thereafter not be deemed to be a Portfolio Loan for purposes of the Indenture. The Indenture further provides that the Authority shall not consent or agree to or permit the amendment, waiver or release of the payment obligations of any Borrower under any Loan Agreement or consent or agree to or permit any other amendment of, or waive or release any other Borrower obligation under, any Loan Agreement that would in any manner materially adversely affect the rights or security of the Owners under the Indenture and shall, to the extent permitted by law, at all times cause to be defended, enforced, preserved and protected the rights and privileges of the Authority with respect to each Loan Agreement in connection therewith; provided, that the Authority reserves the rights, at its sole option: (x) to grant reasonable forbearances to Borrowers (unless such forbearance will, in the reasonable judgment of the Authority, have a material adverse impact on the Authority’s ability to meet its obligations under the Indenture); (y) to settle a default or cure a delinquency on any Portfolio Loan on such terms as shall be permitted by law; or (z) to forgive amounts owing on any Portfolio Loan; provided, that such forgiveness is consistent with standard business practices for consumer lending. Enforcement of the Loan Agreements by the Servicer shall be deemed under the Indenture to be enforcement by the Authority.

## **Representations, Warranties and Covenants as to Program Agreements**

See the caption “Certain Covenants—*Representations, Warranties and Covenants as to Program Agreements*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto for a description of the Representations, Warranties and Covenants of the Authority with respect to the Program Agreements. See also the captions “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Originator and Origination Agreement,” “—Servicer and Servicing Agreement” and “—Backup Servicer and Backup Servicing Agreement” herein.

## **INVESTMENT CONSIDERATIONS**

*The following investment considerations describe certain risk factors of an investment in the Series 2019A Bonds. Additional investment considerations relating to an investment in the Series 2019A Bonds are described throughout this Official Statement, whether or not specifically designated as investment considerations. Investors should consider such investment considerations in deciding whether to purchase any of the Series 2019A Bonds. There can be no assurance that other investment considerations will not become material in the future. In the event of a shortfall of Pledged Revenues, material delays in payments of principal or interest, or losses, on the Series 2019A Bonds could result and could materially reduce the value of the Series 2019A Bonds. These and other factors could result in a loss of marketability, or of market value, of the Series 2019A Bonds even if no such payment delay or loss occurs.*

### **Considerations Relating to the Pledged Revenues**

#### *Limited Sources of Payment*

The Series 2019A Bonds will be limited obligations of the Authority, payable principally from Pledged Revenues received by the Trustee under the Indenture. The Authority will pledge and assign to the Trustee in respect of the Series 2019A Bonds all its right, title and interest in and to the Pledged Revenues; that is, all money, revenues and receipts to be received under the Indenture, including all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund. No assurances can be given that Pledged Revenues will be sufficient to make payments on the Series 2019A Bonds or that any monies on deposit in the Reserve Fund will be available to make payments on the Series 2019A Bonds if the Pledged Revenues are not sufficient.

The Series 2019A Bonds will not be insured or guaranteed by the Authority, the Originator, the Servicer, any of their respective affiliates, or any other person or entity. In addition, the Portfolio Loans will be unsecured obligations of the Borrowers thereunder. Therefore, the receipt by the Trustee of principal and interest on the Portfolio Loans will be dependent on the ability and willingness of the Borrowers to make these payments. The primary credit enhancement for the Series 2019A Bonds is overcollateralization, excess interest on the Portfolio Loans and amounts on deposit in the Reserve Fund. The amount of credit enhancement is limited and can be depleted over time. If these sources of funds are insufficient, Owners of any Series 2019A Bonds will suffer losses.

The Series 2019A Bonds will not be general obligations of the Authority. The Series 2019A Bonds will not constitute an indebtedness of or a charge against the general credit of the Authority. The Series 2019A Bonds will not constitute a debt of the State, and the State will not be liable on the Series 2019A Bonds. No Owner of any Series 2019A Bonds will have the right to demand payment of the principal of, or interest on, the Series 2019A Bonds out of any funds to be raised by taxation.

#### *The Trustee Has No Right to Sell Portfolio Loans*

Only the Pledged Loan Payments received from the Portfolio Loans are pledged to the repayment of the Series 2019A Bonds. The Portfolio Loans are not pledged to the trust estate created by the Indenture. Thus, the Trustee has no right to sell Portfolio Loans, which are the source of the Pledged Loan Payments, and to apply the proceeds thereof to pay the Owners of the Series 2019A Bonds, even if an Event of Default under the Indenture has occurred.

#### *The Authority’s Obligation to Cause the Release of Certain Portfolio Loans by Effecting their Prepayment is Limited*

The Indenture provides that the Authority will, subject to certain limitations, effect the release of Pledged Loan Payments: (a) with respect to certain Portfolio Loans that are determined to not have complied with the Loan Criteria; and

(b) with respect to certain other Portfolio Loans that are determined to not have complied with the Portfolio Criteria as of the end of the Prefunding Period. See the captions “THE PORTFOLIO LOANS—Loan Criteria” and “THE PORTFOLIO LOANS—Portfolio Criteria” herein. Such Authority obligations are (i) at any time, limited to any amounts in the GJGNY Revolving Fund then legally available for such purpose and not subject to any lien in favor of another party or otherwise restricted from being applied to such purpose; and (ii) inapplicable during any period during which either: (A) the aggregate principal amount of such Loans that are not Eligible Loans as described in the first sentence of this paragraph does not exceed \$100,000; or (B) the aggregate Value of: (A) all Pledged Loan Payments, other than such Pledged Loan Payments upon Loans that are not Eligible Loans as described in such sentence; plus (B) all cash and investments on deposit to the credit of the Pledged Funds is not less than 175% of the aggregate amount of: (x) the outstanding principal amount of the Series 2019A Bonds; plus (y) the accrued but unpaid interest on the Series 2019A Bonds.

Those representations and warranties described in the preceding paragraph do not address the collectability of the Portfolio Loans. See the caption “Certain Covenants—*Representations, Warranties and Covenants as to Loans—Non-Eligible Loans*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto. There may not be sufficient financial resources available in the GJGNY Revolving Fund at any specific time to effect the release of any Pledged Loan Payments that relate to any Portfolio Loan that is determined to not meet such criteria.

*Amounts Permitted to Pay Administrative Expenses from the Trust Estate are Limited*

The Indenture limits the amounts that may be applied to pay Administrative Expenses from the trust estate securing the Series 2019A Bonds to \$165,000 in any Bond Year (the “Scheduled Administrative Expenses”); provided, that such amount may be amended upon satisfaction of the Rating Agency Requirement. See also the caption “Funds Created under the Indenture—*Revenue Fund*” in APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto. As of the Date of Issuance, the Servicing Fees for the Portfolio Loans have averaged approximately \$4.60 per loan/per month, the Backup Servicing Fees are 0.05% of the principal amount of the Portfolio Loans per annum and the Trustee’s annual administration fee and the Rating Surveillance Fees are collectively \$10,500 per annum. To the extent that the actual amount of Administrative Expenses exceeds the Scheduled Administrative Expenses, the Authority is required to pay such excess Administrative Expenses from any amounts in the GJGNY Revolving Fund then legally available for such purpose and not subject to any lien in favor of another party or otherwise restricted from being applied to such purpose. There may not be sufficient financial resources available in the GJGNY Revolving Fund at any specific time to pay any such excess Administrative Expenses, which might result in a payment shortfall that might permit one or more of the Trustee, the Servicer, the Backup Servicer or the Rating Agency to discontinue performing its services under such related agreement.

*The Authority is Permitted to take Certain Actions upon Satisfying the Rating Agency Requirement*

If the Authority satisfies the Rating Agency Requirement it may, without having to obtain the consent of any Owners, increase the amount of the Scheduled Administrative Expenses, terminate, amend or replace any of the Servicing Agreement, the Backup Servicing Agreement or the Origination Agreement, or assign, or consent to the assignment or delegation of, any material portion of the duties under any of the Servicing Agreement, the Backup Servicing Agreement or the Origination Agreement. Satisfaction of the “Rating Agency Requirement” means with respect to any proposed action, upon not less than ten (10) Business Days’ prior written notification to each Rating Agency of such action, written confirmation from such Rating Agency to the Authority that such action will not result in a suspension, reduction or withdrawal of the then current rating assigned by such Rating Agency to the Series 2019A Bonds; provided, however, that if within such ten (10) Business Day period, any Rating Agency has neither replied to such notification nor responded in a manner that indicates that such Rating Agency is reviewing and considering the notification, then (a) the Authority shall be required to confirm that such Rating Agency has received such notice, and if it has, promptly request the related Rating Confirmation; and (b) if such Rating Agency neither replies to such notification nor responds in a manner that indicates it is reviewing and considering the notification within five (5) Business Days following such second request, the Rating Agency Requirement shall be deemed to be satisfied. For the purposes of this definition, any confirmation, request, acknowledgment or approval that is required to be in writing may be in the form of electronic mail or a press release (which may contain a general waiver of any Rating Agency of its right to review or consent). See the definition of “Rating Agency Requirement” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.



### *Limited History of Portfolio Loans and Collection of Pledged Loan Payments*

The Initial Portfolio Loans had a weighted average age of only 14 months and a weighted average original term of 177 months as of the Statistical Cutoff Date, so the default history and collection history included herein is based on very limited experience. Over 85% of the Initial Portfolio Loans by outstanding principal balance were originated in 2018 and 2019. It is expected that all other Portfolio Loans will have been originated since January 16, 2019. There are no assurances that Pledged Revenues will be sufficient to cover actual delinquencies and defaults realized on the Portfolio Loans.

*The Portfolio Loans do Not Restrict Borrowers from Incurring Additional Unsecured or Secured Debt, nor do they Impose any Financial Restrictions on Borrowers during the Term of the Portfolio Loans, which may Increase the Likelihood that Borrowers may Default on their Portfolio Loans*

A Portfolio Loan is likely not a Borrower's only debt obligation. If a Borrower incurs additional debt after obtaining a Portfolio Loan, that additional debt may adversely affect the Borrower's creditworthiness generally, and could result in the financial distress, insolvency, or bankruptcy of the Borrower. This circumstance could ultimately impair the ability of that Borrower to make payments on the Borrower's Portfolio Loan and the ability of the Authority to make payments on the Series 2019A Bonds. To the extent that the Borrower has or incurs other indebtedness and cannot pay all of its indebtedness, the Borrower may choose to make payments to other creditors, rather than on the Portfolio Loans.

To the extent Borrowers incur other indebtedness that is secured, such as mortgage, home equity line or auto loans, the ability of the secured creditors to exercise remedies against the assets of the Borrower may impair the Borrower's ability to repay the Portfolio Loan on which the Series 2019A Bonds are dependent for payment, or it may impair the ability to collect on the Portfolio Loan if it goes unpaid. Since the Portfolio Loans are unsecured, Borrowers may choose to repay obligations under other indebtedness before repaying Portfolio Loans because the Borrowers have no collateral at risk.

There can be no assurance that Borrowers will not seek protection under applicable bankruptcy law, or to otherwise avoid or delay repayment, to the extent such measures may be legally available.

### *Performance of the Portfolio Loans is Uncertain*

The performance of the Portfolio Loans will depend on a number of factors, including general economic conditions, unemployment levels, the circumstances of individual obligors, the underwriting standards of the Authority at origination and the success of the servicing and collection activities of the Servicer and also of the utilities who act as subservicers for the Authority pursuant to separate contracts directly with the Authority. Consequently, no accurate prediction can be made of how the Portfolio Loans will perform based on FICO<sup>®</sup> scores or other similar measures.

Certain general economic conditions, such as a downturn in the economy resulting in decreased employment, either regionally or nationally, may result in an increase in defaults by Borrowers in repaying their Portfolio Loans. It is impossible to predict the status of the economy or unemployment levels or when, if ever, a downturn in the economy would impair a Borrower's ability to repay his or her Portfolio Loans. General economic conditions may also be affected by other events including the prospect of increased hostilities abroad. Such events may also have other effects, the impact of which is impossible to project.

### *Losses on the Portfolio Loans May Be Affected Disproportionately Because of Geographic Concentration*

All of the Portfolio Loans are expected to be made to obligors with mailing addresses in the State of New York. As of the Statistical Cutoff Date, four counties (Nassau, Suffolk, Monroe and Erie) each accounted for more than 5.00% of the aggregate principal balance of the Portfolio Loans. These four counties accounted for approximately 59% of the Initial Portfolio Loans by aggregate principal balance as of the Statistical Cutoff Date. If the State generally, or the greater New York metropolitan area, specifically, experience adverse economic changes, such as an increase in the unemployment rate, a material number of obligors may be unable to make timely payments on their Portfolio Loans and owners of any Series 2019A Bonds may experience payment delays or losses on the Series 2019A Bonds. The Authority cannot predict whether adverse economic changes or other adverse events will occur or to what extent those events would affect the Portfolio Loans or repayment of the Series 2019A Bonds. See the table "Distribution of the Portfolio Loans by County of Obligor" under the caption "THE PORTFOLIO LOANS—Characteristics of the Initial Portfolio Loans as of the Statistical Cutoff Date" herein.

*Storm Damage in the State Could Impair Payment of the Series 2019A Bonds*

Superstorm Sandy caused moderate to severe damage to many buildings in the State. Future storms could have similar or more drastic effects. There could be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the State, which could cause payment delinquencies.

*Market Factors May Reduce the Value of the Improved Real Estate Which Could Result in Increased Losses on the Portfolio Loans*

A decrease in demand for real estate of the kinds improved by the Portfolio Loans may adversely affect the resale value thereof, which could result in increased losses on the related Portfolio Loans.

*Interests of Other Persons in the Portfolio Loans Could Reduce the Pledged Revenues Available to Make Payments on the Series 2019A Bonds*

If a third-party successfully establishes: (i) a claim to any of the underlying Portfolio Loans which are the source of the Pledged Loan Payments; or (ii) otherwise acquires an interest in Pledged Loan Payments superior to the Trustee's interest, some or all of the expected collections of revenue may not be available to make payment on the Series 2019A Bonds.

*Technological Change Might Make the Improvements Less Valuable in the Future*

Technological developments might result in the introduction of economically attractive alternatives to the solar electric systems or the other residential energy efficiency improvements financed with the proceeds of the Series 2019 Bonds which could increase the difficulty of collecting Pledged Revenues.

*Federal or State Bankruptcy or Debtor Laws May Impede Collection Efforts or Alter Timing and Amount of Collections*

If a Borrower seeks protection under federal or state bankruptcy or debtor relief laws, a court could reduce, restructure or discharge completely such Borrower's obligations to make payments due on such Borrower's Portfolio Loan. Whether any payment will ultimately be made or received on a Portfolio Loan after the Borrower becomes subject to a bankruptcy proceeding depends on the Borrower's particular financial situation. In most cases, however, unsecured creditors such as the Authority receive nothing, or only a fraction of their outstanding debt. Owners could suffer a loss if insufficient funds were available from credit enhancement or other sources to cover the applicable amounts due on the Series 2019A Bonds.

## **Investment Characteristics**

*The Series 2019A Bonds May Not Be Accelerated*

The Series 2019A Bonds may not be accelerated following an Event of Default under the Indenture.

*Prepayments and Defaults on Portfolio Loans with Higher Interest Rates May Adversely Affect the Series 2019A Bonds*

Interest collections that are in excess of interest payments on the Series 2019A Bonds and Servicing Fees could be used to cover losses on defaulted Portfolio Loans. Interest collections will depend, among other things, on the annual percentage rates of the Portfolio Loans. The Portfolio Loans will have a range of annual percentage rates. Excessive prepayments and defaults on the Portfolio Loans with relatively higher annual percentage rates may adversely affect the Series 2019A Bonds by reducing such available interest collections in the future.

*Risks associated with Non-origination; Characteristics of Subsequent Portfolio Loans May Differ from the Characteristics of the Initial Portfolio Loans.*

There can be no assurance that the characteristics of the Subsequent Portfolio Loans will be identical to the characteristics of the Initial Portfolio Loans, however the characteristics of the Subsequent Portfolio Loans are not

expected to differ materially from the characteristics of the Initial Portfolio Loans, and all such Subsequent Portfolio Loans must satisfy the Loan Criteria. See the caption “THE SERIES 2019A BONDS—Redemption—Mandatory Redemption” and “THE AUTHORITY’S RESIDENTIAL LOAN PROGRAM—Underwriting—Loan Approval Process” and “THE PORTFOLIO LOANS—Loan Criteria” herein.

*The Series 2019A Bonds are Expected to be Repaid Early; If this happens, an Owner’s Yield would be Affected and such Owner will bear Reinvestment Risk*

The Series 2019A Bonds are expected to be partially or wholly redeemed prior to their respective stated maturity dates through optional or mandatory redemption of the Series 2019A Bonds. If this happens, an Owner’s yield on the Series 2019A Bonds to the date of redemption would be affected and it will bear the risk that it cannot reinvest the money such Owner receives in comparable bonds at an equivalent yield. Such redemption may reduce the secondary market liquidity of the Series 2019A Bonds that remain outstanding. See the caption “THE SERIES 2019A BONDS—Redemption” herein.

*The Series 2019A Bonds are Expected to be Issued Only in Book-Entry Form*

The Authority expects that the Series 2019A Bonds will be initially represented by certificates registered in the name of Cede & Co., the nominee for DTC, and will not be registered in the name of any holder or the name of its nominee. Unless and until definitive securities are issued, holders of the Series 2019A Bonds will not be recognized by the Trustee as Registered Owners as that term is used in the Indenture and holders of the Series 2019A Bonds will only be able to exercise the rights of Owners indirectly through DTC and its participating organizations. See the caption “THE SERIES 2019A BONDS—Securities Depository” herein.

*The Rating of the Series 2019A Bonds is Not a Recommendation to Purchase and may Change*

It is a condition to issuance of the Series 2019A Bonds that they be rated as described under the caption “SUMMARY OF TERMS—Rating” herein. The rating is based primarily on the creditworthiness of the underlying Portfolio Loans, the amount of debt service coverage and the legal structure of the transaction. The rating is not a recommendation to purchase, hold or sell the Series 2019A Bonds inasmuch as the rating does not comment as to the market price or suitability for any investor. The ratings may be increased, lowered or withdrawn by the rating agency if in the rating agency’s judgment circumstances so warrant. A downgrade in the rating of the Series 2019A Bonds is likely to decrease the price a subsequent purchaser will be willing to pay for the Series 2019A Bonds. The rating of the Series 2019A Bonds will not address the market liquidity of the Series 2019A Bonds.

## **Legislative and Regulatory Investment Considerations**

*Federal Action Might Preempt the Act Without Full Compensation*

New York law may not protect Owners of the Series 2019A Bonds against an adverse effect on their investment pursuant to a federal law enacted under the powers of the United States Congress, such as the war power or the power to regulate interstate commerce.

In the past, bills have been introduced in Congress that would prohibit the recovery of all or some types of a public utility’s existing infrastructure investments that may become redundant after substantial changes in regulatory or market conditions, but none of those bills was enacted. Congress could, however, pass a law or adopt a rule or regulation negating the ability of the Authority to collect On-Bill Recovery Loan repayments.

If federal legislation attempting to preempt the Act is enacted, there is no assurance that the courts would consider it a “taking” under the United States Constitution for which the government would be required to pay just compensation or, if it is considered a “taking”, that any amount provided as compensation would be sufficient to pay the full amount of principal of and interest on the transition bonds or to pay these amounts on a timely basis.

*Application of Consumer Protection Laws to the Portfolio Loans may Increase Costs and Uncertainties about the Portfolio Loans*

Numerous federal and state consumer protection laws and related regulations impose substantial requirements upon lenders and servicers involved in consumer finance. Some of these laws and regulations impose penalties or other

consequences upon originators, lenders and servicers who fail to comply with their provisions. For example, federal law such as the Truth-in-Lending Act can impose statutory damages on assignees and defenses to enforcement of the Portfolio Loans, if errors were made in disclosures that must be made to Borrowers. In some cases, such penalties or other consequences could affect the ability of the Authority to enforce consumer finance contracts such as the Portfolio Loans, which could reduce Pledged Loan Payments available to make payments on the Series 2019A Bonds.

Additionally, further regulation by Congress, State legislatures or regulatory agencies, or changes in the regulatory application or judicial interpretation of existing laws and regulations applicable to consumer lending, could make it more difficult for the Servicer to collect payments on the Portfolio Loans or otherwise affect the manner in which the Servicer conducts its business. The regulatory environment in which financial institutions, creditors and servicers operate has become increasingly complex.

