U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-5000

OFFICE OF PUBLIC AND INDIAN HOUSING

Special Attention of:
Public Housing Agencies;
Office Directors of Public Housing;
Regional Directors

Notice PIH 2019-24

Issued: September 3, 2019

This notice remains in effect until amended, superseded or rescinded.

Cross Reference: 24 CFR § 990.185, 24 CFR § 965 Subpart C, 2 CFR Part 200, Notice PIH-2011-36 (HA), and Notice PIH 2018-20, HUD Handbook 7460.8 REV 2 (2/2007).

SUBJECT: Guidance on the Rate Reduction Incentive in Public Housing

(1) Purpose. This notice serves as guidance to Public Housing Authorities (PHAs) on the use and eligibility of the Rate Reduction Incentive (RRI). This notice supersedes and replaces Notice PIH-2014-18 (HA) and supplements information in the current Energy Performance Contracting (EPC), Utility Partnership Program (UPP), and the Operating Fund Grant processing notices.

(2) Applicability. This notice applies to all PHAs that operate a public housing program and provides guidance under the Public Housing Operating Fund Grant Program pursuant to the U.S. Department of Housing and Urban Development (HUD) regulations at 24 Code of Federal Regulation (CFR) Part 990.

Moving to Work (MTW) housing authorities with Alternative Operating Subsidy formulas are only eligible to claim financial incentives for rate reductions to the extent that their Alternative Operating Subsidy formula explicitly permits it or that the Alternative Operating Subsidy Formula does not modify the Utility Expense Level portion of the Operating Subsidy formula found in 24 CFR Part 990.

(3) Background. The RRI is a financial incentive for PHAs that pursue special and significant efforts beyond what is required by statute and/or regulation to reduce their utility rate. The PHA's action must exceed the activities required by statute and/or regulation. Pursuant to HUD regulation 24 CFR § 990.185(b), a PHA will be eligible for a rate reduction if a

> PHA takes action beyond normal public participation in rate-making proceedings, such as wellhead purchase of natural gas, administrative appeals, or legal action to reduce the rate it pays for utilities.

The RRI provides additional Operating Fund Grant formula eligibility to a PHA that undertakes a special and significant action to reduce its utility rate. PHAs with an eligible

action will be eligible to retain one-half of the annual savings realized from their actions. A PHA must undertake an eligible action that results in the PHA paying a lower utility rate in order to be eligible for an RRI. The lower rate cannot be a result of factors that do not require the PHA to take an action and/or are beyond a PHA's control including, but not limited to, market changes, legislative changes, rate changes for all customers, or consuming energy at a different time of day. A coincidental change in the effective rate paid by the PHA from one year to the next is not always a result of a PHA action and therefore is not eligible for an RRI.

The RRI is not an incentive for complying with required procurement practices, conducting maintenance, and/or reducing utility consumption. The RRI is a tool to incentivize PHAs to lower the overall utility costs of the public housing program. In general, pursuant to 24 CFR § 990.185, the RRI evenly divides the financial benefit of the lower utility rate between the PHA and HUD (i.e., 50 percent to the PHA and 50 percent to HUD). RRI financial benefits, which are provided through the Public Housing Operating Fund Grant, may be used for any eligible Operating Fund Grant activity allowable under Section 9(e) of the United States Housing Act of 1937.

(4) RRI Approval Process. A PHA seeking an RRI must submit a request to HUD for review and approval. The PHA's submission must be approved before the PHA is eligible to include RRI savings in their HUD Form 52722. Previous approval of an RRI is not a guarantee of future approval. A PHA seeking approval of an RRI is subject to the Section 9(e) of the United States Housing Act of 1937, the HUD regulations at 24 CFR Part 990 and the terms and guidelines of the current notice. Any time limits for RRI eligibility will begin in the Operating Subsidy funding year following the RRI approval. The process for the review and approval of an RRI is as follows:

Step 1: PHA Submittal

A PHA interested in pursuing an RRI is required to submit a request to its local Field Office (FO) and the energy policy mailbox (PIH_EPC_Policy@hud.gov) for review. The request must be submitted no later than August 30th prior to the upcoming funding period for which the RRI would be applicable.