If the Portfolio Loans were marketed or serviced in a manner that is unfair, deceptive or abusive, or if marketing, origination or servicing violated any applicable law, then state and federal laws applicable to unfair, deceptive or abusive acts or practices may impose liability on the loan holder, as well as creating defenses to enforcement. There can be no assurance that the Authority will not be subject to and have liability with respect to such claims. Any such liability could reduce Pledged Loan Payments and have a material adverse effect on the Series 2019A Bonds.

The Portfolio Loans were made using standardized documentation. Thus, many Borrowers may be similarly situated insofar as the provisions of their contractual obligations are concerned. Accordingly, certain allegations of violations of the provisions of applicable federal or state consumer protection laws could potentially result in a large class of claimants asserting claims against the Authority or the Servicer. The costs of defending or paying judgments in any such lawsuits could adversely affect the Authority's or the Servicer's business, or could reduce the Authority's funds available to make payments of principal of and interest on the Series 2019A Bonds.

#### *Future State Action Might Reduce the Value of the Series 2019A Bonds*

From time to time, bills are introduced into the Legislature of the State that, if enacted into law, would affect the Authority and its operations, including the GJGNY Program. Such bills may be introduced or become law in the future. In addition, the State undertakes periodic studies of public authorities (including the Authority) and their financing programs. Any of such studies could result in legislation adversely affecting the Authority's operations. See the caption "STATE PLEDGE AND AGREEMENT" herein.

It might be possible for the State legislature to repeal or amend the Act notwithstanding the State's pledge if the legislature acts in order to serve a significant and legitimate public purpose. Any such action, as well as the litigation that likely would ensue, might adversely affect the price and liquidity, the dates of payment of interest and principal and the weighted average lives of the Series 2019A Bonds. The enforcement of any rights against the State under its pledge may be subject to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against the State. The outcome of any litigation cannot be predicted.

If an action of the State legislature adversely affecting the Owners were considered a "taking" under the United States or State Constitution, the State might be obligated to pay compensation for the taking. Even in that event, there is no assurance that any amount provided as compensation would be sufficient for Owners to fully recover their investment in the Series 2019A Bonds or to offset interest lost pending such recovery.

#### *The Authority is not Obligated to Indemnify Owners of the Series 2019A Bonds for Changes in Law*

The Authority will not indemnify Owners of the Series 2019A Bonds for any changes in the law, including any federal preemption or repeal or amendment of the Act that may affect the value of the Series 2019A Bonds.

### **Servicing Investment Considerations**

#### *Performance of the Servicer's Duties is Essential*

Concord Servicing Corporation, as the initial Servicer, will be responsible for, among other things, billing, monitoring the Portfolio Loans and taking actions in the event of non-payment of Portfolio Loans. The Trustee's receipt of the Pledged Loan Payments, which will be used to make payments on the Series 2019A Bonds, will depend in part on the skill and diligence of the Servicer in performing these functions. If the Servicer fails to make collections for any

reason, or to timely remit the Pledged Loan Payments to the Trustee, then the Servicer's payments to the Trustee in respect of the Portfolio Loans, and payments on the Series 2019A Bonds, might be delayed or reduced.

*If payments on the Portfolio Loans become Overdue, the Authority may be required to Pay Additional Loan Servicing Fees and Collection Fees associated with Delinquent or Defaulted Loans and the Owners may Experience Losses.*

If a Portfolio Loan becomes delinquent or defaults, the Servicer is permitted to charge higher servicing fees on the delinquent Portfolio Loans and will engage Blackwell Recovery, a unit of the Servicer, to perform default collection service for which Blackwell Recovery is paid a contingency fee. In performing default collections, Blackwell Recovery may offer to settle with the obligor under terms agreed to by the Authority. As these additional fees will be offset against the Pledged Revenues, such fees will reduce the Pledge Revenues available to pay the Series 2019A Bonds and Owners may experience losses.

The Servicer or Blackwell Recovery may be unable to recover some or all of the unpaid balance of a non-performing Portfolio Loan. Owners must rely on the collection efforts of the Servicer and Blackwell Recovery.

*The Servicing Fees are on a Per-Loan and Per-Service Basis and may be Increased*

The Servicing Fees charged by the Servicer pursuant to the Servicing Agreement are primarily charged on a per-loan and per-service rendered basis by the Servicer for each Portfolio Loan; thus, servicing fees will increase as a percentage of the principal amount of the Portfolio Loans as the Portfolio Loans are paid down and, if the delinquency rate of the Portfolio Loans increases, the Servicing Fees will increase as a percentage of the Pledged Revenues. The Servicing Agreement permits the Servicing Fees charged thereunder to be increased on an annual basis up to one and one-half times the increase in the Consumer Price Index. Any increases in per-loan and per-service Servicing Fees could cause the Administrative Expenses to exceed the amount permitted to be paid out of Pledged Revenues. See the caption "Considerations Relating to the Pledged Revenues—Amounts Permitted to Pay Administrative Expenses from the Trust Estate are Limited" above.

*The Servicer May Commingle Collections on the Portfolio Loans with its Own Funds*

The Pledged Loan Payments received on the Portfolio Loans constituting the Smart Energy Loans generally are deposited into an account in the name of the Servicer each Business Day. However, such payments received on the Smart Energy Loans initially will not be segregated from payments the Servicer receives on other loans it services. The Servicer will be required to deposit such Pledged Loan Payments into a segregated collection account established for the Series 2019A Bonds in the name of the Authority within two Business Days of receipt, and such amounts are transferred to the Trustee at the end of each Business Day (subject to retention in such deposit account of a balance not in excess of \$1,000). Despite these requirements, the Servicer might fail to transfer the full amount of such Pledged Loan Payments to the Trustee or might fail to do so on a timely basis. If the Servicer fails to meet its contractual obligations to deposit such Pledged Loan Payments in a segregated collection account and commingles such Pledged Loan Payments with its own funds, in a bankruptcy of the Servicer, a bankruptcy court might decline to recognize the Trustee's right to any such Pledged Loan Payments that are commingled with other funds of the Servicer as of the date of bankruptcy. If so, any Pledged Loan Payments held by the Servicer as of the date of bankruptcy would not be immediately available to pay amounts owing on the Series 2019A Bonds. If these amounts were ultimately determined to not be available, Owners of the Series 2019A Bonds would have only a general unsecured claim against the Servicer for those amounts.

See also the caption "*Reliance on Utilities to Collect Certain Pledged Loan Payments*" below for a description of the receipt of Pledged Loan Payments on the Portfolio Loans constituting On-Bill Recovery Loans.

*If the Initial Servicer Ceases to Act, Difficulties May Arise*

If Concord Servicing Corporation resigns or is removed as the Servicer, the Authority expects to appoint the Backup Servicer as the Servicer; however, if the Backup Servicer is unable to undertake such duties, it might be difficult to find a successor Servicer. A successor Servicer might have less experience and ability than the initial Servicer or Backup Servicer and might experience difficulties in collecting the Pledged Loan Payments into a segregated collection account within two Business Days of receipt. Despite this requirement, the Servicer, and servicing fees, billing and payment arrangements may change, resulting in delays or disruptions of collections. A successor Servicer might charge fees that are substantially higher than the fees paid to the initial Servicer. In the event of the commencement of a case by

or against the Servicer under the United States Bankruptcy Code or similar laws, the Servicer and the Trustee might be prevented from effecting a transfer of servicing. Any of these factors and others might delay the timing of payments and may reduce the value of the Series 2019A Bonds.

*A Servicer Default May Result in Additional Costs or a Diminution in Servicing Performance, Which May Adversely Affect the Series 2019A Bonds*

In the event of the removal of the Servicer and an appointment of a successor Servicer, the Authority cannot predict:

- the cost of the transfer of servicing to such successor; or
- the ability of such successor to perform the obligations and duties of the Servicer under the Servicing Agreement.

Furthermore, the Authority may experience difficulties in appointing a successor Servicer and during any transition phase it is possible that normal servicing activities could be disrupted.

*The Servicer's Indemnification Obligations to the Authority Are Limited and Do Not Extend to the Owners of the Series 2019A Bonds*

The Servicer will be obligated under the Servicing Agreement to indemnify the Authority only as a result of the Servicer's negligence in the performance of the Servicing Agreement. The Servicer's indemnification obligations to the Authority do not extend to the Owners of the Series 2019A Bonds. The Owners of the Series 2019A Bonds do not have any right to terminate the Servicing Agreement.

*Reliance on Utilities to Collect Certain Pledged Loan Payments*

Pursuant to contracts directly with the Authority and not with the Servicer, utilities will act as subservicers in connection with collecting upon the On-Bill Recovery Loans. Each such utility will utilize its own customary billing and collecting procedures in connection with collecting and administering the related Portfolio Loans.

On-Bill Recovery Loan payments will be subordinated to payment in full of electric and/or gas services. Each subservicing agreement provides that the related utility will be required to remit payments in respect of the related Portfolio Loans received during a month to the Authority or its designee on the 15<sup>th</sup> day of the following month. Until such time, Pledged Loan Payments will not be required to be segregated from the general funds of the related utility subservicer. A utility subservicer nevertheless might fail to remit the full amount of Pledged Loan Payments owed to the Servicer or might fail to do so on a timely basis. This failure, whether voluntary or involuntary, might materially reduce the amount of Pledged Loan Payments available to make timely payments on the Series 2019A Bonds. Additionally, in a bankruptcy of a utility subservicer, a bankruptcy court might decline to recognize the Trustee's right to Pledged Revenues that are commingled with other funds of such subservicer as of the date of bankruptcy and such Pledged Revenues held by such subservicer as of the date of bankruptcy would not be immediately available to pay amounts owing on the Series 2019A Bonds. If these amounts were ultimately determined to not be available, Owners of the Series 2019A Bonds would have only a general unsecured claim against the subservicer for those amounts, which could cause material delays in payments of principal or interest, or losses, on the Series 2019A Bonds and could materially reduce the value of the Series 2019A Bonds.

The subservicing agreements require the utility subservicers to perform billing and collection arrangements with customers in accordance with regulations filed with and approved by the PSC (or in the case of the Long Island Power Authority, as approved by its Trustees), the New York Public Service Law, the PSC's regulations in Title 16 of the Codes, Rules and Regulations of the State of New York, the utility's business practices, and the utility's Vendor Agreement with the New York State Office of Temporary and Disability Assistance. Changes could be made to these laws, regulations, agreements and practices to change billing and collection practices, which might adversely affect the timing and amount of customer payments and might reduce On-Bill Recovery Loan collections, thereby reducing the ability to make scheduled payments on the Series 2019A Bonds.

The utility subservicers will be obligated under the related subservicing agreements to indemnify the Authority only for negligent acts or omissions, willful misconduct or a failure to comply with the obligations of the related

subservicing agreements. The utility subservicers' indemnification obligations to the Authority do not extend to the Owners of the Series 2019A Bonds. The Owners of the Series 2019A Bonds do not have any right to terminate the Authority's contracts with any of the utility subservicers.

#### *On-Bill Recovery Loan Collections*

The On-Bill Recovery Loans have a limited history. In addition, the terms of the On-Bill Recovery Loans and the New York Public Service Law allow obligors of an On-Bill Recovery Loan who do not fully pay their utility bill to enter into a deferred payment arrangement with the utility, which would affect repayment. In addition, On-Bill Recovery Loans include unique terms regarding the ability of an On-Bill Recovery Loan to be transferred to a new obligor upon the sale or transfer of the related property. The new obligor may have a different credit profile than the original obligor that could affect the likelihood of repayment of the On-Bill Recovery Loan. Although the PNY Act requires prospective sellers to notify a prospective purchaser prior to accepting an offer for the sale or transfer of the property, and also requires the filing of a program declaration in the city or county recording office in an effort to ensure that a prospective purchaser has notice of the existence of the obligation, there is no guarantee that a prospective purchaser has received notice from the seller or obtained and understood the recorded declaration.

Certain On-Bill Recovery Loan customers only receiving their electric and/or gas utility bills on a bi-monthly basis and are billed for two On-Bill Recovery Loan installment amounts on each utility bill. In addition, each utility only transfers its On-Bill Recovery Loan collections to the Servicer on a monthly basis. Delays in the receipt of On-Bill Recovery Loan collections could adversely affect the Authority's ability to timely pay principal of and interest on the Series 2019A Bonds.

#### *Limits on Rights to Terminate Service Might Make it More Difficult to Collect Pledged Loan Payments*

Pursuant to the Servicing Agreement and the subservicing agreements, each of the utility subservicers may disconnect an obligor's utility electricity/gas service for nonpayment of On-Bill Recovery Loans, subject to provisions of the New York Public Service Law and regulations adopted by the PSC.

### **STATE PLEDGE AND AGREEMENT**

The Indenture will include the State's pledge to, and agreement with, the Owners of the Series 2019A Bonds that the State will not limit or alter the rights and powers vested in the Authority by the Act to fulfill the terms of any contract made by the Authority with the Owners, or in any way impair the rights and remedies of the Owners until the Series 2019A Bonds, together with the interest thereon, with interest on any unpaid installments of interest, and all costs and expenses in connection with any action or proceeding by or on behalf of the Owners, are fully met and discharged.

### **LEGALITY FOR INVESTMENT AND DEPOSIT**

The bonds and notes of the Authority, including the Series 2019A Bonds, are securities in which all public officers and bodies of the State and all municipalities and municipal subdivisions, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks, savings associations, including savings and loan associations and building and loan associations, investment companies and other persons carrying on a banking business, all administrators, guardians, executors, trustees and other fiduciaries, and all other persons whatsoever who may be authorized to invest in bonds or other obligations of the State, may properly and legally invest funds including capital in their control or belonging to them. Notwithstanding any other provisions of law, the bonds and notes of the Authority are also securities which may be deposited with and may be received by all public officers and bodies of the State and all municipalities and municipal subdivisions for any purpose for which the deposit of bonds or other obligations of the State may be authorized.

### **UNDERWRITING**

The Underwriter has agreed, subject to certain conditions, to purchase the Series 2019A Bonds from the Authority at an aggregate purchase price of \$15,510,000. The Underwriter will be paid an underwriting fee equal to \$161,830. The Underwriter has agreed to purchase all Series 2019A Bonds if any are purchased.

The Underwriter may offer and sell Series 2019A Bonds to certain dealers (including dealers depositing Series 2019A Bonds into investment trusts) and others at prices lower than the offering prices stated on the cover page of

this Official Statement. After the initial public offering, the Underwriter may change the price at which the Underwriter offers the Series 2019A Bonds for sale from time to time.

In connection with the offering, the Underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of the Series 2019A Bonds. Specifically, the Underwriter may over allot the offering, creating a syndicate short position. The Underwriter may bid for and purchase Series 2019A Bonds in the open market to cover such syndicate short position or to stabilize the price of Series 2019A Bonds. Those activities may stabilize or maintain the market price of such Series 2019A Bonds above independent market levels. The Underwriter is not required to engage in these activities and may end any of these activities at any time.

The bond purchase agreement provides that the Authority has agreed to reimburse the Underwriter for the fees and expenses of its counsel.

## LITIGATION

There is not now pending any litigation: (i) restraining or enjoining the issuance or delivery of the Series 2019A Bonds or questioning or affecting the validity of the Series 2019A Bonds or the proceedings and authority under which they are issued; (ii) contesting the creation, organization or existence of the Authority, or the title of the directors or officers of the Authority to their respective offices; or (iii) questioning the right of the Authority to enter into the Indenture and to pledge the Pledged Revenues and the Pledged Funds and other moneys and securities purported to be pledged by the Indenture in the manner and to the extent provided in the Indenture.

## RATING

The Series 2019A Bonds are expected to be rated “A(sf)” by Kroll Bond Rating Agency, Inc. (“KBRA”). Such rating reflects only the view of such rating agency from which an explanation of the significance of such rating may be obtained. There is no assurance that such rating will continue for any given period of time or that any such rating will not be revised downward or withdrawn entirely if, in the judgment of KBRA, circumstances so warrant. A revision or withdrawal of such rating may have an effect on the market price of the Series 2019A Bonds.

## CONTINUING DISCLOSURE

In order to assist the Underwriter in complying with Rule 15c2-12 promulgated by the SEC (the “Rule”), the Authority will enter into a continuing disclosure undertaking with respect to the Series 2019A Bonds (a “Continuing Disclosure Undertaking”) setting forth the undertaking of the Authority regarding continuing disclosure with respect to the Series 2019A Bonds. The proposed form of the Continuing Disclosure Undertaking is set forth in Appendix C attached hereto. The initial report delivered by the Authority in connection with its Continuing Disclosure Undertaking will also include a final report describing the Green Projects financed with the proceeds of the Series 2019A Bonds.

In addition, the Indenture provides that the Authority will, within sixty (60) days after each Interest Payment Date, commencing October 1, 2019, prepare a report setting forth a description of the Series 2019A Bonds Outstanding, the redemptions of Series 2019A Bonds on such Interest Payment Date and the distribution of the Pledged Revenues on such Interest Payment Date (the “Information Statement”), and will file such Information Statement with the Municipal Securities Rulemaking Board through EMMA. See the caption “Certain Covenants—*Semiannual Information Statement*” in “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto.

## TAX MATTERS

### Series 2019A Bonds

In the opinion of Co-Bond Counsel to the Authority, interest on the Series 2019A Bonds: (i) is included in gross income for Federal income tax purposes pursuant to the Internal Revenue Code of 1986, as amended (the “Code”); and (ii) is exempt, under existing statutes, from personal income taxes imposed by the State of New York or any political subdivision thereof (including The City of New York).

The following discussion is a brief summary of the principal United States Federal income tax consequences of the acquisition, ownership and disposition of Series 2019A Bonds by original purchasers of the Series 2019A Bonds who



are “U.S. Holders”, as defined herein. This summary: (i) is based on the Code, Treasury Regulations, revenue rulings and court decisions, all as currently in effect and all subject to change at any time, possibly with retroactive effect; (ii) assumes that the Series 2019A Bonds will be held as “capital assets”; and (iii) does not discuss all of the United States Federal income tax consequences that may be relevant to a holder in light of its particular circumstances or to holders subject to special rules, such as insurance companies, financial institutions, tax-exempt organizations, dealers in securities or foreign currencies, persons holding the Series 2019A Bonds as a position in a “hedge” or “straddle”, holders whose functional currency (as defined in Section 985 of the Code) is not the United States dollar, holders who acquire Series 2019A Bonds in the secondary market, or individuals, estates and trusts subject to the tax on unearned income imposed by Section 1411 of the Code.

Owners of Series 2019A Bonds should consult with their own tax advisors concerning the United States Federal income tax and other consequences with respect to the acquisition, ownership and disposition of the Series 2019A Bonds as well as any tax consequences that may arise under the laws of any state, local or foreign tax jurisdiction.

### **Original Issue Discount**

In general, if Original Issue Discount (“OID”) is greater than a statutorily defined de minimis amount, a holder of a Series 2019A Bond must include in Federal gross income (for each day of the taxable year, or portion of the taxable year, in which such holder holds such Series 2019A Bond) the daily portion of OID, as it accrues (generally on a constant yield method) and regardless of the holder’s method of accounting. “OID” is the excess of (i) the “stated redemption price at maturity” over (ii) the “issue price”. For purposes of the foregoing: “issue price” means the first price at which a substantial amount of the Series 2019A Bond is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers); “stated redemption price at maturity” means the sum of all payments, other than “qualified stated interest”, provided by such Series 2019A Bond; “qualified stated interest” is stated interest that is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually at a single fixed rate; and “de minimis amount” is an amount equal to 0.25 percent of the Series 2019A Bond’s stated redemption price at maturity multiplied by the number of complete years to its maturity. A holder may irrevocably elect to include in gross income all interest that accrues on a Series 2019A Bond using the constant-yield method, subject to certain modifications.

### **Bond Premium**

In general, if a Series 2019A Bond is originally issued for an issue price (excluding accrued interest) that reflects a premium over the sum of all amounts payable on the Series 2019A Bond other than “qualified stated interest” (a “Series 2019A Premium Bond”), that Series 2019A Premium Bond will be subject to Section 171 of the Code, relating to bond premium. In general, if the holder of a Series 2019A Premium Bond elects to amortize the premium as “amortizable bond premium” over the remaining term of the Series 2019A Premium Bond, determined based on constant yield principles (in certain cases involving a Series 2019A Premium Bond callable prior to its stated maturity date, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the highest yield on such bond), the amortizable premium is treated as an offset to interest income; the holder will make a corresponding adjustment to the holder’s basis in the Series 2019A Premium Bond. Any such election is generally irrevocable and applies to all debt instruments of the holder (other than tax-exempt bonds) held at the beginning of the first taxable year to which the election applies and to all such debt instruments thereafter acquired. Under certain circumstances, the holder of a Series 2019A Premium Bond may realize a taxable gain upon disposition of the Series 2019A Premium Bond even though it is sold or redeemed for an amount less than or equal to the holder’s original acquisition cost.

### **Disposition and Defeasance**

Generally, upon the sale, exchange, redemption, or other disposition (which would include a legal defeasance) of a Series 2019A Bond, a holder generally will recognize taxable gain or loss in an amount equal to the difference between the amount realized (other than amounts attributable to accrued interest not previously includable in income) and such holder’s adjusted tax basis in the Series 2019A Bond.

The Authority may cause the deposit of moneys or securities in escrow in such amount and manner as to cause the Series 2019A Bonds to be deemed to be no longer outstanding under the Indenture of the Series 2019A Bonds (a “defeasance”). See “APPENDIX A—CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE” hereto. For Federal income tax purposes, such defeasance could result in a deemed exchange under Section 1001 of the

Code and a recognition by such owner of taxable income or loss, without any corresponding receipt of moneys. In addition, the character and timing of receipt of payments on the Series 2019A Bonds subsequent to any such defeasance could also be affected.

### **Information Reporting and Backup Withholding**

In general, information reporting requirements will apply to non-corporate holders of the Series 2019A Bonds with respect to payments of principal, payments of interest, and accrual of OID on a Series 2019A Bond and the proceeds of the sale of a Series 2019A Bond before maturity within the United States. Backup withholding may apply to holders of Series 2019A Bonds under Section 3406 of the Code. Any amounts withheld under the backup withholding rules from a payment to a beneficial owner, and which constitutes over-withholding, would be allowed as a refund or a credit against such beneficial owner's United States Federal income tax provided the required information is furnished to the Internal Revenue Service.

### **U.S. Holders**

The term "U.S. Holder" means a beneficial owner of a Series 2019A Bond that is: (i) a citizen or resident of the United States, (ii) a corporation, partnership or other entity created or organized in or under the laws of the United States or of any political subdivision thereof, (iii) an estate the income of which is subject to United States Federal income taxation regardless of its source or (iv) a trust whose administration is subject to the primary jurisdiction of a United States court and which has one or more United States fiduciaries who have the authority to control all substantial decisions of the trust.

### **Miscellaneous**

Tax legislation, administrative actions taken by tax authorities, or court decisions, whether at the Federal or state level, may adversely affect the tax-exempt status of interest on the Series 2019A Bonds under state law and could affect the market price or marketability of the Series 2019A Bonds.

Prospective purchasers of the Series 2019A Bonds should consult their own tax advisors regarding the foregoing matters.

## **FINANCIAL ADVISORS**

Omnicap Group LLC ("Omnicap") has acted as independent registered municipal advisor to the Authority in conjunction with the issuance of the Series 2019A Bonds. Omnicap has assisted the Authority in preparation of this Official Statement and in other matters related to the planning, structuring, execution and delivery of the Series 2019A Bonds. Omnicap is a municipal advisor registered with the Securities and Exchange Commission and the MSRB, is an independent advisory firm, and is not engaged in the business of underwriting, trading or distribution of municipal securities or other public securities and therefore will not participate in the underwriting of the Series 2019A Bonds.

Omnicap has not audited, authenticated or otherwise independently verified the information set forth in this Official Statement, or any other information related to the Authority with respect to the accuracy or completeness of disclosure of such information. Omnicap makes no guaranty, warranty or other representation respecting the accuracy or completeness of this Official Statement or any other matter related to this Official Statement.

## **APPROVALS**

The Act provides that: (a) the sale of Series 2019A Bonds to the Underwriter and the terms of such sale are subject to the approval of the Comptroller of the State; (b) the proceedings authorizing the issuance of the Series 2019A Bonds are subject to the approval of the Governor of the State; and (c) certain provisions of the Indenture are also subject to the approval of the Commissioner of Taxation and Finance of the State. Pursuant to Section 51 of the Public Authorities Law of the State, as amended, the Authority may not make any commitment, enter into any agreement or incur any indebtedness for the purpose of acquiring, constructing or financing any project without the prior approval of the Public Authorities Control Board of the State.

## LEGAL OPINIONS

Legal matters incident to the authorization, issuance and sale of the Series 2019A Bonds will be subject to the approving opinion of Hawkins Delafield & Wood LLP, New York, New York, and Law Offices of Joseph C. Reid, P.A., New York, New York, Co-Bond Counsel to the Authority. The approving Opinions of Co-Bond Counsel are expected to be in substantially the form included in this Official Statement as Appendix B. Certain other legal matters will be passed upon for the Authority by Noah C. Shaw, its General Counsel. Certain other legal matters will be passed upon for the Underwriter by Kutak Rock LLP, Denver, Colorado, counsel to the Underwriter.

This Official Statement has been duly executed and delivered by the Authority.

### NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

By /s/ Alicia Barton  
President and CEO

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**CERTAIN DEFINITIONS AND SUMMARY OF THE INDENTURE**

THIS SUMMARY DOES NOT PURPORT TO BE COMPLETE AND REFERENCE SHOULD BE MADE TO THE INDENTURE FOR A FULL AND COMPLETE STATEMENT OF SUCH DOCUMENT AND ALL PROVISIONS THEREIN.

**Certain Definitions**

The following terms have the meanings herein specified in the following summary of the Indenture.

“*Act*” means the New York State Energy Research and Development Authority Act, Title 9 of Article 8 of the Public Authorities Law of the State of New York, as from time to time amended and supplemented.

“*Administrative Expense*” means any Trustee Fees, Servicing Fees, Backup Servicing Fees or Rating Surveillance Fees and any fees and expenses payable to any Paying Agent under the Indenture.

“*Authority*” means New York State Energy Research and Development Authority, the public benefit corporation created by the Act, and its successors and assigns.

“*Authorized Officer*” means the Chair, Vice-Chair, President, Vice President, Treasurer, Assistant Treasurer or Secretary of the Authority.

“*Backup Servicer*” means First Associates Loan Servicing LLC, along with any successors to the material obligations of a backup servicer, with respect to the Loans, as provided by the Backup Servicing Agreement, appointed in accordance with the Indenture.

“*Backup Servicing Agreement*” means the Backup Servicing Agreement, dated as of July 1, 2013, by and between the Authority and the Backup Servicer, as the same may be amended and supplemented in accordance with the Indenture and any similar agreement with any successor as Backup Servicer, to the extent applicable to Loans.

“*Backup Servicing Fees*” means fees payable to the Backup Servicer under the Backup Servicing Agreement and allocable to the Loans.

“*Bond Counsel*” means, collectively, with respect to the initial issuance of the Series 2019A Bonds on the Date of Issuance, Hawkins Delafield & Wood LLP and Law Offices of Joseph C. Reid, P.A., or other counsel selected by the Authority and satisfactory to the Trustee and nationally recognized as experienced in matters relating to bonds issued by states and their political subdivisions and public instrumentalities.

“*Bond Register*” means the Bond Register maintained and kept by the bond registrar at the Corporate Trust Office pursuant to the Indenture.

“*Bond Year*” means any period commencing on and including April 1 of any year and ending on and including March 31 of the next succeeding calendar year.

“*Borrower*” means any person who may be obligated as a borrower, co-signor or guarantor to pay a Program Loan, along with any successor to such payment obligations.

“*Business Day*” means a day on which banks located in (i) The City of New York, New York, or (ii) the city in which the principal office of the Trustee is located are not required or authorized to remain closed and on which the New York Stock Exchange is not closed.

“*Corporate Trust Office*” means the office of the Trustee at which at any particular time its corporate trust business shall be principally administered, which office at the date hereof is located at 101 Barclay Street - 7W, New York, New York 10286.

“*Cost of Issuance Fund*” means the Cost of Issuance Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Cost of Issuance Fund*” in this Appendix A.

“*Date of Issuance*” means March 21, 2019.

“*Debt Service*” means, as of any date, and for any Bond Year, with respect to the Series 2019A Bonds then Outstanding, the aggregate amount of principal and interest scheduled to become due (either at maturity or by mandatory redemption), as calculated by the Authority in accordance with this definition.

“*Debt Service Fund*” means the Debt Service Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Debt Service Fund*” in this Appendix A.

“*Eligible Loan*” means: (a) with respect to all Loans, a U.S. Dollar denominated Program Loan that satisfies the Loan Criteria; and (b) additionally, with respect to Subsequent Portfolio Loans, a Program Loan that may be reimbursed hereunder consistent with the Portfolio Criteria.

“*Eligible Project*” means any project for one to four family residential structures that meets the definition of eligible project as defined in the Green Jobs–Green New York Act and the Act.

“*EMMA*” means the Electronic Municipal Market Access System of the Municipal Securities Rulemaking Board.

“*Event of Default*” means any event of default specified in the Indenture as described under the caption “Defaults and Remedies—*Events of Default*” in this Appendix A.

“*Fund*” means any fund described under the caption “Funds Created under the Indenture” in this Appendix A.

“*Green Jobs–Green New York Act*” means the Green Jobs–Green New York Act of 2009 (Title 9A of the Public Authorities Law of New York), as from time to time amended and supplemented.

“*Green Jobs–Green New York Program*” or “*GJGNY Program*” means the Authority’s Green Jobs–Green New York Program described under the caption “GREEN JOBS–GREEN NEW YORK PROGRAM” in the body of this Official Statement.

“*Green Jobs–Green New York Revolving Loan Fund*” or “*GJGNY Revolving Fund*” means the revolving loan fund established by the State pursuant to the Green Jobs–Green New York Act and described under the caption “GREEN JOBS–GREEN NEW YORK PROGRAM” in the body of this Official Statement.

“*Initial Portfolio Loans*” means the Loans identified in the Indenture as of the Cutoff Date.

“*Interest Payment Date*” means the date on which any installment of interest on the Series 2019A Bonds is due other than by reason of acceleration or redemption, being April 1 and October 1 of each year, commencing October 1, 2019, or, if such date is not a Business Day, on the next succeeding Business Day.

“*KBRA*” means Kroll Bond Rating Agency, Inc., or its successors and assigns, or if there is no such successor or assign, shall mean another rating service selected by the Authority.

“*Loan*” means any Program Loan subsequent to the assignment and pledge of Loan Payments with respect to such Program Loan to the Trustee (and shall include, without limitation, the Initial Portfolio Loans as of the Date of Issuance), but shall not include any such Program Loans as to which the associated Loan Payments have been released from the lien of the Indenture as provided therein.

“*Loan Agreement*” means any agreement providing for a Program Loan to be made available to a Borrower in whole or in part with the proceeds of the Series 2019A Bonds or which is a source of Pledged Loan Payments between a Borrower and the Authority, including any promissory notes or other evidences of indebtedness executed pursuant thereto, in each case as amended and supplemented in accordance with its terms from time to time.

“*Loan Criteria*” means the following criteria relating to each Loan upon origination, upon the second Business Day prior to reimbursement or at each such time, as noted: (a) each Loan is a valid and binding obligation of the obligor at each such time; (b) no Loan is subject at either such time to a prior perfected lien; (c) each Loan has an original maturity of not more than 180 months and a remaining maturity on such second Business Day of at least three months and not more than 180 months; (d) each Loan has a remaining principal balance on such second Business Day of at least \$100 and not more than \$25,000; (e) each Loan has an interest rate at each such time of at least 2.99%; (f) each Loan provides at each such time for level scheduled monthly payments that fully amortize the amount financed over its original term to maturity; (g) each Loan was originated in the United States and in the State of New York and is not identified on such second Business Day on the records of the Servicer as being subject to any pending bankruptcy proceeding; (h) each Loan arose under a contract with respect to which the Authority on such second Business Day has performed all obligations required to be performed by it thereunder; (i) each Loan was originated and on such second Business Day has been serviced in compliance with all applicable laws; (j) each Loan either: (1) meets the Tier 1 Criteria, or (2) meets the Tier 2 Criteria and such Loan was originated no fewer than sixty (60) months prior to such second Business Day; and (k) each Loan, if an Initial Portfolio Loan, is not more than sixty (60) past due on such second Business Day or, if other than an Initial Portfolio Loan, is not more than thirty (30) days past due on such second Business Day.

“*Loan Fund*” means the Loan Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Loan Fund*” in this Appendix A.

“*Loan Payments*” means all amounts of interest and principal payable by a Borrower under a Loan Agreement.

“*Moody’s*” means Moody’s Investors Service, Inc., or its successors and assigns, or if there is no such successor or assign, shall mean another rating service selected by the Authority.

“*Officer’s Certificate*” means a written certificate signed by an Authorized Officer of the Authority, which may be transmitted in electronic form acceptable to the Trustee.

“*On-Bill Recovery Agreement*” means any agreement by and between the Authority and another entity pursuant to Section 1896(1)(c)(iii) of Title 9A of the Public Authorities Law of New York, as amended, to provide for billing and collection of Loan Payments using an on-bill recovery mechanism, to the extent applicable to Loans.

“*On-Bill Recovery Loan*” means a Program Loan that is subject to billing and collection pursuant to an On-Bill Recovery Agreement.

“*Origination Agreement*” means, collectively, the Agreement, dated as of January 1, 2010, between the Authority and the Originator, and an Agreement, effective as of June 1, 2017, each by and between the Authority and the Originator, as the same has been and may be amended and supplemented in accordance with the Indenture, and any similar agreement with any successor as Originator, to the extent applicable to Loans.

“*Originator*” means Slipstream Group Incorporated, operating as Energy Finance Solutions, along with any successors to the material obligations of an originator, with respect to the Loans, as provided by the Origination Agreement, appointed in accordance with the Indenture.

“*Outstanding*” means, as of any particular date, the aggregate of all the Series 2019A Bonds, authenticated and delivered under the Indenture, except:

(a) Series 2019A Bonds cancelled by the Trustee or delivered to the Trustee for cancellation at or prior to such date;

(b) Series 2019A Bonds for the payment or redemption of which money in the necessary amount has been theretofore deposited with the Trustee or any Paying Agent in trust for the Owners of such Series 2019A Bonds, provided that if such Series 2019A Bonds are to be redeemed, notice of such redemption has been duly given pursuant to the Indenture or provision therefor satisfactory to the Trustee has been made;

(c) Series 2019A Bonds paid or deemed to be paid as provided in the Indenture; and

(d) Series 2019A Bonds paid or in lieu of or in substitution for which other Series 2019A Bonds shall have been authenticated and delivered pursuant to the Indenture, unless proof satisfactory to the Trustee

shall be presented that any such Series 2019A Bonds shall be held by a “protected purchaser” (as such term is defined in the Uniform Commercial Code of the State of New York).

“*Owner*” or “*Bondowner*” means the Registered Owner of any Series 2019A Bond.

“*Paying Agency Office*” means the office of the Trustee maintained in the Borough of Manhattan in The City of New York, at which its corporate trust business shall be administered in such city.

“*Paying Agent*” means any paying agent for the Series 2019A Bonds and any successor or successors as paying agent appointed pursuant to the Indenture.

“*Person*” means an individual, a corporation, a partnership, an association, a joint stock company, a trust, any unincorporated organization or a government or political subdivision thereof.

“*Pledged Fund*” means any Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture” in this Appendix A, other than the Cost of Issuance Fund.

“*Pledged Loan Payments*” means Loan Payments with respect to Loans that are received by or on behalf of the Authority subsequent to the date on which the right to receive such Loan Payments is assigned to the Trustee, other than Loan Payments that have been released from the Indenture as provided therein.

“*Pledged Revenues*” means all money, revenues and receipts to be received under the Indenture, including all Pledged Loan Payments and all interest or other income derived from the investment or deposit of moneys in any Pledged Fund.

“*Portfolio Criteria*” means with respect to the Subsequent Portfolio Loans:

(i) the percentage of the aggregate unpaid principal amount of all such Loans that are On-Bill Recovery Loans to finance the installation of energy efficiency measures and that meet the Tier 1 Criteria shall be no greater than 4% of such Loans upon the date described in the fourth paragraph under the caption “Funds Created under the Indenture—*Loan Fund*” in this Appendix A;

(ii) the percentage of the aggregate unpaid principal amount of all such Loans that are On-Bill Recovery Loans to finance the installation of solar electric systems and that meet the Tier 1 Criteria shall be no greater than 41% of such Loans upon such described date;

(iii) the percentage of the aggregate unpaid principal amount of all such Loans that are Smart Energy Loans to finance the installation of energy efficiency measures and that meet the Tier 2 Criteria shall be no greater than 4% of such Loans upon such described date;

(iv) the percentage of the aggregate unpaid principal amount of all such Loans that are On-Bill Recovery Loans to finance the installation of energy efficiency measures and that meet the Tier 2 Criteria shall be no greater than 2% of such Subsequent Portfolio Loans upon such described date;

(v) the weighted average debt to income ratio applicable to all such Subsequent Portfolio Loans, at the time of their respective origination, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans shall be no greater than 35% upon such described date;

(vi) the weighted average FICO<sup>®</sup> score applicable to all such Subsequent Portfolio Loans, at the time of their respective origination, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans shall be no less than 730 upon such described date; and

(vii) the weighted average interest rates applicable to all such Subsequent Portfolio Loans, upon the applicable date of reimbursement, based upon the aggregate unpaid principal amount of all such Subsequent Portfolio Loans, upon completion of such reimbursement, shall be no less than 5.20% for all such Subsequent Portfolio Loans.



“*Principal Installment*” means, as of any date of calculation and with respect to a certain date, the aggregate amount of the principal amount of the Series 2019A Bonds due by their terms on such certain date.

“*Program*” means the program established, administered by the Authority and created pursuant to the Green Jobs-Green New York Act to provide funding, through GJGNY Revolving Fund loans, for the performance of energy audits and residential energy efficiency measures for, among other purposes, Eligible Projects.

“*Program Agreements*” means, collectively, the Servicing Agreement, the Backup Servicing Agreement and the Origination Agreement, as each relates to the Loans, and each Loan Agreement relating to a Loan.

“*Program Loan*” means any loan made by the Authority to a Borrower to finance an Eligible Project, as to which Eligible Project the Authority has received evidence of completion prior to loan disbursement, with moneys available under the Program, including, without limitation, with any amount reimbursed to the GJGNY Revolving Fund from amounts transferred from the Loan Fund.

“*Rating*” means each rating then assigned to the Series 2019A Bonds by a Rating Agency.

“*Rating Agency*” means each nationally recognized securities rating agency that is maintaining a Rating on the Series 2019A Bonds at the request of the Authority. On the Date of Issuance, KBRA is the only Rating Agency.

“*Rating Agency Requirement*” means with respect to any proposed action, not less than ten (10) Business Days’ prior written notification to each Rating Agency of such action, and written confirmation from such Rating Agency to the Authority that such action will not result in a suspension, reduction or withdrawal of the then current Rating assigned by such Rating Agency to the Series 2019A Bonds; provided, however, that if within such ten (10) Business Day period, any Rating Agency has neither replied to such notification nor responded in a manner that indicates that such Rating Agency is reviewing and considering the notification, then: (a) the Authority shall be required to confirm that such Rating Agency has received such notice, and if it has, promptly request the related Rating Confirmation; and (b) if such Rating Agency neither replies to such notification nor responds in a manner that indicates it is reviewing and considering the notification within five (5) Business Days following such second request, the Rating Agency Requirement shall be deemed to be satisfied. For the purposes of this definition, any confirmation, request, acknowledgment or approval that is required to be in writing may be in the form of electronic mail or a press release (which may contain a general waiver of any Rating Agency of its right to review or consent).

“*Rating Surveillance Fees*” means the applicable annual amount payable to each Rating Agency.

“*Redemption Fund*” means the Redemption Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Redemption Fund*” in this Appendix A.

“*Redemption Price*” means, with respect to any Series 2019A Bond, the principal amount thereof plus the applicable premium, if any, payable upon redemption thereof pursuant to the terms of such Series 2019A Bond.

“*Registered Owner*” means the person or persons in whose name or names a particular Series 2019A Bond shall be registered on the Bond Register.

“*Required Debt Service*” means Debt Service, other than Principal Installments the mandatory nature of which is dependent upon the availability of funds therefor in accordance with the Indenture.

“*Reserve Fund*” means the Reserve Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Reserve Fund*” in this Appendix A.

“*Reserve Fund Requirement*” means, at any time, the greater of: (a) two percent (2.00%) of the aggregate amount of all Outstanding Series 2019A Bonds; or (b) \$50,000.

“*Reserved Rights of the Authority*” means the rights reserved by the Authority and described under the captions “Security for Series 2019A Bonds; Issuance of Series 2019A Bonds—*Security for the Series 2019A Bonds*,” “Security for Series 2019A Bonds; Issuance of Series 2019A Bonds—*Additional Financial Assistance to Borrowers*,” “Amendments of

Loan Agreements,” “Certain Covenants—*Enforcement of Loan Agreements which are expected to be a source of Pledged Loan Payments*” and “Representations, Warranties and Covenants as to Loans” in this Appendix A.