> For example, the submittal request for an RRI for the 2021 funding period (January 2021 – December 2021) must be received by HUD no later than August 30, 2020.

For funding year 2020, PHAs have until November 30, 2019 to submit their RRI request to HUD for approval. In future years, PHAs must follow the submission deadline specified in this notice.

Failure to meet this deadline will result in denial of the RRI request. At a minimum, each RRI request must include the following information (see Appendix III for a sample PHA submittal):

1. PHA Name and PHA code;
2. Asset Management Project (AMP) number for each AMP included in the proposed RRI;

3. A brief description of the action the PHA undertook to reduce the utility rate and supporting documentation;
4. An explanation of how the PHA will calculate savings (see Appendix II for more information); and
5. Identification of the incentive the PHA will claim, whether it is 50 percent or 100 percent of the actual savings (see Section 7 Interaction with an EPC for more information).

PHAs must submit a separate application for each action for each utility. For actions that impact more than one AMP, the PHA may submit one application.

PHAs are encouraged to submit an RRI approval request ahead of the stated deadline. In subsequent years, a PHA must request to amend the approval letter if there are any changes to the information contained in the original request. If a PHA undertakes a new action such as executing a new contract, then the PHA must submit the information listed above even if the information resembles a previous submittal and/or action.

Step 2: HUD Review

HUD will review the submittal and supporting documentation to determine RRI eligibility. The review process will not start until all supporting documentation has been received. During the review process, HUD may contact the PHA to request additional documentation to determine RRI eligibility.

Step 3: HUD Approval

HUD will process either an approval or denial letter for the PHA. A PHA that receives a signed approval letter from HUD is eligible to claim an RRI on their HUD Form 52722. The approval letter will identify the number of years the PHA is eligible to claim the RRI for this action, provided that the action continues to produce measurable savings for the PHA. PHAs that receive a denial letter from HUD have a right to appeal the denial as specified under 24 CFR § 990.245 (a) Streamlined appeals.

Step 4: Reporting Annual Savings

PHAs that receive an approval letter from HUD are eligible to claim RRI savings in their annual Operating Subsidy request provided that the action continues to result in a net savings to the PHA. Savings must be reported in the HUD Form 52722 by the initial submission date as identified in the Operating Subsidy notice for each eligible funding year. In order for a PHA to be eligible to claim an RRI, a PHA must submit documentation of the savings to its FO no later than the September 30th prior to the upcoming funding year. For funding year 2020, PHAs will need to submit documentation of the savings within 30 calendar days of receiving an approval letter from HUD. In future years, PHAs must follow the submission deadline specified in this notice.

After HUD determines that a PHA took an eligible action (Step 3 above), PHAs only need to submit documentation of the savings in subsequent years. If there are any changes from the

original approval letter, such as a new contract or a new contractor, then the PHA must seek a new approval letter from HUD (repeat Steps 1-3 above).

(5) <u>Activities That May Be Eligible for an RRI</u>. Activities listed in this section may be eligible to receive an RRI if the action results in a lower utility rate for the PHA, subject to HUD approval under the terms of this notice. HUD will not consider an action eligible for an RRI if the action violates a current policy, regulation, or statute, or inhibits a PHA from complying with a current policy, regulation, or statute.

HUD's current policy is that contracts shall not exceed a period of five years, including options for renewal or extension, as stated in Chapter 10.8 of The Procurement Handbook for Public Housing Agencies (HUD Handbook 7460.8 REV 2, dated 2/2007). An RRI cannot be combined with any public housing financing (e.g., Capital Fund Financing Program,[1] Operating Fund Financing Program,[2] Section 30 EPC,[3] Public Housing Mortgage Program[4]) without HUD approval of the financing. RRI actions that require a contract are not eligible to receive RRI incentives beyond the term of the contract.

The scenarios below are not an exhaustive list or a guarantee of approval for RRI eligibility or payment.