“*Revenue Fund*” means the Revenue Fund established pursuant to the Indenture and described under the caption “Funds Created under the Indenture—*Revenue Fund*” in this Appendix A.

“*S&P*” means S&P Global Ratings business, or its successors and assigns, or if there is no such successor or assign, shall mean another rating service selected by the Authority.

“*Scheduled Administrative Expenses*” means an amount no greater than \$165,000 in any Bond Year for Administrative Expenses; provided that such amount may be amended from time to time by means of an Officer’s Certificate delivered to the Trustee stating such amendment and evidencing compliance with the Rating Agency Requirement with respect thereto.

“*Securities Depository*” means a Bondowner acting as a central securities depository for the Series 2019A Bonds as provided in the Indenture.

“*Series 2019A Bond*” or “*Series 2019A Bonds*” means any bond or bonds of the Authority executed, authenticated and delivered under the Indenture.

“*Servicer*” means Concord Servicing Corporation, in its capacity as master servicer for the Loan Agreements, along with any successors to the material obligations of a servicer, with respect to the Loans, as provided by the Servicing Agreement, appointed in accordance with the Indenture.

“*Servicing Agreement*” means the agreement, dated as of the 3rd day of November, 2010, between the Authority and the Servicer, as the same has been and may be amended and supplemented in accordance with the Indenture and any similar agreement with any successor as Servicer, in each case, to the extent applicable to Loans.

“*Servicing Fees*” means fees payable to the Servicer under the Servicing Agreement and allocable to Loans.

“*Smart Energy Loan*” means a Program Loan where the Borrower is billed monthly by the Servicer or pays the loan installment through an automated ACH payment.

“*State*” means the State of New York.

“*Subsequent Portfolio Loans*” means all Loans other than Initial Portfolio Loans.

“*Supplemental Indenture*” means any indenture supplementary to or amendatory of the Indenture duly executed and delivered in accordance with the provisions of the Indenture.

“*Term Series 2019A Bonds*” means the Series 2019A Bonds that mature on April 1, 2035.

“*Tier 1 Criteria*” means that at the time of origination of the Program Loan: (a) the Borrower had a FICO score of (1) at least 640, if not self-employed, (2) at least 680, if self-employed for two or more years, or (3) at least 720 if self-employed; provided, however, effective January 1, 2019, the higher FICO® score requirements for self-employed Borrowers are no longer applicable; (b) the Borrower had either (1) a debt-to-income ratio not greater than 50% or (2) with respect to Program Loans originated after December 31, 2018, a FICO score greater than 780 and the date of origination for such Program Loan is later than December 31, 2018; (c) the Borrower had no reported bankruptcies, foreclosures, or repossessions within the prior seven years; and (d) the Borrower did not have reported combined outstanding collections, judgments or tax liens greater than \$2,500.

“*Tier 2 Criteria*” means that at the time of origination of the Program Loan: (a) the Borrower had a FICO score of (1) at least 540 and demonstrated a mortgage payment history without any reported payment delinquencies for the prior 12 months and no reported payment delinquencies greater than 60 days for the prior 24 months, or (2) greater than 640; (b) the Borrower (1) had a FICO score of at least 680 and a debt-to-income ratio not greater than 80%, (2) had a FICO score of at least 600 and a debt-to-income ratio not greater than 75%, (3) had a FICO score of at least 540 and a debt-to-income ratio not greater than 70%; or (4) qualified as owner-occupants for Assisted Home Performance with

ENERGY STAR Subsidy for the subject property of the Program Loan and a debt-to-income ratio not greater than 100%; (c) the Borrower had no reported bankruptcies, foreclosures, or repossessions within the prior two years; and (d) the Borrower did not have reported combined outstanding collections, judgments or tax liens greater than \$2,500.

“*Trustee*” means The Bank of New York Mellon, a corporation organized and existing under the laws of the State of New York, having its principal office in The City of New York, New York, and a paying agency office in the Borough of Manhattan in The City of New York, New York, in its capacity as trustee under the Indenture, and its successor or successors as trustee under the Indenture.

“*Trustee Fees*” means fees and expenses payable to the Trustee under the Indenture.

“*Value*” means, at any time: (a) with respect to Pledged Loan Payments, the unpaid principal component thereof, plus any accrued but unpaid interest component thereof; (b) with respect to cash, the amount thereof; and (c) with respect to other investments, the market price thereof.

### **Liability under the Series 2019A Bonds**

The Series 2019A Bonds are not general obligations of the Authority, and do not constitute an indebtedness of or a charge against the general credit of the Authority. The liability of the Authority under the Series 2019A Bonds is enforceable only to the extent provided in the Indenture, and the Series 2019A Bonds are payable solely from the Pledged Revenues and any other funds held by the Trustee under the Indenture in a Pledged Fund and are available for such payment. The Series 2019A Bonds are not a debt of the State of New York or any Borrower and neither the State of New York nor any Borrower is liable thereon. No Owner of any Series 2019A Bonds will have the right to demand payment of the principal of, or premium, if any, or interest on the Series 2019A Bonds out of any funds raised by taxation.

### **Security for Series 2019A Bonds; Issuance of Series 2019A Bonds**

***Security for the Series 2019A Bonds.*** The Indenture provides that all Series 2019A Bonds issued under the Indenture are, and are to be, to the extent provided in and subject to the Indenture, equally and ratably secured by the Indenture without preference, priority or distinction on account of the actual time or times of the authentication or delivery or maturity or redemption or prepayment of the Series 2019A Bonds, or any of them. All Series 2019A Bonds issued under the Indenture are to the extent provided in the Indenture, equally and ratably secured by the Indenture with like effect as if they had all been executed, authenticated and delivered simultaneously.

As security for the payment of the principal of, and premium, if any, and interest on the Series 2019A Bonds and for the performance of each other obligation of the Authority under the Indenture, the Authority pledges and assigns to the Trustee the Authority’s estate, right, title and interest and claim in, to and under any of the Pledged Revenues, including, without limitation, the Pledged Loan Payments and the right to make all related waivers and agreements in the name and on behalf of the Authority, as agent and attorney-in-fact, and to perform all other related acts which are necessary and appropriate under the Program Agreements, subject to the Reserved Rights of the Authority and to the following conditions: (i) that the owners of the Series 2019A Bonds will not be responsible or liable in any manner or to any extent for the performance of any of the covenants or provisions thereof to be performed by the Authority under the Program Agreements; (ii) that, unless and until the Trustee has, in its discretion when an Event of Default has occurred and is continuing, so elect, by instrument in writing delivered to the Authority (and then only to the extent that the Trustee elects), the Trustee will not be responsible or liable in any manner or to any extent for the performance of any of the covenants or provisions contained in any Program Agreement to be performed by the Authority (except to the extent of actions undertaken by the Trustee in the course of its performance of any such covenant or provision); (iii) that the Authority reserves the exclusive right to enforce and to direct the enforcement of the Program Agreements and all related contractual agreements except after the occurrence, and during the continuance of, an Event of Default; and (iv) that the Authority will remain obligated to observe and perform all the conditions and covenants in the Program Agreements provided to be observed and performed by it, notwithstanding any such pledge and assignment.

***Issuance of Series 2019A Bonds.*** The Series 2019A Bonds are issued for the purposes of (i) financing Loans made to Borrowers for Eligible Projects, (ii) funding a Reserve Fund and (iii) paying the costs of issuing the Series 2019A Bonds. See the captions “Funds Created under the Indenture—*Loan Fund*,” “—*Reserve Fund*” and “—*Costs of Issuance Fund*” in this Appendix A. The Series 2019A Bonds shall be issued only upon the receipt by the Trustee of proceeds (including accrued interest, if any) of sale of the Series 2019A Bonds.

**Application of Proceeds.** All amounts deposited in any Fund established pursuant to the Indenture will be disbursed by the Trustee in accordance with the provisions described under the captions “Funds Created under the Indenture” in this Appendix A.

**Additional Financial Assistance to Borrowers.** The Indenture does not limit the right of the Authority to provide for any additional financial assistance or loans to any Borrowers or any other Person or to issue bonds, notes, or other obligations pursuant to another indenture of trust or resolution.

### **Amendments of Loan Agreements**

The Authority may, without the consent of or notice to the Trustee or the Bondowners, make any amendment or modification to a Loan Agreement: (i) if such amendment or modification is required for the purpose of curing any formal defect or omission in the Loan Agreement, complying with applicable law or assuring the enforceability of the Loan; or (ii) if such amendment or modification will not affect the timing or reduce the amount of any Pledged Loan Payments, except as permitted under the caption “Certain Covenants—*Enforcement of Loan Agreements*” below.

### **Funds Created under the Indenture**

**Creation and custody of funds and accounts.** The following Funds are established with respect to and for the benefit of all Series 2019A Bonds in accordance with the provisions of the Indenture, subject to application in accordance with the priority established in the Indenture:

- (1) Loan Fund;
- (2) Revenue Fund;
- (3) Debt Service Fund;
- (4) Reserve Fund;
- (5) Redemption Fund; and
- (6) Cost of Issuance Fund.

All such Funds will be held by the Trustee.

The Authority will cause all Pledged Revenues to be paid to the Trustee for deposit in the Revenue Fund. All Pledged Revenues shall be deposited in the Revenue Fund upon receipt by the Trustee. Moneys held therein constituting Pledged Revenues will be applied from time to time in accordance with the Indenture.

The Authority may, by Supplemental Indenture or by Officer’s Certificate, establish one or more additional Funds, accounts or subaccounts.

**Loan Fund.** The Loan Fund will be used to reimburse the GJGNY Revolving Fund on the Date of Issuance and on subsequent Business Days, designated by the Authority, on or prior to June 30, 2019 to the extent of funds available in the Loan Fund after the completion of any transfer described below on such date, for all or a portion of the aggregate amount of the outstanding principal balance of, and the accrued but unpaid interest on, Loans upon the assignment to the Trustee of the right to receive Loan Payments with respect to such Loans, in accordance with one or more Officer’s Certificates, which Officer’s Certificate shall include: (a) with respect to each such reimbursement, the date of such reimbursement and a representation that each Loan described therein complies with the applicable Loan Criteria, was originated to finance an Eligible Project and has been fully disbursed, with no remaining Borrower right to receive advances or Borrower right of rescission with respect to such Loan; and (b) additionally, with respect to each such subsequent reimbursement, a description of such Loans comparable in information content to that provided for the Initial Portfolio Loans and a calculation of the applicable amount of reimbursement described in the immediately succeeding paragraph.

The Trustee, upon the receipt of the applicable Officer's Certificate, which may be an email verified as to its authenticity in such manner as the Trustee shall determine, will pay from the Loan Fund to the order of the Authority: (i) with respect to the Initial Portfolio Loans, an amount to be determined prior to the Date of Issuance, which is expected to be approximately \$10,911,593; and (ii) with respect to each subsequent reimbursement, an amount equivalent to the sum of (x) the total unpaid principal amount of the subject Loans; and (y) the total accrued but unpaid interest applicable to such Loans as of the second Business Day prior to the applicable date of reimbursement.

If at any time there are not sufficient amounts in the Debt Service Fund to provide for the payment of Required Debt Service on the Series 2019A Bonds then due and payable therefrom, after completion of all transfers described under the captions "*Revenue Fund*" and "*Redemption Fund*" below on such date, the Trustee at that time will transfer from the Loan Fund and pay into the Debt Service Fund the amount of the deficiency in accordance with the priority set forth under the caption "*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*" below. If at any time there are not sufficient amounts to provide for the payment of Scheduled Administrative Expenses then due and payable therefrom, after completion of all transfers described in clause (a) under the caption "*Revenue Fund*" below on such date, the Trustee at that time shall transfer from the Loan Fund and pay to the order of the Authority the amount of the deficiency in accordance with the priority set forth (and subject to the conditions described) under the caption "*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*" below.

Amounts remaining in the Loan Fund will be transferred to the Redemption Fund after the completion of all other transfers on the earlier of: (i) the Business Day following the date of receipt by the Trustee of an Officer's Certificate evidencing that no additional reimbursements are to be funded therefrom; or (ii) June 30, 2019 or, if such date is not a Business Day, the next succeeding Business Day.

**Revenue Fund.** Pledged Revenues which have been received by persons collecting Pledged Revenues on behalf of the Authority or the Trustee but have not yet been paid over directly to the Authority by such persons will not be required to be so deposited until so paid over; provided, however, that such Pledged Revenues shall be deemed to have been received by the Authority for purposes of the pledge provided in the Indenture.

The Trustee will apply any moneys in the Revenue Fund to make deposits as follows and in the following priority:

(a) on the first Business Day of each calendar month, to the order of the Authority, in an amount certified to the Trustee by an Authorized Officer, which amount shall not be in excess of the aggregate amount of Scheduled Administrative Expenses then payable or projected to become payable through the end of the such calendar month; provided, however, that if there are insufficient funds in the Revenue Fund to pay such amount, the Trustee will transfer the required amount as described under the caption "*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*" below;

(b) on the first Business Day of each March and September, to the Debt Service Fund, as necessary so that the amounts on deposit are equal to the sum of (i) interest accrued and to accrue on Series 2019A Bonds through the next succeeding Interest Payment Date, plus (ii) with respect to each such Interest Payment Date on which a Principal Installment is due on such Series 2019A Bonds, such Principal Installment; provided, however, that if there are insufficient funds in the Revenue Fund to pay such amounts required, the Trustee will transfer the required amounts as described under the caption "*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*" below;

(c) on the first Business Day of each March and September, to the Reserve Fund if the amount therein is less than the Reserve Fund Requirement, so that the balance in the Reserve Fund shall equal the Reserve Fund Requirement; and

(d) on the first Business Day of each March and September, to the Redemption Fund, the remaining balance in the Revenue Fund.

As long as no Event of Default shall have occurred and be continuing, the Trustee shall be entitled to rely on an Officer's Certificate as to the proper amounts to be deposited in the various Pledged Funds and accounts.

**Debt Service Fund.** The Trustee is required to pay out of the Debt Service Fund to the applicable Paying Agent on a timely basis by wire transfer in immediately available funds, together with moneys if any provided from the

Redemption Fund, in accordance with the provisions described under the caption “*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” below, an amount equal to the sum of the Principal Installments of and interest on the Series 2019A Bonds coming due on any Interest Payment Date. Subject to the provisions described under the caption “*Defaults and Remedies—Application of moneys received by Trustee*” in this Appendix A, the applicable Paying Agent shall apply such amounts on each Interest Payment Date as follows:

FIRST: to the payment of interest then due and, if the amount available shall not be sufficient to pay in full such interest, then to such payment ratably according to the amounts due to the Persons entitled thereto, without discrimination or preference; and

SECOND: to the payment of Principal Installments then due and, if the amount available shall not be sufficient to pay in full such Principal Installments, then to such payment ratably according to the amounts due on such Principal Installments and, within each such Principal Installment, to the amounts due to the Persons entitled thereto, without discrimination or preference.

If, on any Interest Payment Date, the amount accumulated in the Debt Service Fund for the purpose specified above exceeds the amount required therefor, the Trustee shall deposit such excess in the Revenue Fund.

Amounts in the Debt Service Fund with respect to any Principal Installment (together with amounts therein with respect to interest on the Series 2019A Bonds for which such Principal Installment was established) may, and upon receipt of an Officer’s Certificate so directing prior to the Trustee’s having given any applicable notice of redemption in connection with such Principal Installment, shall be applied by the Trustee to the purchase of Series 2019A Bonds of the same maturity and of like tenor for which such Principal Installment was established, at prices not to exceed the principal amount thereof plus interest to the date of purchase; provided, that any such purchases shall be arranged by the Authority.

**Reserve Fund.** The Reserve Fund will initially be funded in an amount equal to \$310,200 from the proceeds of the Series 2019A Bonds. If, after making the transfers described under the captions “*Revenue Fund*” and “*Loan Fund*” above and “*Redemption Fund*” below, the Trustee determines that the amount on deposit and available therefor in the Debt Service Fund is insufficient to pay Required Debt Service coming due on the Series 2019A Bonds on the next Interest Payment Date and payable therefrom, the Trustee shall, to the extent of the funds available therein, withdraw from the Reserve Fund consistent with the priority described under the caption “*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” below and deposit in the Debt Service Fund the amount necessary to meet the deficiency.

If, on the first Business Day of any calendar month, after making the transfers described under the captions “*Revenue Fund*” and “*Loan Fund*” above and “*Redemption Fund*” below, the Trustee determines sufficient moneys are not available in the Revenue Fund to fund required withdrawals under clause (a) under the caption “*Revenue Fund*” above for Scheduled Administrative Expenses, the Trustee will transfer from the Reserve Fund and pay to the order of the Authority the amount of the deficiency in accordance with the priority described under (and subject to the conditions described under) the caption “*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” below.

If on any Interest Payment Date the balance in the Reserve Fund after the completion of all other transfers therefrom exceeds the Reserve Fund Requirement, the Trustee will transfer any moneys in the Reserve Fund to the extent of such excess to the Revenue Fund.

**Redemption Fund.** The Trustee will apply funds deposited in the Redemption Fund to the payment of the Redemption Price of Series 2019A Bonds called for redemption as described under the captions “*THE SERIES 2019A BONDS—Redemption—Mandatory Redemption*” in the body of this Official Statement from time to time, as directed by an Officer’s Certificate, and in accordance with the timing, notice and selection provisions described under the caption “*THE SERIES 2019A BONDS—Redemption*” in the body of this Official Statement. Moneys for the interest due on such Series 2019A Bonds on the redemption date shall be drawn from the Debt Service Fund.

If at any time there are not sufficient amounts in the Debt Service Fund to provide for the payment of Required Debt Service on the Series 2019A Bonds then due and payable therefrom, after completion of all transfers described under the caption “*Revenue Fund*” above on such date, the Trustee at that time will transfer from the Redemption Fund and pay into the Debt Service Fund the amount of the deficiency in accordance with the priority (and subject to the conditions) described under the caption “*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative*

*Expenses*” below (other than moneys in the Redemption Fund held therein for the payment of the Redemption Price of and interest on Series 2019A Bonds for which the required notice of redemption shall have already been given or held for payment of Series 2019A Bonds as described under the caption “Defeasance” below or moneys already committed to the purchase of Series 2019A Bonds in accordance with provisions of the Indenture). If on the first Business Day of each month, sufficient moneys are not available in the Revenue Fund to fund required withdraws for the payment of Scheduled Administrative Expenses pursuant to clause (a) under the caption “*Revenue Fund*” above, the Trustee at that time shall transfer from the Redemption Fund and pay to the order of the Authority the amount of the deficiency in accordance with the priority (and subject to the conditions) described under the caption “*Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses*” below (other than moneys in the Redemption Fund held therein for the payment of the Redemption Price of and interest on Series 2019A Bonds for which the required notice of redemption shall have already been given or held for payment of Series 2019A Bonds within the meaning described under the caption “Defeasance” below or moneys already committed to the purchase of Series 2019A Bonds in accordance with provisions of the Indenture).

Except as provided in the preceding paragraph, all moneys transferred to the Redemption Fund will be applied to effect a redemption of Series 2019A Bonds as described under the captions “THE SERIES 2019A BONDS—Redemption—*Mandatory Redemption*” in the body of this Official Statement or to the purchase in lieu of redemption of Series 2019A Bonds in the manner described under this caption or under the captions “THE SERIES 2019A BONDS—Redemption” and “—Purchase of Series 2019A Bonds” in the body of this Official Statement. As described under the caption “*Debt Service Fund*” above, the Trustee will withdraw from the Debt Service Fund the amount, if any, equal to the interest accrued on Series 2019A Bonds to be redeemed or purchased pursuant to this paragraph at the time of such purchase or redemption.

Amounts in the Redemption Fund that would otherwise be applied to the redemption of Series 2019A Bonds, together with amounts in the Debt Service Fund with respect to interest on the Series 2019A Bonds, upon receipt by the Trustee of an Officer’s Certificate so directing prior to the Trustee’s having given notice of redemption in connection with the redemption of specific Series 2019A Bonds of such maturity, will be applied by the Trustee to the purchase of Series 2019A Bonds of such maturity and of like tenor, at prices not to exceed the principal amount thereof plus interest to the date of purchase; provided, that any such purchases shall be arranged by the Authority. As soon as practicable after the 20<sup>th</sup> day preceding each Interest Payment Date upon which the redemption of Series 2019A Bonds as described under the caption “THE SERIES 2019A BONDS—Redemption” in the body of this Official Statement is to occur on or before the 15<sup>th</sup> such day, the Trustee will proceed (by giving notice as described under the caption “THE SERIES 2019A BONDS—Redemption” in the body of this Official Statement) to call for redemption on such due date the Series 2019A Bonds of the maturity and tenor the subject to such redemption (except in the case of Series 2019A Bonds maturing on such Interest Payment Date) in such amount as shall be necessary to complete the retirement of the principal amount of the Series 2019A Bonds of such maturity and tenor in accordance with the Indenture, but only to the extent that the balance in the Redemption Fund is sufficient to pay all such Series 2019A Bonds.