Scenario 5-1: Special rate negotiated by and for the PHA

- The PHA actively works with the local utility company to create a special rate for the PHA. The result is a reduced rate or accommodation not available to the public, low income households, or subsidized housing in general. The action taken by the PHA must extend beyond simply writing letters, attending public meetings, or completing administrative paperwork.
- The PHA may be eligible to receive an RRI approval for up to five years for each negotiation.

Scenario 5-2: Wellhead purchase of natural gas

- The PHA negotiates a natural gas rate at the wellhead.[5]
- The RRI savings must reflect the impact to the wellhead portion of the bill only. In this scenario, HUD will only pay an incentive on the savings associated with the wellhead portion of the utility bill. Most commodity purchases are inclusive of the wellhead price as well as fuel processing and transportation charges.
- The PHA may be eligible to receive an RRI approval for up to five years for each procurement action.

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[1] 24 CFR Part 905, https://www.hud.gov/program_offices/public_indian_housing/programs/ph/capfund/cffp
[2] https://www.hud.gov/sites/documents/OPFUND-FINANCING-GUIDE.PDF
[3] Energy Performance Contract Section 30 Reviews and Approvals Guidebook, https://www.hud.gov/sites/documents/SECTION30GUIDEBOOK.PDF
[4] PIH Notice 2011-30 (HA): PHA Mortgaged Projects: Procedures for Section 30 Mortgage Transactions, https://www.hud.gov/sites/documents/PIH2011-30.PDF
[5] According to the American Gas Association, the definition of wellhead price is "the cost of gas as it comes from the well excluding cleaning, compression, transportation, and distribution charges." (https://www.aga.org/natural-gas/glossary/)

Scenario 5-3: Power Purchase Agreement (PPA) using a third-party energy supplier

- The PHA participates in a power purchase agreement (PPA), where a third party finances, owns, maintains, and operates an energy generating system and the PHA purchases the output (e.g., electricity, steam, or chilled water).
- If a PHA elects to pursue a PPA and the contract term exceeds five years, then the contract may be subject to a procurement exception review (under 2 CFR Part 200) and approval by the Office of Public Housing (OPH) and Office of General Counsel (OGC) in HUD headquarters. HUD will only consider contracts longer than five (5) years when the contract is executed in conjunction with an EPC, or an EPC extension,[6] for a term of up to twenty (20) years. If a PHA receives OPH and OGC approval to enter into a PPA contract, the approval is only for entering into that contract and not an automatic approval of an RRI. The PHA must separately request HUD approval of the RRI.
- If the PHA receives contract approval, and the associated RRI is also approved, the PHA may be eligible to receive an RRI approval for the life of the contract, which cannot exceed 20 continuous years.

Scenario 5-4: Energy efficiency investments that lead to lower utility rates

- Some utilities offer lower rates for customers that make energy efficiency investments or upgrades, including, but not limited to, boilers, windows, or toilets.
- If the investment involves the physical installation of new equipment as a requirement to qualify for a lower rate, then the PHA may be eligible to receive an RRI for the lower utility rate but not any reductions in utility consumption (e.g., kilowatt hours (kWh), 100 cubic feet (CCF), gallon).
- Energy efficiency investments that reduce utility consumption and impact the actual average utility rate paid by the PHA,[7] but not the rate (e.g., $/kWh or $/gallon) charged by the utility company, are not eligible under this scenario.
- RRIs do not apply to physical investments that result in a property using different fuels, which, for example, could include switching from natural gas to electric heat to be eligible for a reduced electric rate.
- The PHA may be eligible to receive an RRI approval for up to three years for each investment.[8]

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[6] See 24 CFR § 990.185(a) regarding EPC term extensions

[7] "*Utility rate* means the actual average rate for any given utility for the most recent 12-month period that ended the June 30th prior to the beginning of the applicable funding period." 24 CFR § 990.115