Upon receipt of an Officer’s Certificate referred to in the preceding paragraph, the Trustee will apply the moneys in the Redemption Fund to the purchase in lieu of redemption and retirement of the Series 2019A Bonds designated in such certificate, such price not to exceed the Redemption Price of such Series 2019A Bonds applicable on the next Interest Payment Date. Following the giving of notice of redemption of the Series 2019A Bonds to be redeemed on account of moneys in the applicable Fund, however, Series 2019A Bonds may not be purchased pursuant to this paragraph from such moneys.

***Cost of Issuance Fund.*** A portion of the proceeds of the Series 2019A Bonds in an amount sufficient to pay the costs of issuing the Series 2019A Bonds will be deposited in the Cost of Issuance Fund. The amount so deposited will be paid by the Trustee upon requisition of the Authority to pay issuance costs incurred in connection with the issuance of the Series 2019A Bonds. Upon certification by an Authorized Officer that any amounts deposited in the Cost of Issuance Fund will not be required to pay costs of issuance, the Trustee will transfer such amounts to the Revenue Fund.

***Priority of Unscheduled Draws to Meet Required Debt Service and Scheduled Administrative Expenses.*** On an Interest Payment Date (with respect to Required Debt Service) or any date on which Scheduled Administrative Expenses are to be paid to the order of the Authority (with respect to Scheduled Administrative Expenses), after the completion of all transfers from the Revenue Fund as described under the caption “*Revenue Fund*” above, but prior to any other transfer hereunder, if the amounts in the Debt Service Fund are insufficient to pay the Required Debt Service then due on the Series 2019A Bonds and payable therefrom, or if the amounts in the Revenue Fund are insufficient to pay Scheduled Administrative Expenses pursuant to clause (a) under the caption “*Revenue Fund*” above, such Required Debt

Service and Scheduled Administrative Expense withdrawals shall be payable from funds available in the following Pledged Funds in the following order of priority:

- (a) Revenue Fund;
- (b) Redemption Fund;
- (c) Loan Fund; and
- (d) Reserve Fund;

provided, that no funds shall be applied from the Redemption Fund as described above to the extent such funds are held for the redemption of Series 2019A Bonds for which the Trustee has given notice of redemption Series 2019A or are held for the payment of Series 2019A Bonds as described under the caption “Defeasance” below or are then committed to the purchase of specific Series 2019A Bonds in accordance with the Indenture.

### **Security for and Investment of Moneys**

*Uninvested moneys held by the Trustee.* All moneys received by the Trustee under the Indenture and not invested by the Trustee, to the extent not insured by the Federal Deposit Insurance Corporation or other federal agency, are required to be deposited with the Trustee, or with a national or state bank or a trust company which has a combined capital and surplus aggregating not less than \$100,000,000.

*Investment of, and payment of interest on, moneys.* Moneys on deposit to the credit of any Fund may be retained uninvested by the Trustee as trust funds held for the benefit of the Bondowners, with respect to any Pledged Fund, or for the benefit of the Authority, with respect to the Cost of Issuance Fund. Such moneys shall, at the written direction of an Authorized Officer, be invested by the Trustee in: (a) obligations of the United States and obligations the principal and interest of which are unconditionally guaranteed by the United States; (b) obligations of New York State and obligations the principal and interest of which are guaranteed by New York State; (c) deposits with such banks or trust companies as may be designated by the Authority, each such bank or trust company deposit being continuously and fully secured by obligations described in clauses (a) or (b) above; (d) deposit accounts in, or certificates of deposit issued by, and banker’s acceptance of, any U.S. bank, trust company or national banking association (which may include the Trustee), having a rating on its short-term certificates of deposit on the date of purchase of P-1 by Moody’s and A-1 or A-1+ by S&P, which investments mature not more than 360 calendar days after the date of purchase; (e) money market funds, which funds have a composite investment grade rated not less than “AAAm” or equivalent by Moody’s or S&P; (f) investment agreements with any bank or trust company organized under the laws of any state of the United States of America or any national banking association (including the Trustee) or any governmental bond dealer reporting to, trading with and recognized as a primary dealer by, the Federal Reserve Bank of New York, which has, or the parent company of which has, long-term debt rated at least “A” or its equivalent by S&P or Moody’s; or (g) any other obligations from time to time permitted by the Act or other applicable law; provided, that such moneys on deposit to the credit of the Debt Service Fund or the Redemption Fund shall be invested only in obligations specified in (a) above maturing prior to the date required for application to pay Debt Service.

Any investment made under the Indenture may be executed by any bank or trust company acting as Trustee under the Indenture at the time of such investment. The Trustee may rely upon any written direction of an Authorized Officer as to both the suitability and legality of the directed investment.

The securities purchased with the moneys in each fund are required to be held by or under the control of the Trustee and will be deemed a part of such fund. The interest, including any realized increment on securities purchased at a discount, received on all such securities in any Pledged Fund is required to be deposited by the Trustee to the credit of the Revenue Fund. Losses, if any, realized on securities held in any Pledged Fund shall be debited to the Revenue Fund. The interest, including any realized increment on securities purchased at a discount, received on all such securities in the Cost of Issuance Fund will be deposited by the Trustee to the credit of the Cost of Issuance Fund. Losses, if any, realized on securities held in the Cost of Issuance Fund will be debited to the Cost of Issuance Fund. Losses, if any, realized on securities held in any Pledged Fund will be debited to the Revenue Fund. The Trustee will not be liable or responsible for any loss resulting from any such investment or resulting from the redemption, sale or maturity of any such investment as authorized under the Indenture. If at any time it becomes necessary that some or all of the securities purchased with the moneys in any such Pledged Fund or account be redeemed or sold in order to raise the moneys necessary to comply with



the provisions of the Indenture, the Trustee is required to effect such redemption or sale, employing in the case of a sale any commercially reasonable method of effecting such sale.

***Moneys held in trust.*** All moneys from time to time received by the Trustee and held in any Pledged Fund created pursuant to the Indenture are required to be held in trust by the Trustee for the benefit of the Owners from time to time of the Series 2019A Bonds entitled to be paid therefrom. Moneys held by the Trustee in trust under the Indenture need not be segregated from other funds except to the extent required by law.

***Valuation of Investments.*** In computing the amount in any Pledged Fund or account held by the Trustee under the provisions of the Indenture, Loans, cash and other investments shall be valued in accordance with the definition of the term “Value” under the caption “Certain Definitions” in this Appendix A; provided, that the Trustee will be entitled to conclusively rely upon a Servicer’s report to establish the Value of Loans as of its date.

## **Certain Covenants**

***Payment of principal of and interest and redemption premium on Series 2019A Bonds.*** The Authority will promptly pay, from Pledged Revenues and Pledged Funds held by the Trustee and available therefor, the Debt Service on every Series 2019A Bond issued under and secured by the Indenture and any premium required to be paid for the retirement of said Series 2019A Bonds by redemption, at the places, on the dates and in the manner specified in the Indenture and in said Series 2019A Bonds according to the true intent and meaning thereof, subject, however, to the provisions of the Indenture summarized under the caption “Liability under the Series 2019A Bonds” in this Appendix A.

***No extension of time of payment of interest.*** In order to prevent any accumulation of claims for interest after maturity the Authority will not directly or indirectly extend or assent to the extension of the time of payment of any claims for interest on any of the Series 2019A Bonds and will not directly or indirectly be a party to or approve any such arrangement by purchasing such claims for interest or in any other manner. In case any such claim for interest is extended in violation hereof, such claim for interest will not be entitled, in case of any default under the Indenture, to the benefit or security of the Indenture except subject to the prior payment in full of the principal of, and premium, if any, on, all Series 2019A Bonds issued and Outstanding under the Indenture, and of all claims for interest which has not been so extended or funded.

***Trustee Fees, Rating Surveillance Fees and Paying Agents’ fees, charges, expenses and Trustee and Paying Agent indemnification.*** The Authority shall: (1) pay all Trustee Fees and Rating Surveillance Fees and any Paying Agent fees, charges and expenses from time to time, which shall be limited with respect to the Trustee and any paying agent to reasonable compensation for their respective services rendered by each under the Indenture; (2) except as otherwise expressly provided in the Indenture, reimburse the Trustee and any Paying Agent upon its respective request for all reasonable expenses, disbursements and advances incurred or made by such Trustee or Paying Agent in accordance with any provision of the Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its negligence or willful misconduct; and (3) to indemnify the Trustee and any Paying Agent for, and to hold each harmless against, any loss, liability or expense incurred without negligence or willful misconduct on its part, arising out of or in connection with the acceptance or administration of the trust established pursuant to the Indenture, including the costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties under the Indenture; provided, however, that the obligations of the Authority to make such payments and reimbursements and to indemnify the Trustee in such manner shall be limited to any amounts received from the Borrowers permitted to be used for such purpose and to any other amounts held and available under the Indenture permitted to be used for such purpose.

***Agreement of the State.*** In accordance with the provisions of the Act, the Authority, on behalf of the State, does hereby pledge to and agree with the Owners of the Series 2019A Bonds that the State will not limit or alter the rights and powers vested by the Act in the Authority to fulfill the terms of any contract made with Owners or in any way impair the rights and remedies of such Owners, until the Series 2019A Bonds, together with the interest thereon, with interest on any unpaid installments of interest (if payable under the terms of any Series 2019A Bonds), and all costs and expenses in connection with any action or proceeding by or on behalf of such Owners, are fully met and discharged.

***Enforcement of Loan Agreements.*** The Authority is required to diligently enforce or cause to be enforced, and take or cause to be taken all reasonable steps, actions and proceedings necessary for the enforcement of, all terms, covenants and conditions of the Loan Agreements as and when due, including prompt collection of all Pledged Loan

Payments and including enforcement by the Authority of all On-Bill Recovery Agreements, as provided in the next sentence; provided, that the Authority reserves the right, at its sole option, with respect to any Loan upon which currently payable principal or interest has remained unpaid for a period of no less than ninety (90) days, while such amount remains unpaid to effect the release of any future Loan Payments upon such Loan from the lien hereof by depositing with the Trustee the aggregate amount of unpaid principal thereof and interest thereon and any such Program Loan shall thereafter not be deemed to be a Loan for purposes of the Indenture. The Authority shall not consent or agree to or permit the amendment, waiver or release of the payment obligations of any Borrower under any Loan Agreement or consent or agree to or permit any other amendment of, or waive or release any other Borrower obligation under, any Loan Agreement that would in any manner materially adversely affect the rights or security of the Owners under the Indenture and shall, to the extent permitted by law, at all times cause to be defended, enforced, preserved and protected the rights and privileges of the Authority with respect to each Loan Agreement in connection therewith; provided, that the Authority reserves the rights, at its sole option: (x) to grant reasonable forbearances to Borrowers (unless such forbearance will, in the reasonable judgment of the Authority, have a material adverse impact on the Authority's ability to meet its obligations under the Indenture); (y) to settle a default or cure a delinquency on any Loan on such terms as shall be permitted by law; or (z) to forgive amounts owing on any Loan; provided, that such forgiveness is consistent with standard business practices for consumer lending. Enforcement of the Loan Agreements by the Servicer shall be deemed to be enforcement by the Authority.

***Representations, Warranties and Covenants as to Program Agreements.*** The Authority represents, warrants and covenants in the Indenture for the benefit of the Trustee and the Registered Owners, with respect to each Program Agreement, other than Loan Agreements (to which the provisions described under the caption "Enforcement of Loan Agreements" above apply), as follows:

(a) *Enforcement and Amendment of Program Agreements other than Loan Agreements.* The Authority: (i) will, from and after the date on which it shall have entered into each such Program Agreement, diligently perform its obligations under such Program Agreement and diligently enforce its rights thereunder, in each case with respect to Loans; and (ii) will not voluntarily consent to or permit any rescission of, or otherwise take any action under or in connection with such Program Agreement which in any manner will materially adversely affect the rights of the Owners under the Indenture. The Authority will be responsible for dealing with the Servicer, the Originator or the Back-up Servicer, as applicable, with respect to the rights, benefits and obligations under each such Program Agreement with respect to the Loans and shall make timely payment of all Administrative Expenses due and payable to each Servicer, Originator and Back-up Servicer with respect to the Loans in accordance with the applicable Program Agreement; provided, that such payment obligations of the Authority at any time shall be limited to: (x) amounts transferred to the Authority as described under the caption "Funds Created under the Indenture" of this Appendix A for such purpose; and (y) in the event that amounts so transferred are not sufficient, any amounts in the GJGNY Revolving Fund then legally available for such purpose and not subject to any lien in favor of another party or otherwise restricted from being applied to such purpose. The Authority shall diligently cause to be collected all principal and interest payments on all the Loans and other sums to which the Authority is entitled pursuant to any such Program Agreement, except as described under the caption "*Representations, Warranties and Covenants as to Loans—Deposit of Loan Payments*" below. The Authority will comply, and will cause each of the Servicer, the Originator and the Back-up Servicer to comply, with all United States and State statutes, rules and regulations which apply to the Program and to the Loans.

(b) *Amendments of Program Agreements; Substitution of Parties.* The Authority shall not terminate, amend or replace any of the Servicing Agreement, the Backup Servicing Agreement or the Origination Agreement or assign, or consent to the assignment or delegation of any material portion of the duties of any of the Servicer, the Backup Servicer or the Originator to another entity (other than, with respect to the Servicer, the Backup Servicer as provided in the Backup Servicing Agreement), in each case with respect to the Loans, prior to delivery to the Trustee of an Officer's Certificate addressing such action and accompanied by evidence of compliance with the Rating Agency Requirement. Subject to such compliance, the Authority shall use its best efforts to at all times maintain in effect both a Servicing Agreement and a Backup Servicing Agreement with respect to the Loans.

(c) *Statement as to Compliance.* The Authority will deliver to the Trustee, within 150 days after the end of each Bond Year, an Officer's Certificate stating whether or not, to the knowledge of the signer thereof, the Authority is in compliance with all conditions and covenants under the Indenture and, in the event of any noncompliance, specifying such noncompliance and the nature and status thereof. For purposes of this

subsection (c), such compliance shall be determined without regard to any period of grace or requirement of notice under the Indenture.

(d) *Information Concerning Changes Subject to Rating Agency Requirement.* Each Officer's Certificate delivered to the Trustee evidencing satisfaction of the Rating Agency Requirement shall include a form of notice describing the change proposed.

(e) *Delivery of Reports to Trustee.* Delivery of any reports, information and documents to the Trustee and receipt thereof by the Trustee in satisfaction of requirements of the Indenture shall not constitute constructive notice to the Trustee of any information contained therein or determinable from information contained therein, including the Authority's compliance with any of its covenants under the Indenture (as to which the Trustee may conclusively rely on an Authorized Officer's Certificate).

***Representations, Warranties and Covenants as to Loans.*** The Authority hereby represents, warrants and covenants for the benefit of the Trustee and the Registered Owners as follows:

(a) *Acquisition, Origination and Collection of Eligible Loans.* The Authority covenants that each Loan shall be an Eligible Loan and that the Authority shall diligently cause to be collected all principal and interest payments (except as described under the caption "*Deposit of Loan Payments*" below) on all the Loans and other sums to which the Authority is entitled pursuant to any Loan Agreement and On-Bill Recovery Agreement; provided, that compliance of Subsequent Portfolio Loans with the Portfolio Criteria, for all purposes hereof, shall be determined as of the date described in the fourth paragraph under the caption "Funds Created under the Indenture—Loan Fund" in this Appendix A. The Authority will comply, and will cause each Originator, the Servicer and each other party to an On-Bill Recovery Agreement to discharge their respective responsibilities with respect to the Loan Agreements in a competent, diligent and orderly fashion and in accordance with all requirements of the Indenture comply, with all United States and State statutes, rules and regulations which apply to the Program and to the Loans Agreements.

(b) *Non-Eligible Loans.* In the event that the Authority determines, or receives written notification from the Trustee, that any Loan was not an Eligible Loan by reason of: (i) with respect to all Loans, the failure of such Loan to comply with the Loan Criteria at the time of origination; or (ii) with respect to Subsequent Portfolio Loans, the failure of such Subsequent Portfolio Loans, in aggregate, to comply with Portfolio Criteria upon the date described in the fourth paragraph under the caption "Funds Created under the Indenture—Loan Fund" in this Appendix A, the Authority shall, within 15 days of the earlier of such determination or of receipt of such notice: (A) with respect to a failure described in clause (i) above, effect the release from the lien hereof of any future Loan Payments upon any such Loans that are not Eligible Loans; and (B) with respect to a failure described in clause (ii) above, effect the release from the lien hereof of any future Loan Payments upon such Loans selected by the Authority as may be necessary to effect compliance with the Portfolio Criteria, in each case by depositing with the Trustee the aggregate amount of unpaid principal thereof and interest thereon and any such Loans so released shall thereafter not be deemed to be Loans for purposes hereof. The obligations of the Authority to make the deposits described in the next preceding sentence: (i) at any time, shall be limited to any amounts in the GJGNY Revolving Fund then legally available for such purpose and not subject to any lien in favor of another party or otherwise restricted from being applied to such purpose; and (ii) shall be inapplicable during any period during which either: (A) the aggregate principal amount of such Loans that are not Eligible Loans as described in such sentence does not exceed \$100,000; or (B) the aggregate Value of: (I) all Pledged Loan Payments, other than such Pledged Loan Payments upon Loans that are not Eligible Loans as described in such sentence; plus (II) all cash and investments on deposit to the credit of the Pledged Funds is not less than 175% of the aggregate amount of: (III) the Outstanding principal amount of the Series 2019A Bonds; plus (IV) the accrued but unpaid interest on the Series 2019A Bonds. The Authority shall file Form ABS 15G, in accordance with 17 C.F.R. 240.15Ga-1, promulgated under the Securities Exchange Act of 1934 ("Rule 15Ga-1") with respect to each period for which such filing may be required under Rule 15Ga-1 that is both: (i) subsequent to the first date upon which the aggregate principal amount of such Loans that are not Eligible Loans as described in the second preceding sentence exceeds \$100,000; and (ii) prior to the delivery by the Authority to the Trustee of a written opinion of Bond Counsel stating that, in the opinion of such counsel, no further filing by the Authority under Rule 15Ga-1 is required with respect to such Loans.

(c) *Deposit of Loan Payments.* The Authority is required to cause the Servicer to deposit all Pledged Loan Payments received by the Servicer to a dedicated demand deposit account of the Authority in favor

of the Trustee (the “Series 2019A Loan Payments Account”) no less frequently than each Business Day and, with respect to each such Pledged Loan Payment, within two (2) Business Days of the Servicer’s receipt thereof. The Authority is required to cause each entity that receives Pledged Loan Payments from Borrowers pursuant to an On-Bill Recovery Agreement to transfer to the Authority all Pledged Loan Payments received by such entity no less frequently than monthly and, with respect to each such Pledged Loan Payment, within 45 days of such entity’s receipt thereof. The Authority shall deposit all Pledged Loan Payments so received by it to a dedicated demand deposit account of the Authority (the “On-Bill Loan Payments Account”). The Authority shall transfer Pledged Loan Payments so received from the On-Bill Loan Payments Account to the Series 2019A Loan Payments Account within 31 days of such receipt (subject to retention in the On-Bill Loan Payments Account of a balance not in excess of \$1,000). The Authority shall cause the transfer of all Loan Payments that have been deposited to the Series 2019A Loan Payments Account from the Series 2019A Loan Payments Account to the Trustee for deposit in the Revenue Fund no less frequently than each Business Day (subject to retention in the Series 2019A Loan Payments Account of a balance amount not in excess of \$1,000).

(d) *The Trustee’s Interest in Pledged Revenues and Pledged Funds.*

(i) The Authority represents and warrants that the Indenture creates a valid, pledge and assignment to the Trustee of a continuing, irrevocable and exclusive first lien on the Pledged Revenues and Pledged Funds, that is valid and binding as against all other parties. The Authority is required to maintain records concerning the Loans, the Program Agreements, the On-Bill Recovery Agreements, the Revenues and the Pledged Funds (collectively referred to below as the “Records”). The Authority shall include in such Records, or shall cause the Servicer to maintain a listing of Loans, which may be in electronic form, that is sufficient to identify such Loans for purposes of evidencing the Trustee’s interest in the Pledged Revenues received by or on behalf of the Authority and, subject to compliance with applicable law, shall cause such listing to be available to the Trustee upon reasonable notice.