[8] The Operating Fund Grant formula determines eligibility based on the current utility rate multiplied by the payable consumption level. The payable consumption level factors in the current consumption and the rolling base consumption level (RBCL). When a PHA reduces its consumption, the PHA is able to retain 75 percent of the difference between the current consumption and the RBCL (24 CFR § 990.170). The HUD Form 52722 refers to this as the Utility Consumption Incentive or the 75 percent/25 percent Split. This allows the PHA to retain 150 percent of the consumption savings incentive spread over 3 years (assuming no consumption variation from year to year). PHAs that pay a utility bill that does not reflect actual consumption (e.g., cost per dwelling unit rather than cost per gallon) are not eligible to utilize the Utility Consumption Incentive and therefore not able to capture these savings when a capital investment results in a lower utility consumption. Therefore, the PHA may be eligible to claim the RRI for up to three years to capture these savings, provided the actions and savings meet the criteria of this notice.

Scenario 5-5: Investments to allow for fuel switching capability in order to participate in an interruptible utility rate

- Some utilities offer lower rates for customers that agree to participate in fuel switching programs in which customers are required to switch fuels at the direction of their local utility company. Participation in the program requires a PHA to temporarily (cannot be permanent) switch between fuels. Fuel switching occurs usually in response to disruptions in the fuel supply or changes in market conditions. For example, a utility company may require a PHA to switch from natural gas to fuel oil during a temporary price surge.
- If fuel switching capability requires the installation of new equipment, then the PHA may be eligible to receive an RRI.
- The PHA may be eligible to receive an RRI approval for up to three years for each investment.

Scenario 5-6: Commodity purchases of regulated utilities in a deregulated market that result in a lower utility rate

- Each PHA property has a default utility provider that maintains the local electricity lines and/or natural gas distribution system. The default provider operates as a regulated monopoly and is the only provider physically capable or legally allowed to provide utility delivery services to a PHA property.
    - The charge for this service is listed on the utility bill as either the transportation or delivery portion of the electricity or natural gas bill.
    - PHAs do not take specific steps to procure transmission and distribution utility services from the default utility provider as there is only one provider capable and legally allowed to provide service to the PHA property.
- In addition to utility service delivery, the default provider also provides the energy supply or commodity.
    - When a customer initiates utility service with the customer's local utility provider, the local utility provider is the default commodity provider. PHAs do not need to undergo a procurement action to purchase commodity from the default provider when they initiate utility service.
- PHA properties that are physically located in a deregulated utility market have the option to procure energy commodity from a provider other than their default local provider. A PHA that chooses to exercise this option must follow Federal procurement guidelines (2 CFR Part 200 and HUD Handbook 7460.8 REV 2, dated 2/2007). If a PHA exercises this option and reduces its utility rate, then that PHA may be eligible for an RRI.
- As a best practice, a PHA that chooses to procure a commodity separately from its default provider is encouraged to continuously review the financial costs and benefits of the procurement action to ensure that the procurement action continues to be financially advantageous to the PHA.
- This RRI activity does not apply to non-regulated fuels including, but not limited to, fuel oil, diesel fuel, propane, or kerosene. Since there is no default provider, the PHA is always required to follow Federal competitive procurement procedures (2 CFR Part 200) when purchasing these fuels.
- The PHA may be eligible to receive an RRI approval for up to five years for each procurement action.

Scenario 5-7: Active commodity trading

- Active commodity trading, or participating in a reverse auction, is where the PHA, or an agent on its behalf, purchases electricity or natural gas on the spot market at regular intervals throughout the year. Unlike a commodity purchase that typically happens once a year, a reverse auction may require the PHA, or an agent on its behalf, to frequently monitor energy costs to ensure the best rate. Purchases in a reverse auction may range from short-term intervals of a few days up to multiple years.
- The PHA may be eligible to receive an RRI approval for up to five years for each procurement action.

Scenario 5-8: On-Site renewable energy

- If a PHA installs a renewable energy system, the PHA may include the electricity generated on-site for the purposes of calculating the blended rate. See Appendix I for a sample project, including an example methodology of how to calculate the savings.
- PHAs choosing to install on-site renewable energy are encouraged to investigate the financial benefits, risks, and penalties when evaluating whether to invest in such projects.
- If the renewable energy investment results in higher electricity costs, then the PHA is not eligible for the RRI.
- The renewable energy RRI is not eligible to claim the 100 percent rate savings, only 50 percent, even when installed as part of an EPC. See Section 7 of this document for more information.
- The PHA may be eligible to receive an RRI for the life of the equipment, not to exceed 20 years.

Scenario 5-9: Other

- Additional RRI scenarios proposed by PHAs will be reviewed on a case-by-case basis.

(6) **<u>Actions That Are Not Eligible to Receive An RRI</u>**. The following are some examples of activities that do not qualify as eligible to receive an RRI. This list is not exhaustive and is provided as a general guide for evaluating eligible activities.

Scenario 6-1: Energy investments that lower utility consumption but not the rate (unit cost)

Justification: If the investment reduces energy consumption, the PHA may be eligible to receive an incentive under 24 CFR § 990.170(c) as automatically calculated in the HUD Form 52722, but not an RRI. Energy and water investments using third party funds may be eligible for incentives when they are included in an approved EPC. For more information on EPCs, see HUD regulation 24 CFR § 990.185(a) and/or the current EPC notice.

Examples of ineligible activities:

- Energy or water conservation investments including, but not limited to, replacing, repairing, or upgrading existing equipment such as boilers, insulation, windows, or toilets.

- Investments in energy technology that use fuel more efficiently including, but not limited to, cogeneration, combined heat and power, trigeneration, or geothermal heat pumps.
- Routine maintenance to repair faulty equipment and/or leaky pipes.

Scenario 6-2: Selecting the best available utility rate

Justification: If a local utility company offers multiple rate options from which the PHA may be eligible, then the PHA is expected to select the utility rate that is most financially advantageous to the PHA and/or HUD.

For example, a PHA may have the option of choosing to pay $0.12/kWh for a standard commercial rate or $0.10/kWh for an affordable housing rate. It is expected that the PHA will choose the cheaper rate. When the PHA does this, it is considered a good business decision rather than a special or significant action worthy of an RRI.

Examples of ineligible activities:
- Selecting a lower rate that is available to the public, even if there is an application or income verification process.
- Assisting tenants in applying for a lower rate.
- Participating in an interruptible rate program except as explained in Scenario 5-5.
- Switching into, or out of, a time-of-use rate.[9]

Scenario 6-3: Combining or removing utility meters in a manner that prohibits the PHA from individually metering tenant level consumption

Justification: Removing or consolidating individual meters inhibits a PHA from complying with the requirements of 24 CFR 965 Subpart D & E (§ 965.401- § 965.508), which requires PHAs to individually meter utility consumption where technically feasible and appropriate.

HUD may consider a negotiated rate for meter consolidation provided that the PHA metering remains in compliance with HUD regulations for assigning tenant responsibility. For example, a PHA may install a master utility meter upstream from individual meters and convert the unit level meters from individual utility accounts to PHA operated checkmeters. In a checkmeter system, a PHA must bill tenants for excess consumption. In this case, the PHA may be eligible to receive the RRI, subject to HUD approval, provided that the action lowers the cost to the PHA and/or HUD.

Scenario 6-4: Fuel switching to obtain a better rate when new equipment is not required

Justification: If new equipment purchases are not required, then these actions amount to energy conservation activities and/or compliance with the requirement to select the most favorable utility rate.

[9] Time-of-use rates charge different rates based on the time of day, season, or type of day (weekday or weekend). In an electric time-of-use rate, the unit cost of electricity ($/kWh) costs more during peak (daytime) hours and less during off-peak (nighttime) hours.

Examples of ineligible activities:

- Using an on-site generator to reduce electricity consumption.
- Converting electric heat to natural gas because natural gas is cheaper per British Thermal Unit (BTU, a unit of energy).
- Switching between natural gas and oil when it is price advantageous to the PHA and/or HUD, except as described in Scenario 5-5.