(ii) The Authority warrants and agrees to defend its title to the Loans, the Pledged Revenues and the Pledged Funds against the claims and demands of all Persons other than, with respect to the Pledged Revenues and Pledged Funds, the Trustee and the Bondowners.

(iii) Except for the lien and pledge of the Indenture, and any other liens expressly authorized under the Indenture, the Authority will not cause or permit all or any part of the Authority’s right, title and interest in the Pledged Revenues, the Loans and the Pledged Funds, to become subject to any consensual or non-consensual lien or encumbrance.

(iv) Except for the lien and pledge of the Indenture the Authority has no knowledge, and has received no notice: (x) that any party other than the Trustee, on behalf of the Bondowners and as a fiduciary, has or claims to have any security interest or other lien on all or any part of the Pledged Revenues and Pledged Funds; or (y) that any party, other than the Authority and the Trustee, on behalf of the Bondowners and as a fiduciary, has or claims to have any interest whatsoever in all or any part of the Pledged Revenues and Pledged Funds.

(v) (A) The Authority has not pledged, assigned, sold, granted a security interest in, or otherwise conveyed, any of the Pledged Revenues or the Pledged Funds, except as provided in the Indenture, and shall not do so while any of the Series 2019A Bonds remain Outstanding. The Authority has not pledged, assigned, sold, granted a security interest in, or otherwise conveyed, the Loans and will not do so while any of the Series 2019A Bonds remain Outstanding. The Authority has not authorized the filing of and is not aware of, any financing statements against the Authority that include a description of collateral including any of the Pledged Revenues, the Pledged Funds or the Loans. The Authority is not aware of any judgment or tax lien filings against the Authority.

(B) The Authority’s Servicer currently maintains possession and control, and shall continue to maintain possession and control, of all Loan Agreements; provided that such control may be maintained through a custodian; and further provided, that any Loan Agreement that is “electronic” within the meaning of the Article III of the New York State Technology Law shall be evidenced by “electronic records” as defined in such law and shall be maintained in accordance therewith.

(C) The transactions described in the Indenture may be conducted and related documents may be stored by electronic means as provided in this subsection (d). Copies, telecopies, facsimiles, electronic files and other reproductions of original executed documents shall be deemed to be authentic and valid counterparts of such original documents for all purposes, including the filing of any claim, action or suit in the appropriate court of law.

(vi) The Authority is required to take all other steps necessary, and to cause each Servicer, the Backup Servicer and the Trustee to take all steps necessary and appropriate, to maintain the validity, enforceability and priority of the Trustee's interest in the Pledged Revenues and Pledged Funds.

**Semiannual Information Statement.** Within sixty (60) days after each Interest Payment Date, commencing with the Interest Payment Date in October 2019, the Authority shall prepare a report setting forth a description of the Series 2019A Bonds Outstanding, the redemptions of Series 2019A Bonds, if any, and the other application of amounts on deposit in the Pledged Funds on such Interest Payment Date (the "Information Statement"). The Authority shall file the Information Statement with the Municipal Securities Rulemaking Board through EMMA. The Trustee shall direct any Person who requests a copy of the Information Statement to the form posted on EMMA. The Authority reserves the right to modify the format and presentation of the Information Statement from time to time in its sole discretion and without prior notice.

## **Defaults and Remedies**

**Events of Default.** The occurrence and continuances of one or more of the following events with respect to Series 2019A Bonds will constitute an Event of Default for purposes of the Indenture:

(a) default in the payment of any installment of interest, principal or premium, if any, in respect of any Series 2019A Bond as the same becomes due and payable; or

(b) failure on the part of the Authority duly to observe or perform any other of the covenants or agreements on the part of the Authority contained in the Indenture for a period of thirty (30) days after the date on which written notice of such failure, requiring the Authority to remedy the same, has been given to the Authority by the Trustee; provided, that, if such failure cannot be corrected within such thirty (30) day period, it will not constitute an Event of Default if corrective action is instituted by the Authority within such period and is diligently pursued until the failure is corrected provided further, that failure to file any information with the Rating Agency shall never constitute an Event of Default.

**Judicial proceedings by Trustee.** Upon the happening and continuance of any Event of Default, the Trustee in its discretion may, and if the Trustee receives written request of the Owners of at least twenty-five percent (25%) in aggregate principal amount of the Series 2019A Bonds then Outstanding and has received indemnity to its satisfaction it is then required to, (a) by suit, action or special proceeding, enforce all rights of the Owners of the Series 2019A Bonds and require the Authority to perform its duties under the Act, the Green Jobs--Green New York Act, the Program Agreements, the On-Bill Recovery Agreements, the Series 2019A Bonds and the Indenture, (b) bring suit upon the Series 2019A Bonds which may be in default, (c) by action or suit in equity to require the Authority to account as if it were the trustee of an express trust for the Owners of the Series 2019A Bonds, or (d) by action or suit in equity enjoin any acts or things which may be unlawful or in violation of the rights of the Owners of the Series 2019A Bonds. The remedy of acceleration is not available to the Owners of the Series 2019A Bonds.

**Power of Bondowners to direct proceedings.** The Owners of a majority in aggregate principal amount of the Series 2019A Bonds then Outstanding have the right, by an instrument in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee under the Indenture, provided, such direction is not in conflict with any rule of law or with any provision of the Indenture and does not unduly prejudice the rights of the Owners of Series 2019A Bonds who are not in such majority and does not involve the Trustee in liabilities for which it does not reasonably expect reimbursement. The Trustee is not liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the Owners of a majority in aggregate principal amount of the Series 2019A Bonds.

**Limitation on actions by Bondowners.** No Owner of any Series 2019A Bond has any right to institute any suit, action or proceeding in equity or at law for the enforcement of any trust under the Indenture, or any other remedy

thereunder or under the Series 2019A Bonds, unless (i) such Owner has previously given to the Trustee written notice of an Event of Default as provided in the Indenture, (ii) the Owners of at least twenty-five percent (25%) in aggregate principal amount of the Series 2019A Bonds then Outstanding have made written request of the Trustee so to do after the right to exercise such powers or rights of action, as the case may be, has accrued, (iii) the Trustee has been given a reasonable opportunity either to proceed to exercise the powers granted by the Indenture, or to institute such action, suit or proceeding in its or their name, (iv) the Trustee has been offered security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby, and (v) the Trustee has not complied with such request within a reasonable time.

***Application of moneys received by Trustee.*** Any moneys received by the Trustee or by any receiver pursuant to the exercise of remedies upon the occurrence of an event of default in respect of any Series 2019A Bonds, will, after payment of the costs and expenses of the proceedings resulting in the collection of such moneys and of any fees, charges, expenses and indemnities owed to the Trustee, any Paying Agent or their agents in connection with services rendered under the Indenture, and the payment of all Administrative Expenses then due and owing and subject to the limitations as to particular Pledged Revenues, be applied, together with any other moneys held by the Trustee under the Indenture as follows:

FIRST: To the payment to the Persons entitled thereto of all installments of interest then due on the Series 2019A Bonds, in the order of the maturity of the installments of such interest including (to the extent provided with respect to such Series 2019A Bonds and permitted by law) interest on overdue installments of interest at the rate borne by the Series 2019A Bonds on which such interest shall then be due, and, if the amount available shall not be sufficient to pay in full any particular installment or installments, then to the payment ratably, according to the amounts due on such installment or installments, to the Persons entitled thereto, without any discrimination or preference; and

SECOND: To the payment to the Persons entitled thereto of the unpaid principal of and premium, if any, on any of the Series 2019A Bonds which shall have become due (other than Series 2019A Bonds called for redemption or purchase for the payment of which moneys are held pursuant to the provisions of the Indenture) in the order of their due dates, with interest on such Series 2019A Bonds from the respective dates, upon which they become due and, if the amount available shall not be sufficient to pay in full Series 2019A Bonds due on any particular date, together with such interest, then to the payment ratably, according to the amount of principal due on such date, to the Persons entitled thereto without any discrimination or preference.

Whenever moneys are to be applied as described above, such moneys shall be applied at such times, and from time to time, as the Trustee shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such funds, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date any interest on the amounts of principal or interest to be paid on such dates shall cease to accrue. The Trustee shall give notice to the Authority and all Registered Owners of the related Series 2019A Bonds, in the manner required by the Indenture of the deposit with it of any such moneys and of the fixing of any such date, and shall not be required to make payment to the owner of any Series 2019A Bond until such Series 2019A Bond shall be presented to the Trustee for appropriate endorsement or for cancellation if fully paid.

### **Concerning the Trustee and Paying Agents**

***No responsibility for own acts save willful misconduct or negligence.*** The Trustee may act upon the opinion or advice of any attorney (who may be the attorney or attorneys for the Authority or each Borrower), approved by the Trustee in the exercise of reasonable care. The Trustee is not responsible for any loss or damage resulting from any action or non-action in good faith in reliance upon such opinion or advice. The Trustee is not liable for the exercise of any discretion or power under the Indenture or for anything whatsoever in connection with the trusts therein created, except only for its own willful misconduct or negligence.

***No duty to take enforcement action unless so requested by Bondowners of 25% of the Series 2019A Bonds.*** Unless and until an Event of Default with respect to Series 2019A Bonds shall have occurred, the Trustee is under no obligation to take any action in respect of any default or otherwise, or toward the execution or enforcement of any of the trusts hereby created, or to institute, appear in or defend any suit or other proceeding in connection therewith, unless requested in writing so to do by Owners of at least twenty-five percent (25%) in aggregate principal amount of the Series 2019A Bonds then Outstanding, and if in its opinion such action may tend to involve it in expense or liability,

unless furnished, from time to time as often as it may require, with security and indemnity satisfactory to it; but the foregoing provisions are intended only for the protection of the Trustee, and shall not affect any discretion or power given by any provisions of the Indenture to the Trustee to take action in respect of any default without such notice or request from the Bondowners, or without such security or indemnity.

***Right to rely.*** The Indenture provides that the Trustee will be protected and will not incur liability in acting or proceeding in good faith upon resolution, notice, telegram, request, consent, waiver, certificate, statement, affidavit, voucher, bond, requisition or other any paper or document (including investment instructions, and disbursement of bond proceeds) which it believes in good faith to be genuine and to have been authorized or signed by the proper Person or to have been prepared and furnished pursuant to any of the provisions of the Indenture. The Trustee is not under any duty to make any investigation or inquiry as to any statements contained or matters referred to in any such instrument but may accept and rely upon the same as conclusive evidence of the truth and accuracy of such statements. Any action taken by the Trustee upon the request or consent of any Person who at the time of making such request or giving such consent is the Owner of any Series 2019A Bond is conclusive and binding upon all subsequent Owners of such Series 2019A Bond or any Series 2019A Bond issued on registration of transfer thereof.

***Right to own and deal in Series 2019A Bonds and engage in other transactions with Borrowers and Authority.*** The Trustee may in good faith buy, sell, own, hold and deal in any of the Series 2019A Bonds issued or incurred under the Indenture and secured by the Indenture, and may join in any action which any Owner of a Series 2019A Bond may be entitled to take with like effect as if the Trustee were not a party to the Indenture. The Trustee, either as principal or agent, may also engage in or be interested in any financial or other transaction with the Authority or any Borrower, and may act as depository, trustee, or agent for any committee or body of Owners of any Series 2019A Bonds secured hereby or other obligations of the Authority or any Borrower as freely as if it were not Trustee under the Indenture.

***Construction of provisions of Indenture by Trustee.*** The Trustee may construe any of the provisions of the Indenture insofar as the same may appear to be ambiguous or inconsistent with any other provision hereof, and any construction of any such provisions hereof by the Trustee in good faith shall be binding upon the Owners of Series 2019A Bonds.

***No implied duties or risks.*** The Trustee does not have implied duties under the Indenture and the Trustee is not required to expend or risk its own funds for payment of any of the obligations provided for in the Indenture. The Trustee's permissive rights enumerated under the Indenture are not construed as duties.

***Right to resign trust.*** The Trustee may at any time and for any reason resign and be discharged of the trusts created by the Indenture by filing a written instrument resigning such trusts and specifying the date when such resignation takes effect with the Secretary of the Authority not less than 60 days before the date specified in such instrument when such resignation shall take effect, and by giving notice of such resignation to Owners of the Series 2019A Bonds by mail in the manner provided in the Indenture not less than twenty-one (21) days prior to the date specified in such notice when such resignation shall take effect; provided, that no such resignation shall become effective until the acceptance of appointment by a successor Trustee in accordance with the Indenture.

***Removal of Trustee.*** The Trustee at any time and for any reason may be removed from the trusts relating to the Series 2019A Bonds by an instrument in writing with 30 days' notice, appointing a successor, filed with the Trustee so removed and executed by the Owners of a majority in aggregate principal amount of the Series 2019A Bonds then Outstanding. No such removal may become effective, however, until the acceptance of appointment by a successor Trustee in accordance with the Indenture. The Trustee at any time, other than during the continuance of an Event of Default relating to the Series 2019A Bonds, and for any reason may be removed from the trusts relating to the Series 2019A Bonds created by the Indenture by an instrument in writing, executed by an Authorized Officer, appointing a successor, filed with the Trustee so removed. No such removal may become effective, however, until the acceptance of appointment by a successor Trustee in accordance with the Indenture.

***Appointment of successor Trustee by Bondowners or Authority.*** In case at any time the Trustee resigns, is removed, is dissolved, or its property or affairs are taken under the control of any state or Federal court or administrative body because of insolvency or bankruptcy, or for any other reason, a vacancy shall forthwith and ipso facto exist in the office of the Trustee, then a successor may be appointed by the Owners of a majority in aggregate principal amount of the Series 2019A Bonds then Outstanding, by an instrument or instruments in writing filed with the Secretary of the Authority, signed by such Bondowners or by their attorneys-in-fact duly authorized. Copies of each such instrument are to be promptly delivered by the Authority to the predecessor Trustee and to the Trustee so appointed.

Until a successor Trustee is appointed by the Bondowners, the Authority, by an instrument authorized by resolution, is required to appoint a Trustee to fill such vacancy. After any appointment by the Authority, it shall cause notice of such appointment to be mailed to each Bondowner. Any new Trustee so appointed by the Authority will immediately and without further act be superseded by a Trustee appointed by the Bondowners in the manner above provided.

***Qualifications of successor Trustee.*** Every successor in the trust under the Indenture appointed pursuant to the foregoing provision is required to be a bank or trust company with trust powers, organized and doing business under the laws of the United States or any state or territory thereof and having a combined capital and surplus of at least \$250,000,000, if such a bank or trust company willing and able to accept the trust on customary terms can, with reasonable effort, be located.

***Court appointment of successor Trustee.*** In case at any time the Trustee resigns and no appointment of a successor Trustee is made pursuant to the foregoing provisions within forty-five days of the giving of notice of resignation, the Owner of any Series 2019A Bond or the retiring Trustee may apply to any court of competent jurisdiction to appoint a successor Trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor Trustee.

***Acceptance of appointment by, and transfer of trust estate to, successor Trustee.*** Any successor Trustee appointed under the Indenture is required to execute, acknowledge and deliver to the Authority an instrument accepting such appointment, and thereupon the resignation or removal of the withdrawing Trustee becomes effective and such successor Trustee, without any further act, deed or conveyance, will become duly vested with all the estates, property, rights, powers, trusts, duties and obligations of its predecessor in the trust under the Indenture, with like effect as if originally named Trustee under the Indenture. Upon request of such Trustee, the Trustee ceasing to act and the Authority is required to execute and deliver an instrument transferring to such successor Trustee all the estates, property, rights, powers and trusts under the Indenture of the Trustee so ceasing to act, and the Trustee so ceasing to act shall pay over to the successor Trustee all moneys and other assets at the time held by it under the Indenture.

***Successor Trustee by merger or consolidation.*** Any corporation into which any Trustee may be merged or with which it may be consolidated, or any corporation resulting from any merger or consolidation to which any Trustee is a party, or any corporation to which any Trustee may transfer substantially all of its assets, will be the successor Trustee under the Indenture, without the execution or filing of any paper or any further act on the part of the parties to the Indenture, anything in the Indenture to the contrary notwithstanding.

## **Supplemental Indentures**

***Supplemental Indentures not requiring consent of Bondowners.*** Subject to certain conditions and restrictions, the Authority and the Trustee may, without the consent of or notice to the Bondowners, enter into an indenture or indentures supplemental to the Indenture, for any one or more of the following purposes: (a) to cure any ambiguity or formal defect or omission in the Indenture, (b) to grant to or confer upon the Trustee for the benefit of the Bondowners any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Bondowners or the Trustee or either of them, (c) to subject to the provisions of the Indenture additional revenues, properties or collateral, (d) to modify, amend or supplement the Indenture or any Supplemental Indenture in such manner as to permit its qualification under any federal statute now or hereafter in effect or under any state Blue Sky Law and, in connection therewith, if they so determine, to add to the Indenture or any Supplemental Indenture, such other terms, conditions and provisions as may be permitted or required by said federal statute or Blue Sky Law, provided that any such Supplemental Indenture does not, in the judgment of the Trustee, prejudice the Owners of the Series 2019A Bonds, provided that in making such judgment the Trustee is entitled to rely on an opinion of counsel, (e) to establish one or more additional Funds, accounts or subaccounts, or (f) to provide for any change in the Indenture which, in the opinion of the Trustee, does not materially adversely affect or diminish the rights or interests of the Trustee or the Bondowners, provided that in making such determination the Trustee is entitled to rely on an opinion of counsel.

***Supplemental Indentures requiring consent of Bondowners.*** Except as otherwise provided in the Indenture, any modification or amendment of the Indenture may be made only with the consent of in case less than all of the Series 2019A Bonds then Outstanding are so affected, the Owners of not less than a majority in aggregate principal amount of the aggregate of all Series 2019A Bonds so affected then Outstanding; provided, that if such modification or amendment will, by its terms, not take effect so long as any particular Series 2019A Bonds remain Outstanding, the consent of the Owners of such Series 2019A Bonds shall not be required and such Series 2019A Bonds shall not be



deemed to be Outstanding for the purpose of any calculation of Outstanding Series 2019A Bonds under this caption “*Supplemental Indentures requiring consent of Bondowners*”. No such modification or amendment shall be made which will reduce the percentages of aggregate principal amount of Series 2019A Bonds, the consent of the Owners of which is required for any such modification or amendment, or permit the creation by the Authority of any lien prior to or on a parity with, the lien of the Indenture, or which will affect the times, amounts and currency of payment of the principal of and premium, if any, and interest on the Series 2019A Bonds without the consent of the Owners of all Series 2019A Bonds then Outstanding and affected thereby.

For the purposes of the Indenture, Series 2019A Bonds are deemed to be affected by a modification or amendment of the Indenture if the same materially adversely changes or diminishes the rights of the Owners of the Series 2019A Bonds. The Trustee may in its discretion determine whether or not, in accordance with the foregoing provisions, Series 2019A Bonds would be affected by any modification or amendment of the Indenture and any such determination shall be binding and conclusive on the Authority and all Owners of the Series 2019A Bonds. For all purposes of the Indenture, the Trustee is entitled to rely upon an opinion of counsel with respect to the extent, if any, as to which such action affects the rights under the Indenture of any Owners of Series 2019A Bonds then Outstanding.

If at any time the Authority requests the consent of Bondowners to the execution of any such Supplemental Indenture for any of the purposes of the Indenture, the Trustee must, upon being satisfactorily indemnified with respect to expenses, cause notice of the proposed execution of such Supplemental Indenture to be given to Bondowners in the manner provided in the Indenture. If, within sixty (60) days or such longer period as is prescribed by the Authority following the giving of such notice, the required consent and approval of Bondowners is obtained, no Owner of any Series 2019A Bond will have any right to object to any of the terms and provisions contained therein, or the operation thereof, or in any manner to question the propriety of the execution thereof, or to enjoin or restrain the Authority or the Trustee from executing the same or restrain the Authority or the Trustee from taking any action pursuant to the provisions thereof. Upon the execution of any such Supplemental Indenture, the Indenture shall be and be deemed to be modified and amended in accordance therewith.

The Trustee will execute any Supplemental Indenture executed and delivered in accordance with the Indenture; provided, that, if, in the opinion of the Trustee, any such Supplemental Indenture adversely affects the rights, duties, immunities or obligations of the Trustee under the Indenture or otherwise, the Trustee may in its discretion resign in accordance with the provisions of the Indenture, and upon giving notice of such resignation the Trustee, will have no obligation to execute such Supplemental Indenture.