(7) Interaction with an EPC. RRIs executed at the same time as an EPC are eligible to retain up to 100 percent of the savings (rather than 50 percent of the savings with the RRI alone) during the EPC repayment period when the EPC and RRI impact the same AMP-utility. For a PHA to be eligible to retain 100 percent of the RRI savings, the PHA must be eligible for both EPC incentives and RRI incentives (1) at the same AMP, (2) for the same utility, and (3) in the same funding period. See below for clarifications on some common scenarios.

- **Scenario 7-1**: If a PHA executes a HUD approved EPC at two (2) of its three (3) AMPs and simultaneously executes a HUD approved RRI at all 3 AMPs, only the 2 AMPs included in the EPC may be eligible to retain 100 percent of the savings. The third AMP that is not included in the EPC may be eligible to retain 50 percent of the savings.

- **Scenario 7-2**: If a PHA has a HUD approved EPC that includes both electricity and water savings and simultaneously executes a HUD-approved RRI for natural gas cost, the PHA may be eligible to retain 50 percent of the savings because the EPC and RRI impact different utilities.

- **Scenario 7-3**: Eligibility to retain 100 percent of the RRI savings is only applicable when the PHA is also receiving EPC incentives. Therefore, the PHA is only eligible to retain 50 percent of the savings during the construction period, or if the EPC benefits end for any reason.

For an EPC and an RRI to be considered executed at the same time, the RRI action needs to be submitted to HUD for review after the PHA submits the EPC package to HUD for review and before HUD approves the EPC. The PHA's RRI submission must state that it is requesting a 100 percent RRI benefit because it is being executed in conjunction with an EPC. A PHA's EPC submission must state that the PHA is pursuing an RRI in conjunction with an EPC.

Both the RRI and EPC approval letters from HUD must indicate that the PHA is pursing both approvals in conjunction with each other. The requirement that the RRI and EPC be completed within a specified timeframe, the submission requirement, and HUD approval letter requirements apply only to RRIs approved after the date of this notice. HUD determinations as to the percentage of an RRI that can be claimed for existing RRI approvals are made pursuant to the prior RRI notice. There is no requirement for the PHA to use the same contractor for both transactions.

A PHA may claim a maximum of $1.00 for every $1.00 saved across all incentive programs. For example, if a PHA's action reduces its annual cost $100.00 and the action is eligible for

both an EPC incentive and an RRI, then the sum of the incentives claimed cannot exceed $100.00 for that year. PHAs shall submit calculations validating compliance with this requirement no later than the M&V submission deadline each year.

If a PHA executes an RRI and an EPC at the same time and the EPC has a payback term longer than the RRI eligibility, and the PHA receives approval of another RRI after the expiration of the previous RRI, then the PHA may be eligible to extend RRI eligibility at 100 percent provided that:

(1) the new RRI is similar in nature to the previous RRI;
(2) the new RRI meets the requirements identified in this notice;
(3) the new RRI took place at the same AMP for the same utility as the expired RRI; and
(4) the RRI and EPC both include incentives at the same AMP for the same utility.

If the RRI renewal meets the above criteria, then the PHA may be eligible to retain 100 percent of the savings rather than 50 percent while the AMP is receiving both EPC and RRI incentives. If the EPC repayment periods ends before RRI eligibility ends, then the PHA is only able to retain 50 percent of the savings that the approved RRI is in place. The PHA does not need to use the same contractor as was used in the previously approved RRI as a condition of retaining 100 percent eligibility. The intent of allowing flexibility for extensions is to ensure that the PHA is continually seeking the best value in contract selection.

For Example:
A PHA executed an EPC with a 10-year payback and simultaneously executed a commodity contract for electricity at all sites included in the EPC. The commodity contract covered electricity purchases for three (3) years. For each of the three years, HUD determined that the PHA was eligible for an RRI and was able to retain 100 percent of the savings.

At the end of the commodity contract the PHA procured a new commodity contract for electricity for one year that covered the same AMPs.

Based on the information above, HUD determined that the PHA was eligible to retain 100 percent of the RRI savings for this additional year.