### **Defeasance**

If at any time (a) there is delivered to the Trustee for cancellation any or all of the Series 2019A Bonds (other than any Series 2019A Bonds which have been mutilated, lost, stolen or destroyed and which shall have been replaced or paid as provided in the Indenture except for any such Series 2019A Bonds as are shown by proof satisfactory to the Trustee to be held by bona fide purchasers), or (b) with respect to any or all of the Series 2019A Bonds not theretofore delivered to the Trustee for cancellation, the whole amount of the principal and the interest and the premium, if any, due and payable or to become due and payable on such Series 2019A Bond or Series 2019A Bonds then Outstanding is paid or deemed to be paid, and provisions are also made for paying all other sums payable under the Indenture, including the Authority’s, Trustee’s and Paying Agents’ fees and expenses with respect to such Series 2019A Bonds, then the Trustee, on demand of the Authority, is required to release the lien of the Indenture with respect to such Series 2019A Bond or Series 2019A Bonds. Upon such release, the Trustee is required to turn over to or at the direction of the Authority any balances remaining in any Fund created under the Indenture, other than moneys and Investment Obligations (as hereinafter defined) retained for redemption or payment of Series 2019A Bonds; otherwise, the Indenture shall continue and remain in full force and effect.

Subject to the next succeeding sentence, Series 2019A Bonds are deemed to be paid whenever there shall have been deposited with the Trustee (whether upon or prior to the maturity or the redemption date of such Series 2019A Bonds) either moneys in an amount which is sufficient, or noncallable obligations issued or guaranteed by or backed by the full faith and credit of, the United States of America (including certificates or any other evidence of an ownership interest in any such obligation or in specified portions thereof, which may consist of specified portions of the principal thereof or the interest thereon) (herein referred to as “Investment Obligations”) certified by an independent accounting firm of national reputation to be of such maturities and Interest Payment Dates and to bear such interest as will, without the necessity of further investment or reinvestment of either the principal amount thereof or interest therefrom, provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, will be sufficient to pay

when due the principal of, premium, if any, and interest due and to become due on all such Series 2019A Bonds on and prior to the redemption date or maturity date thereof, as the case may be, and if redeemed prior to maturity an irrevocable instruction to mail the redemption notice as provided in the Indenture has been given, and the Trustee has given notice to the Bondowners in the manner provided in the Indenture that a deposit meeting the requirements of this paragraph has been made and stating such maturity or redemption date upon which moneys are to be available for the payment of the principal of, and premium, if any, and interest on, such Series 2019A Bonds; provided, that neither Investment Obligations nor moneys deposited with the Trustee pursuant to this paragraph nor principal or interest payments on any Investment Obligations may be withdrawn, or used for any purpose other than, and will be held in trust for, the payment of the principal of, and premium, if any, and interest on such Series 2019A Bonds.

It is also a condition to Series 2019A Bonds being deemed to be paid that the Authority has delivered to the Trustee an opinion of Counsel to the effect that the Owners will not recognize income, gain or loss for federal income tax purposes as a result of such legal defeasance and will be subject to federal income tax on the same amounts (if any), in the same manner and at the same times as would have been the case if such legal defeasance had not occurred.

### **No Individual Liability**

No covenant or agreement contained in any Series 2019A Bonds or in the Indenture is the covenant or agreement of any director, officer, agent, or employee of the Authority in his or her individual capacity. Neither the directors of the Authority nor any official executing such Series 2019A Bonds are liable personally on such Series 2019A Bonds or subject to any personal liability or accountability by reason of the issuance thereof.

### **Payments due on Saturdays, Sundays and holidays**

In any case where the date of maturity of interest on or principal of the Series 2019A Bonds or the date fixed for redemption of any Series 2019A Bonds shall be on a day that is not a Business Day, then payment of interest or principal and premium, if any, need not be made on such date but may be made (without additional interest) on the next succeeding Business Day, with the same force and effect as if made on the date of maturity or the date fixed for redemption, as the case may be.

FORM OF APPROVING OPINIONS OF CO-BOND COUNSEL

Upon delivery of the Series 2019A Bonds in definitive form, each of Hawkins Delafield & Wood LLP and Law Offices of Joseph C. Reid, P.A. proposes to deliver its approving opinion in substantially the form set forth below.

March 21, 2019

New York State Energy Research  
and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Ladies and Gentlemen:

In our capacity as Co-Bond Counsel to the New York State Energy Research and Development Authority (the "Authority"), we have examined a record of proceedings relating to the sale and issuance on the date hereof, of \$15,510,000 aggregate principal amount of Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A (the "Series 2019A Bonds") of the Authority.

The Series 2019A Bonds are issued under and pursuant to the Constitution and laws of the State of New York, particularly the New York State Energy Research and Development Authority Act, constituting Title 9 of Article 8 of the Public Authorities Law of New York, as amended (the "Act"), and under and pursuant to Resolution No. 1511 adopted by the Authority on September 19, 2017. The Series 2019A Bonds are issued under and are secured ratably by an Indenture of Trust, dated as of March 1, 2019 (the "Indenture"), between the Authority and The Bank of New York Mellon, as trustee (the "Trustee"). The Series 2019A Bonds are issued for the purpose of financing loans made to eligible borrowers for certain costs eligible to receive financial assistance from the Green Jobs-Green New York Revolving Loan Fund.

Under the provisions of the Indenture, all Series 2019A Bonds shall be equally and ratably secured thereby. Any capitalized terms used and not otherwise defined herein are used as defined in the Indenture.

The Series 2019A Bonds bear interest payable on April 1 and October 1 in each year, commencing on October 1, 2019. Unless redeemed prior to maturity in accordance with the Indenture, the Series 2019A Bonds will mature on the dates and in the principal amounts, and will bear interest at the respective rates per annum, set forth in the Indenture.

The Series 2019A Bonds are issuable in the form of registered bonds without coupons in the denomination of \$100,000 or in any integral multiple of \$5,000 in excess thereof not exceeding the respective aggregate principal amounts thereof, and are numbered from one (1) consecutively upwards (with "2019-AR," prefixed to the number) in order of issuance according to the records of the Trustee. The Series 2019A Bonds will be registered in the name of a nominee of The Depository Trust Company or any successor thereto appointed pursuant to the Indenture, as securities depository (the "Securities Depository"), and maintained in book-entry-only form by the Securities Depository.

The principal of and premium, if any, on such Series 2019A Bond shall be payable to the owner thereof upon presentation and surrender thereof when due at either of the Corporate Trust Office or the Paying Agency Office. The interest on such Series 2019A Bond due on an interest payment date for such Series 2019A Bonds shall be payable to the Registered Owner thereof as of the close of business on the Record Date (as hereinafter defined) as the same becomes due by check mailed to such Registered Owner thereof at such owner's address last appearing on the Bond Register or, under certain circumstances, by wire transfer as described in the Indenture. The fifteenth day of the calendar month immediately preceding the interest payment date is the Record Date (the "Record Date") for such interest payment date. Interest shall be calculated on the basis of a 360-day year, consisting of twelve 30-day months.

The Series 2019A Bonds are subject to optional and mandatory redemption prior to maturity as set forth, and to the extent provided for, in the Series 2019A Bonds and in the manner and upon the terms and conditions set forth in the Indenture.

We have examined a specimen of the Series 2019A Bonds delivered to the Trustee.

We have also examined an executed copy of the Indenture.

We are of the opinion that:

1. The Authority is a body corporate and politic constituting a public benefit corporation, and is duly created and validly existing under the Constitution and laws of the State of New York, including particularly the Act, and has good right and lawful authority to: (i) issue the Series 2019A Bonds for the purpose of financing loans made to eligible borrowers for certain costs eligible to receive financial assistance from the Green Jobs-Green New York Revolving Loan Fund; and (ii) pledge and assign to the Trustee in respect of the Series 2019A Bonds all its right, title and interest in and to the Pledged Funds and the Pledged Revenues to be received under the Indenture, subject to certain exceptions set forth in the Indenture, and to secure the Series 2019A Bonds in the manner contemplated by the Indenture.

2. The Authority has the right and power pursuant to the Act to enter into and perform its obligations under the Indenture and the Indenture has been duly authorized, executed and delivered, is in full force and effect and constitutes a legal, valid and binding obligation of the Authority enforceable in accordance with its terms.

3. The Series 2019A Bonds have been duly authorized, executed and delivered and issued by the Authority in accordance with the Indenture and the Constitution and the Laws of the State of New York, including the Act. The Series 2019A Bonds are valid and legally binding limited obligations of the Authority, secured by the Indenture and are payable solely as to principal, premium, if any, and interest from, and are secured by a valid lien on and pledge of the Pledged Funds and the Pledged Revenues held by the Trustee under the Indenture and available therefor, all in the manner provided in the Indenture. The Series 2019A Bonds are enforceable in accordance with their terms and the terms of the Indenture and are entitled to the benefits of the Act and the Indenture. The Series 2019A Bonds are not general obligations of the Authority, and shall not constitute an indebtedness of or a charge against the general credit of the Authority. The Series 2019A Bonds do not constitute a debt of the State of New York, and the State of New York will not be liable on the Series 2019A Bonds. No owner of any Series 2019A Bonds will have the right to demand payment of the principal of, or premium, if any, or interest on, the Series 2019A Bonds out of any funds to be raised by taxation. All conditions precedent to the delivery of the Series 2019A Bonds have been fulfilled.

4. Interest on the Series 2019A Bonds is included in gross income for Federal income tax purposes pursuant to the Internal Revenue Code of 1986, as amended.

5. Interest on the Series 2019A Bonds is exempt, under existing statutes, from personal income taxes imposed by the State of New York or any political subdivision thereof (including The City of New York).

We express no opinion regarding any other Federal or state tax consequences with respect to the Series 2019A Bonds. We render our opinion under existing statutes and court decisions as of the issue date, and assume no obligation to update, revise or supplement our opinion to reflect any action hereafter taken or not taken, or any facts or circumstances that may hereafter come to our attention, or changes in law or in interpretations thereof that may hereafter occur, or for any other reason. We express no opinion on the effect of any action hereafter taken or not taken in reliance upon an opinion of other counsel on the inclusion in gross income for Federal income tax purposes of interest on the Series 2019A Bonds, or the exemption from personal income taxes of the interest on the Series 2019A Bonds under state and local tax law.

The opinions set forth in paragraphs 2 and 3 above are qualified only to the extent that the enforceability of the Series 2019A Bonds and the Indenture may be limited by applicable bankruptcy, insolvency, moratorium, reorganization or other laws or judicial decisions or principles of equity relating to or affecting the enforcement of creditors' rights or contractual obligations generally.

In rendering the foregoing opinions we have made a review of such legal proceedings as we have deemed necessary to approve the legality and validity of the Series 2019A Bonds. In rendering the foregoing opinions we have not been requested to examine any document or financial or other information concerning the Authority or the Pledged Revenues other than the record of proceedings referred to above, and we express no opinion as to the accuracy, adequacy

or sufficiency of any financial or other information which has been or will be supplied to purchasers of the Series 2019A Bonds. We also have not been requested to examine the Loans which are the source of the Pledged Loan Payments and we express no opinion as to the validity, enforceability and sufficiency of any of such Loans.

We assume no obligation to update, revise or supplement our opinion to reflect any action hereafter taken or not taken, or any facts or circumstances, or any changes in law or interpretations thereof, that may hereafter arise or occur, or for any other reason.

Very truly yours,

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## FORM OF CONTINUING DISCLOSURE UNDERTAKING

**New York State Energy Research and Development Authority  
Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A  
(Federally Taxable)**

## CONTINUING DISCLOSURE UNDERTAKING

This Continuing Disclosure Undertaking (the “Disclosure Undertaking”) is executed and delivered by the New York State Energy Research and Development Authority (the “Authority”) in connection with the issuance of its Residential Solar and Energy Efficiency Financing Green Revenue Bonds Series 2019A (the “Bonds”). The Bonds are being issued pursuant to an Indenture of Trust, dated as of March 1, 2019 (the “Indenture”), between the Authority and The Bank of New York Mellon, as trustee. This Disclosure Undertaking is being executed and delivered solely to assist the Underwriter in complying with Rule 15c2-12 (the “Rule”) of the Securities and Exchange Commission (“SEC”) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Terms not defined herein are used herein as they are used in the Official Statement related to the Bonds, dated March 15, 2019 (the “Official Statement”). Certain terms are defined in paragraph 6 hereof.

To the extent that the Rule requires underwriters (as defined in the Rule) to determine, as a condition to purchasing the Bonds, that the Authority will make such covenants, the Authority hereby covenants as follows:

1. The Authority shall provide:
  - (a) within 120 days after the end of the 2019 fiscal year and each fiscal year thereafter, to the Electronic Municipal Market Access system (“EMMA”) (<http://emma.msrb.org>) established by the Municipal Securities Rulemaking Board (the “MSRB”), Audited Financial Statements, and other annual financial information generally of the types found in the tables on pages 20-28 of the Official Statement under “THE PORTFOLIO LOANS—Characteristics of the Initial Portfolio Loans as of the Statistical Cutoff Date” and in the tables on pages 29-34 of the Official Statement under “THE PORTFOLIO LOANS—Delinquency and Loss Information”; and
  - (b) in a timely manner, not in excess of 10 Business Days after the occurrence of any event described below, notice to EMMA of any of the following events with respect to the Bonds:
    - (1) principal and interest payment delinquencies;
    - (2) non-payment related defaults, if material;
    - (3) unscheduled draws on debt service reserves reflecting financial difficulties;
    - (4) unscheduled draws on credit enhancements reflecting financial difficulties;
    - (5) substitution of credit or liquidity providers, or their failure to perform;
    - (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
    - (7) modifications to rights of Holders, if material;
    - (8) Bond calls, if material, and tender offers;
    - (9) defeasances;
    - (10) release, substitution, or sale of property securing repayment of the Bonds, if material;

(11) rating changes;

(12) bankruptcy, insolvency, receivership or similar event of the Authority; which event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Authority in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Authority, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Authority;

(13) the consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

(14) appointment of a successor or additional trustee or the change of name of a trustee, if material;

(15) incurrence of a financial obligation of the Authority, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the Authority, any of which affect security holders, if material;

(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Authority, any of which reflect financial difficulties; and

(17) failure of the Authority to comply with clause (a) above.

Any notice of a defeasance of Bonds shall state whether the Bonds have been escrowed to maturity or to an earlier redemption date and the timing of such maturity or redemption.

It shall be sufficient for purposes of paragraph 1(a) hereof if the Authority provides such annual financial information by specific reference to documents: (i) available to the public on EMMA; or (ii) filed with the SEC.

All notices, documents and information provided to the MSRB through EMMA shall be provided in an electronic format as prescribed by the MSRB and shall be accompanied by identifying information as prescribed by the MSRB.

Nothing herein shall be deemed to prevent the Authority from disseminating any other information in addition to that required hereby in the manner set forth herein or in any other manner. If the Authority should disseminate any such additional information, the Authority shall have no obligation to update such information or include it in any future materials disseminated hereunder.

2. No Holder may institute any suit, action or proceeding at law or in equity ("Proceeding") for the enforcement of any covenant herein or for any remedy for breach thereof, unless such Holder shall have filed with the Authority evidence of ownership and a written notice of and request to cure such breach, and the Authority shall have refused to comply within a reasonable time and such Holder stipulates that: (a) no challenge is made to the adequacy of any information provided in accordance with this Disclosure Undertaking; and (b) no remedy is sought other than substantial performance of this Disclosure Undertaking. All Proceedings shall be instituted only as described herein, in the Federal or State courts located in the Borough of Manhattan, State and City of New York, and for the equal benefit of all Holders of the outstanding Bonds, and no remedy shall be sought or granted other than specific performance of the covenant at issue.

3. (a) An amendment to this Disclosure Undertaking may only take effect if: (i) the amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of the Authority, or type of business conducted, this Disclosure Undertaking, as amended, would have complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances and the amendment does not materially impair the interests of Holders of Bonds, as determined by parties unaffiliated with the Authority (such as, but without limitation, the Authority's financial advisor or bond counsel); or (ii) all or any part of the Rule, as interpreted



by the staff of the SEC on the date hereof, ceases to be in effect for any reason, and the Authority elects that this Disclosure Undertaking shall be deemed terminated or amended (as the case may be) accordingly.

(b) If an amendment is made to the basis on which financial statements are prepared, the information provided pursuant to paragraph 1(a) above for the fiscal year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. Such comparison shall include a quantitative and, to the extent reasonably feasible, qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information.

(c) With respect to any Bonds, the Authority's obligations under this Disclosure Undertaking shall terminate upon a legal defeasance, prior redemption or payment in full of such Bonds.

4. The Authority shall report a failure by the Authority to comply with this Disclosure Undertaking in accordance with the Rule. A failure by the Authority to comply with this Disclosure Undertaking shall not constitute an Event of Default under the Indenture.

5. The Authority shall not be responsible for any failure by EMMA or any nationally recognized municipal securities information repository to timely post disclosure submitted to it by the Authority or any failure to associate such submitted disclosure to all related CUSIPs.

6. The following terms used in this Disclosure Undertaking shall have the following respective meanings:

"Audited Financial Statements" shall mean the Authority's audited financial statements, prepared in accordance with GAAP and audited by an independent firm of certified public accountants in accordance with GAAS; provided, that if such audited financial statements are not available in accordance with the dates described in paragraph 1(a) hereof, the unaudited financial statements shall be provided and such audited financial statements shall be delivered when they become available.

"DTC" shall mean The Depository Trust Company, New York, New York.

"Financial Obligation" shall mean a: (a) debt obligation; (b) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (c) guarantee of any such debt obligation or derivative instrument described in clause (a) or (b) above. The term "Financial Obligation" shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

"GAAP" shall mean generally accepted accounting principles as in effect from time to time in the United States.

"GAAS" shall mean generally accepted auditing standards as in effect from time to time in the United States.

"Holder" shall mean any registered owner of Bonds and, if the Bonds are registered in the name of Cede & Co., as nominee for DTC, or any other DTC nominee, any beneficial owner of Bonds.

IN WITNESS WHEREOF, the Authority has caused this Continuing Disclosure Undertaking to be duly executed and delivered as of March 21, 2019.

NEW YORK STATE ENERGY RESEARCH AND  
DEVELOPMENT AUTHORITY

By: \_\_\_\_\_  
President and Chief Executive Officer

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**WEIGHTED AVERAGE LIVES AND EXPECTED REDEMPTION PERIODS  
FOR THE TERM SERIES 2019A BONDS**

The projections contained in this Appendix D were prepared by the Underwriter on the basis of data that was provided by the Authority concerning the anticipated Portfolio Loans and of assumptions that include those set forth below. These projections are included herein for illustrative purposes only, and no representation is made by the Authority or by the Underwriter that the actual performance of the Portfolio Loans will conform to these assumptions, that the actual rates, fees and time periods included in these assumptions will conform to them or that actual Term Series 2019A Bond principal payment rates will conform to any of these projections. The Authority has not undertaken to update, and does not intend to make available, information updating the assumptions or the projections contained in this Appendix D.

Prepayments on pools of loans can be calculated based on a variety of prepayment models. The model used to calculate prepayments in this Official Statement is based on a constant prepayment rate (“CPR,” see discussion below).

CPR is stated as an annualized rate and is calculated as the percentage of the loan amount outstanding at the beginning of a period (including accrued interest to be capitalized), after applying scheduled payments, that prepays during that period. The CPR model assumes that loans will prepay in each month according to the following formula:

$$\text{Monthly Prepayments} = (\text{Balance (including accrued interest to be capitalized)} \\ \text{after scheduled payments}) \times (1 - (1 - \text{CPR})^{1/12}).$$

Accordingly, monthly prepayments, assuming a \$1,000 balance after scheduled payments, would be as follows for various levels of CPR:

CPR	0%	2%
Monthly Prepayment	\$0.00	\$1.68

The CPR model does not purport to describe historical prepayment experience or to predict the prepayment rate of any actual loan pool. The Portfolio Loans will not prepay according to the CPR, nor will all of the Portfolio Loans prepay at the same rate. You must make an independent decision regarding the appropriate principal prepayment scenarios to use in making any investment decision.

Weighted average lives are influenced by, among other things, the initial parity ratio, Excess Revenue redemptions, actual prepayments, bond interest rates, bond redemptions, reinvestment income, the amount and timing of Portfolio Loans originated during Prefunding Period, Borrower delinquencies and defaults, default recoveries and Administrative Expenses. Actual results may vary.

The table below shows the weighted average remaining lives and expected redemption periods for the Term Series 2019A Bonds under two CPR scenarios.