(8) <u>Further Information</u>. For additional information or questions regarding this notice, please direct inquiries to the Public Housing Management and Occupancy Division's energy policy mailbox at: PIH_EPC_Policy@hud.gov.

/s/

R. Hunter Kurtz, Assistant Secretary
for Public and Indian Housing

Appendix I: On-Site Renewable Energy RRI

In the example below, the PHA installed a solar photovoltaic (PV) system that generated 25 percent of the electricity consumed by the PHA, 20 percent (157,930) of the electricity was consumed on-site and 5 percent (39,483 kWh) was sold back to the grid (this happens if the PHA generates the electricity at a point in the day when they do not need it). Without the solar project, the PHA paid $0.1701/kWh but after the project the PHA paid $0.1901/kWh. The blended electric rate went up slightly because of the standby charge. Despite the higher utility rate, the PHA paid $21,716 less on the electricity bill because of the electricity generated on-site. However, if the blended utility rate accounted for all electricity generated on-site when calculating the blended rate, then the effective blended utility rate would be $0.1426/kWh. In this scenario, the PHA may account for the solar electricity generated and consumed on-site when calculating the blended rate for savings determination. The PHA may be eligible to retain 50 percent of the savings ($13,542.50 in this example) as an operating subsidy benefit, subject to HUD approval.

	Before	After	Savings	Notes
Total On-site Consumption	789,650	789,650		
Renewable Energy Consumption		157,930		This is the amount of electricity that was generated and consumed on-site.
Net Metering Credit		39,483		This is the excess electricity generated on-site that is sold back to the grid.
Adjusted Consumption	789,650	592,237	197,413	Amount of electricity that the PHA was billed for = (Total On-site Consumption) - (Renewable Energy Consumption) - (Net Metering Credit)
Utility Rate ($/kWh)				Unit cost of electricity
Delivery	$0.0800	$0.0800		Amount charged by the local electric company (default provider)
Supply	$0.0900	$0.0900		Amount charged for the electricity to be put into the transmission lines
Standby Charges*		$0.0600		See definition below
Utility Bill				
Meter Charge	$50.00	$50.00		Flat monthly fee
Delivery	$63,172	$47,379		= (Delivery) x (Adjusted Consumption)
Supply	$71,069	$53,301		= (Supply) x (Adjusted Consumption)

Standby Charges		$11,845		= (Standby Charges) x (Renewable Energy Consumption + Net Metering Credit)
Total Cost	$134,291	$112,575	$21,716	Utility Bill (sum of charges above)
Blended Rate	$0.1701	$0.1901	- $ 0.0200	= (Total Cost) / (Adjusted Consumption)
RRI Calculation				
Blended Rate for Savings Determination	$0.1701	$0.1426	$0.0343	= (Total Cost) / (Total On-site Consumption)
RRI Eligibility Savings[10]	$13,542.50 = 50 % x (Total On − site Consumption) x $\left(\text{Blended Rate}_{\text{Savings}}\right)$ $13,542.50 = 50 % x 789,650 x $0.0343			

*Standby Charges - Convenience fee charged by electric company for the electricity generated on-site. This covers the local power company's need to standby and provide backup power if the renewable energy system goes offline. Not all utility companies charge this fee. Utility companies that charge this fee will use different methods for calculating it.

In the scenario above, the PHA will enter the following information on the HUD Form 52722:

- Billed electricity consumption = 592,237 kWh
- Billed electricity cost = $112,575
- Billed electricity blended rate = $0.1901/kWh
- Rate Reduction Incentive = $13,542.50

[10] RRI Savings may need to be adjusted if there is an overlap with an EPC. A PHA may claim a maximum of $1.00 for every $1.00 saved across all incentive programs.

Appendix II: Calculating Utility Rate Savings

In order to calculate savings from an action, a PHA needs to determine the difference between what it actually paid (Actual Cost) and what they would have paid, if it had not taken any action (Default Cost). For most rate reduction actions, a PHA should use the following formulas:

$$Total\ Savings\ =\ (Default\ Cost)\ -\ (Actual\ Cost)$$

$$Total\ Savings\ =\ (\ (Default\ Rate)\ -\ (Actual\ Rate)\ )\ x\ (Consumption)$$

$$Rate = \frac{Cost}{Consumption}$$

Default Rate = The utility rate that the PHA would have paid if it had not taken any action.