For the sole purposes of calculating the information presented in the table, it is assumed, among other things, that:

- (a) the Statistical Cutoff Date for the Portfolio Loans is as of January 16, 2019;
- (b) the Cutoff date is March 19, 2019;
- (c) the Date of Issuance is March 21, 2019;
- (d) no delinquencies or defaults occur on any of the Portfolio Loans, no repurchases for breaches of representations, warranties or covenants occur, and all borrower payments are collected in full;
- (e) a 30-day lag on Borrower payments;

- (f) payments are made semiannually on April 1 and October 1 of each year, commencing on October 1, 2019, whether or not a Business Day;
- (g) the average interest rates for the Series 2019A Bonds will be equal to 3.856%;
- (h) expenses are capped at \$165,000 monthly;
- (i) the Reserve Fund has an initial balance equal to \$310,200 and is to be maintained at an amount equal to the greater of: (a) two percent (2.00%) of the aggregate amount of all Outstanding Series 2019A Bonds; or (b) \$50,000;
- (j) amounts on deposit in the Funds are reinvested at the assumed reinvestment rate of 2.25% per annum; and
- (k) an optional redemption does not occur on first Interest Payment Date immediately following the date on which principal amount of the Series 2019A Bonds is less than or equal to 10.00% of the original principal amount of the Series 2019A Bonds.

The tables below have been prepared based on the assumptions described above (including the assumptions regarding the characteristics and performance of the replines, which will differ from the characteristics and performance of the actual pool of Portfolio Loans) and should be read in conjunction therewith. In addition, the diverse characteristics, remaining terms to scheduled maturity and loan ages of the Portfolio Loans could produce slower or faster principal payments than implied by the information in these tables, even if the dispersions of weighted average characteristics, remaining terms to scheduled maturity and loan ages are the same as the characteristics, remaining terms to scheduled maturity and loan ages assumed. See the caption “INVESTMENT CONSIDERATIONS” and “THE PORTFOLIO LOANS—Characteristics of the Initial Portfolio Loans as of the Statistical Cutoff Date” in this body of this Official Statement.

Each set of projected weighted average lives reflects a projected average of the periods of time for which the Term Series 2019A Bonds are Outstanding. Such projected weighted average lives do not reflect the period of time which any one Term Series 2019A Bond will remain Outstanding. At each prepayment speed, some Term Series 2019A Bonds will remain Outstanding for periods of time shorter than the applicable projected weighted average life, while some will remain Outstanding for longer periods of time.

**Weighted Average Lives and Expected Redemption Dates  
of the Term Series 2019A Bonds at Various Percentages of CPR**

<b>CPR</b>	<b>Expected Average Life (years)<sup>1</sup></b>	<b>1st Bond Redemption</b>	<b>Last Bond Redemption</b>
0%	6.32	April 1, 2020	April 1, 2028
2%	4.70	April 1, 2020	April 1, 2027

<sup>1</sup>The weighted average life of the Term Series 2019A Bonds (assuming a 360-day year consisting of twelve 30-day months) is determined by: (a) multiplying the amount of each principal payment on the Term Series 2019A Bonds by the number of years from the Date of Issuance to the related principal payment date; (b) adding the results; and (c) dividing that sum by the aggregate principal amount of the Term Series 2019A Bonds as of the Date of Issuance.

**SECOND-PARTY OPINION OF ALIGNMENT WITH GREEN BOND PRINCIPLES  
FOR NYSERDA SERIES 2019A BOND ISSUANCE**

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# **Second-Party Opinion of Alignment With Green Bond Principles for NYSERDA Series 2019A Bond Issuance**

**January 24, 2019**

**Prepared by: First Environment, Inc.  
91 Fulton Street  
Boonton, New Jersey 07005**



## Table of Contents

External Review Summary .....	1
Introduction .....	2
Overview of Engagement .....	2
Framework Overview .....	3
Bond Issuance Overview .....	4
Assessment of Core Components.....	5
Use of Proceeds.....	5
Process for Project Evaluation and Selection .....	5
Management of Proceeds.....	6
Reporting.....	7
Opinion .....	8
First Environment.....	9
Appendix A: Independent External Review Form .....	10



## External Review Summary

First Environment Inc. (First Environment) was engaged to perform an external review of the New York State Energy Research and Development Authority (NYSERDA) Green Bond Framework and its application to the pre-issuance of NYSEDA’s Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A and to evaluate alignment with the Green Bond Principles 2018 (“the GBP”). This bond builds on NYSEDA’s 2018 Residential Solar Financing Green Revenue Bonds, Series 2018A that was Climate Bond Certified in 2018.

The following table summarizes the results.

GBP Core Component	Supporting Documentation	Conclusion	
<b>Use of Proceeds</b>	<ol style="list-style-type: none"> <li>1. NYSEDA’s Green Bond Framework</li> <li>2. Field Inspection Report</li> <li>3. Enabling program legislation</li> <li>4. Solar &amp; energy efficiency loan program websites</li> </ol>	Utilization of bond proceeds is clearly designated for solar (renewable energy) and energy efficiency projects.	✓
<b>Process for Project Evaluation &amp; Selection</b>	<ol style="list-style-type: none"> <li>1. NYSEDA’s Green Bond Framework</li> <li>2. Solar &amp; energy efficiency projects program database and most recent Loan Tape</li> <li>3. Solar &amp; energy efficiency program eligibility guidelines, program manuals and participant agreements</li> </ol>	Project evaluation & selection is clearly communicated to investors including environmental objectives, eligible green projects categories, and eligibility criteria such as technical specifications. This process is supplemented by an independent external review.	✓
<b>Management of Proceeds</b>	<ol style="list-style-type: none"> <li>1. NYSEDA’s Green Bond Framework</li> <li>2. Officer’s Certification for Loan Fund Requisition</li> <li>3. Preliminary Official Statement (POS) and related offering documents</li> </ol>	Proceeds are tracked and attested to in a formal internal process linked to the lending and investment operations for green projects. This process is subject to various internal and external reviews and audits.	✓
<b>Reporting</b>	<ol style="list-style-type: none"> <li>1. NYSEDA’s Green Bond Framework</li> <li>2. Solar &amp; energy efficiency loan program data homepage</li> <li>3. Official reports posted on the Electronic Municipal Market Access (EMMA) System of the Municipal Securities Rulemaking Board</li> </ol>	Current information on the use of proceeds is made available on an on-going basis, including the number of solar and energy efficiency loans issued.	✓

Based on these results and our environmental technical expertise, First Environment is of the opinion that NYSEDA’s green bond framework is aligned with the GBP and has been consistently applied to the pre-issuance of their Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A.

## Introduction

The New York State Energy Research and Development Authority, or NYSERDA, is a public benefit corporation in New York State that is committed to developing and implementing new energy technologies consistent with positive economic, social, and environmental objectives. NYSERDA also promotes climate-friendly actions by empowering people to choose clean and efficient energy as part of their everyday lives. Specifically, NYSERDA works with New York State stakeholders to develop, invest, and foster conditions that attract private sector capital to expand New York's clean energy economy; overcome barriers to large-scale clean energy usage; and enable communities and residents to benefit from energy efficiency and renewable energy<sup>1</sup>.

NYSERDA issued the Residential Solar Financing Green Revenue Bonds, Series 2018A as its first Certified Climate Bond. The Series 2018A Bonds were independently verified by First Environment.

## Overview of Engagement

NYSERDA engaged First Environment to conduct an independent external review and provide a second-party opinion on the alignment of their Green Bond Framework dated December 4, 2018 and its application to the pre-issuance of NYSERDA's Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A to the Green Bond Principles 2018 ("the GBP"). The scope-of-work included reviewing relevant documents and determining alignment with the Green Bond Principles. As such, First Environment also utilized the Independent External Review Form (Appendix A to this report) to determine alignment with the GBP. The scope did not include identifying environmental or social risks associated with the projects funded by the Series 2019A Bonds.

This second-opinion engagement was conducted in accordance with the Guidelines for Green, Social and Sustainability Bonds External Reviews (June 2018)<sup>2</sup>. In addition, fundamental ethical and professional principles (Integrity, Objectivity, Professional Competence/Due Care, Confidentiality and Professional Behavior) for this engagement were addressed through implementation of procedures and controls as defined by ISO 14065:2013, the international standard for greenhouse gas (climate-related) validation and verification bodies for use in accreditation or other forms of recognition.

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<sup>1</sup> <https://www.nyserdera.ny.gov/About>

<sup>2</sup> Issued by the International Capital Markets Association (ICMA), June 2018.

## Framework Overview

NYSERDA's Green Bond Framework ("Framework") describes the Authority's commitment to climate-friendly policies and outlines how NYSERDA plans to use the Series 2019A Bonds consistent with its purpose and transparency to investors.

The Green Bond Framework contains the following four sections that map to the core components of the GBP:

1. Use of Proceeds - description of programs to be funded.
2. Selection and Evaluation of Eligible Projects – description of criteria used to select and evaluate participants in the funded programs.
3. Management of Proceeds – description of internal procedures for tracking and management of bond proceeds.
4. Reporting – description of NYSERDA's commitment to annual reporting.

In addition, the framework addresses assurance in the form of independent external review. This framework builds on an earlier version that was third-party verified leading to Climate Bond Certification of NYSERDA's Series 2018A Bonds used to fund rooftop solar project loans.

## Bond Issuance Overview

The Series 2019A Bonds will be used to fund two ongoing NYSERDA programs: loans for residential solar installation and loans for energy efficiency projects. Both programs are part of the Green Jobs – Green New York (GJGNY) program, and participants in the solar and energy efficiency programs must qualify under GJGNY. Details about these programs, and the required qualifications, can be found on the GJGNY homepage.

**Figure 1: Summary of 2019 NYSERDA Bond Issuance**

<b>Issuing Entity</b>	New York State Energy Research and Development Authority
<b>Bond Issuance/s</b>	Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A
<b>Green Project Category</b>	Renewable Energy (rooftop solar panel installations) Energy Efficiency (Energy Star home installations)
<b>Sources of Information</b>	<ol style="list-style-type: none"> <li>1. Green Bond Framework (January 4, 2019)</li> <li>2. Preliminary Official Statement (POS) (Draft Provided January 4, 2019)</li> <li>3. Field Inspection Report (November 30, 2018)</li> <li>4. NY-Sun Con Edison Program Manual (November 2018)</li> <li>5. NY-Sun Upstate + Long Island Program Manual (November 2018)</li> <li>6. Loan Tape (October 31, 2018)</li> <li>7. NY Sun Participation Agreement (October 2018)</li> <li>8. Officer's Certification for Loan Fund Requisition (June 7, 2018)</li> <li>9. NY-Sun Residential and Small Commercial Program Manual (April 2017)</li> <li>10. Enabling program legislation</li> <li>11. Solar &amp; energy efficiency loan program websites</li> <li>12. Reporting available on the Electronic Municipal Market Access (EMMA) System of the Municipal Securities Rulemaking Board</li> </ol>

## Assessment of Core Components

### Use of Proceeds

Both project types funded by the Series 2019A Bonds will provide clear environmental benefit. As listed on the Loan Tape, 19 percent of loans are issued for solar installation and 81 percent of loans are issued for energy efficiency projects.

The residential solar installation loans increase the ability of New York residents to install solar panels on their homes, which reduces their electricity usage and increases the amount of green energy used in the state. This directly correlates to less greenhouse gas emissions.

The residential energy efficiency loans help homeowners learn about and implement strategies to increase the energy efficiency of their homes. This results in lower energy usage, including both electricity and natural gas usage, which directly correlates to less greenhouse gas emissions.

A sample of completed energy efficiency projects is periodically reviewed for quality assurance, and another sample is periodically assessed to quantify the energy savings associated with completed projects. The Field Inspection Report provided by NYSERDA demonstrates that energy efficiency projects are assessed for compliance with program standards, and non-compliant projects are required to take corrective action to ensure projects actually achieve increased energy efficiency. Additionally, NYSERDA periodically conducts a third-party assessment of the measured energy savings of participating homes. In the most recent report for Program Year 2010-2011, billing analysis demonstrated 2 percent annual reduction in electricity spending and 14 percent annual reduction in natural gas spending (Home Performance with ENERGY STAR® Program Impact Evaluation Report [PY2010-2013], November 21, 2016). A reduction in energy spending is directly correlated with a reduction in energy usage, which in turn results in less greenhouse gas emissions.

According to the Green Bond Principles, solar (renewable energy) and energy efficiency projects are identified as “eligible Green Project categories.” Third-party assessment has shown that funded energy efficiency projects have been effective in reducing energy costs. Thus, NYSERDA’s green bond offering is aligned with GBP’s Use of Proceeds core component and has demonstrated tangible environmental benefits.

### Process for Project Evaluation and Selection

The Green Bond Framework identifies NYSERDA’s environmental sustainability objectives; namely, advancing energy solutions and technologies to increase New Yorkers’ access to clean and affordable energy and reduce greenhouse gas emissions.

The two programs funded by the Series 2019A Bonds fit within the Renewable Energy and Energy Efficiency Green Project categories, as defined by the Green Bond Principles. Home solar installation loans are used for renewable solar energy projects. Home energy efficiency loans are used for energy efficiency projects. To be clear, Energy Star Program participants are not certified to Energy Star standards but undertake Energy Star-eligible projects to improve their homes’ energy efficiency. Because NYSERDA does not require homeowners to meet the

more stringent Energy Star certification requirements, more homeowners are able to participate and improve their energy efficiency.

Participants in both the solar and energy efficiency loan programs must qualify according to NYSERDA's and GJGNY's eligibility requirements, described on the GJGNY homepage. These criteria ensure that projects are likely to be effective and minimize the risk of offering loans. For example, homeowners can qualify for a larger energy efficiency loan (up to \$25,000) if they adhere to higher cost effectiveness standards (Green Bond Framework).

Homeowners and contractors interested in the home solar installation program can find program manuals and other documents at the NY Sun homepage. Resources for the home energy efficiency program can be found on the Home Performance with Energy Star homepage. These program manuals and other documents define the eligibility requirements, and the online application presents an opportunity for initial screening of applicants.

NYSERDA's project selection process considers a number of factors including stated environmental and social objectives, green projects type (solar and/or energy efficiency), and established eligibility criteria (e.g., technical specifications). In addition, the process for selecting solar projects has been independently verified as part of NYSERDA's climate bond certification process<sup>3</sup>. NYSERDA's green bond offering is aligned with the GBP's Project Evaluation and Selection core component because the process and results for project evaluation and selection is clearly communicated to the public.

## Management of Proceeds

NYSERDA will only use the proceeds of the Series 2019A Bonds to fund energy efficiency and solar loans. The proceeds will not be used as collateral in any other transactions and will be tracked according to NYSERDA internal procedures (Green Bond Framework). All Series 2019A Bond proceeds will be deposited to the Loan Fund to be used to fund the solar and energy efficiency loan programs (Preliminary Official Statement).

As demonstrated by a current program Loan Tape (October 31 2018), all loans are tracked and labeled according to their purpose (Energy Efficiency [EE] or Solar [PV]). The Officer's Certification for Loan Fund Requisition (June 7, 2018) demonstrates that the disbursement of loan funds is tracked according to the formal internal process. The allocated portfolio of pledged loans is intended to be at least equal in value to the net proceeds of the Series 2019A Bonds.

Additionally, NYSERDA continues to use the processes and procedures that were previously certified by the Climate Bonds Standard Board. The Series 2019A Bonds are therefore aligned with the basic Climate Bond Standard criteria, which represent best practices for Green Bonds. NYSERDA is not pursuing Climate Bond Certification for the current offering because the energy efficiency loans, on average, do not demonstrate the highest performance necessary to qualify under the Climate Bonds Standard Buildings Sector Requirements (April 2018). However, because the energy efficiency program does result in significant reductions in energy use, the program does have a demonstrable positive climate impact.

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<sup>3</sup> Climate Bonds – Green Bond Fact Sheet, 21-Mar-2018, <https://www.climatebonds.net/files/files/2018-03%20US%20NYSERDA.pdf>

Therefore, NYSERDA's green bond offering is aligned with the GBP's Management of Proceeds core component because proceeds are tracked and attested to in a formal internal process linked to the lending and investment operations for green projects. Supporting procedures and controls are subject to various internal and external reviews and audits.

## Reporting

NYSERDA intends to annually report on the use of proceeds and the allocated and outstanding amounts. Public access to these reports will be available on the EMMA website.

NYSERDA issues periodic reports including quantitative performance measures for the residential energy efficiency projects. The assessment is conducted by a third-party consultant who reports on a selection of projects to measure energy savings and other performance metrics. These reports are available on the NYSERDA website.

The NY-Sun program, which includes the residential solar installation loan program, also publishes periodic reporting and annual performance reviews. These reports are also available on the NYSERDA website.

NYSERDA maintains detailed datasets online about all residential loan programs, including the solar and energy efficiency loans. Information available includes metrics such as number and type of loans issued, total loan amount, and average interest rate.

NYSERDA's green bond offering is therefore aligned with the GBP's Reporting core component because current information on the use of proceeds will be made available on an ongoing basis, including the number of solar and energy efficiency loans issued.

## Opinion

First Environment is of the opinion that the NYSERDA's green bond framework is aligned with the GBP and has been consistently applied to the pre-issuance of their Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A.



## First Environment

First Environment, Inc. is an environmental engineering and consulting firm headquartered in New Jersey that has been providing cutting edge environmental solutions since 1987. First Environment has extensive credentials in validation and verification of climate-related assertions including international accreditation under ISO 14065 (Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition). In addition, First Environment has been approved by the Climate Bonds Standard Board as a Climate Bonds Verifier since March 2017.

## **Appendix A: Independent External Review Form**



## Green Bond / Green Bond Programme

### Independent External Review Form

#### Section 1. Basic Information

**Issuer name:** New York State Energy Research and Development Authority (NYSERDA)

**Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:** Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A

**Independent External Review provider's name:** First Environment, Inc.

**Completion date of this form:** January 22, 2019

**Publication date of review publication:** January 24, 2019

#### Section 2. Review overview

##### SCOPE OF REVIEW

*The following may be used or adapted, where appropriate, to summarise the scope of the review.*

The review assessed the following elements and confirmed their alignment with the GBPs:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

##### ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Second Party Opinion  | <input type="checkbox"/> Certification  |
| <input type="checkbox"/> Verification                     | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |   |

*Note: In case of multiple reviews / different providers, please provide separate forms for each review.*

##### EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

See External Review Summary of the Full Review as included in the Preliminary Official Statement (POS).

### Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

#### 1. USE OF PROCEEDS

**Overall comment on section** (if applicable):

See Use of Proceeds section of the full review.

#### Use of proceeds categories as per GBP:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy   | <input checked="" type="checkbox"/> Energy efficiency  |
| <input type="checkbox"/> Pollution prevention and control  | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation   | <input type="checkbox"/> Clean transportation  |
| <input type="checkbox"/> Sustainable water and wastewater management   | <input type="checkbox"/> Climate change adaptation   |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes                             | <input type="checkbox"/> Green buildings   |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other (please specify):   |

If applicable please specify the environmental taxonomy, if other than GBPs:

N/A

#### 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

**Overall comment on section** (if applicable):

See Process for Project Evaluation and Selection section of the full review.

## Evaluation and selection

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives            | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories    |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available       | <input type="checkbox"/> Other <i>(please specify)</i> :   |

## Information on Responsibilities and Accountability

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other <i>(please specify)</i> :   |   |

## 3. MANAGEMENT OF PROCEEDS

**Overall comment on section** *(if applicable)*:

See Management of Proceeds section of the full review.

### Tracking of proceeds:

- |   |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner          |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> :  |

### Additional disclosure:

- |  |   |
|--|---|
| <input type="checkbox"/> Allocations to future investments only                  | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements                  | <input checked="" type="checkbox"/> Allocation to a portfolio of disbursements          |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> :                                |

## 4. REPORTING

**Overall comment on section** *(if applicable)*:

See Reporting Section of the full review.

**Use of proceeds reporting:**

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other *(please specify)*:

**Information reported:**

- Allocated amounts
- Green Bond financed share of total investment
- Other *(please specify)*: Reporting on green loans funded by proceeds

**Frequency:**

- Annual
- Semi-annual
- Other *(please specify)*:

**Impact reporting:**

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other *(please specify)*:

**Frequency:**

- Annual
- Semi-annual
- Other *(please specify)*:

**Information reported (expected or ex-post):**

- GHG Emissions / Savings
- Energy Savings
- Decrease in water use
- Other ESG indicators *(please specify)*:

**Means of Disclosure**

- Information published in financial report
- Information published in sustainability report
- Information published in ad hoc documents
- Other *(please specify)*:
- Reporting reviewed *(if yes, please specify which parts of the reporting are subject to external review)*:

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** *(e.g. to review provider methodology or credentials, to issuer's documentation, etc.)*

See full report.

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**

**Type(s) of Review provided:**

- |  |   |
|--|---|
| <input type="checkbox"/> Second Party Opinion                    | <input type="checkbox"/> Certification  |
| <input checked="" type="checkbox"/> Verification for 2018A bonds | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other ( <i>please specify</i> ):        |   |

**Review provider(s): First Environment, Inc.**

**Date of publication: January 24, 2019**

## ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

1. **Second Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
2. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
3. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
4. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.







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