Actual Rate = The actual utility rate that the PHA paid as a result of the action. This is the rate reported on the HUD Form 52722.

A PHA requesting an RRI must use one of the methodologies listed below to calculate annual savings. PHAs are encouraged to reach out to their utility company account representative for assistance in finding rate information. Unless there is a change in data availability, the PHA must use the same methodology for all years that an action is eligible for an RRI. The PHA must maintain a record of how the PHA calculated savings. Any change from the methodology used to calculate savings must be identified in the RRI savings calculation the PHA submits to the FO each year. Records must be maintained in compliance with 24 CFR Part 990. The PHA must keep a record of all information source(s) used to calculate savings. Records may be reviewed as part of HUD's review of the RRI savings calculation, in the course of audits or reviews of PHA operations. Records must be kept in accordance with 2 CFR § 200.333-337.

Each PHA must report its actual utility consumption and actual utility cost in the HUD Form 52722.[11] PHAs must report eligible RRI savings in the Energy Rate Incentive line. The methodologies below demonstrate different ways to calculate RRI savings based on data availability. PHAs eligible for a standard RRI, must report 50 percent or half of the savings, as the Energy Rate Incentive.

Example A2.1: Fixed Rate

The PHA is eligible for a lower utility rate and both the default rate and actual rates are clearly identified somewhere such as on the utility company's website or in a signed letter from the utility company.

- Default Rate: $5.25/unit

[11] PHAs with an EPC in repayment must consult their approval letter to determine how to report consumption on the HUD Form 52722.

- Actual Rate: $3.75/unit
- Consumption: 482,123 units
- Savings = ($5.25 - $3.75) x 482,123 = $723,259.50

Example A2.2: Monthly Discount

The PHA participates in a program that results in a discount that is applied to each utility bill. This discount is clearly itemized on each bill. The discount may or may not be related to consumption however the PHA only needs to know the total discount, not the consumption, to determine the savings.

- Utility Discount = July – December: $ 6,000 / month
- Utility Discount = January – June: $ 6,500 / month
- Savings = ($6,000 x 6 months) + ($6,500 x 6 months) = $75,000 / year

Example A2.3: Variable Utility Rate

The PHA's local utility company publishes their default commodity rate on the PHA's bill, but the PHA purchases commodity elsewhere. The PHA must record the default rate that is published on their bill each month and use this rate to calculate savings. PHAs using this methodology must account for all line items impacted by the action. For example, a commodity purchase may impact both the commodity and transportation costs on the bill as well as any additional monthly meter charges.

	Consumption	Default		Actual		Savings
		Rate	Cost	Rate	Cost	
July	135,000	$ 0.1605	$ 21,668	$ 0.1509	$ 20,372	$ 1,296
August	139,000	$ 0.1673	$ 23,255	$ 0.1539	$ 21,392	$ 1,863
September	132,000	$ 0.1537	$ 20,288	$ 0.1409	$ 18,599	$ 1,690
October	125,000	$ 0.1571	$ 19,638	$ 0.1410	$ 17,625	$ 2,013
November	136,000	$ 0.0926	$ 12,594	$ 0.1109	$ 15,082	$ (2,489)
December	140,000	$ 0.2187	$ 30,618	$ 0.1609	$ 22,526	$ 8,092
January	139,000	$ 0.1352	$ 18,793	$ 0.1409	$ 19,585	$ (792)
February	142,000	$ 0.1366	$ 19,397	$ 0.1329	$ 18,872	$ 525
March	134,000	$ 0.1496	$ 20,046	$ 0.1359	$ 18,211	$ 1,836
April	125,000	$ 0.1421	$ 17,763	$ 0.1360	$ 17,000	$ 763
May	126,000	$ 0.1424	$ 17,942	$ 0.1340	$ 16,884	$ 1,058
June	131,000	$ 0.1651	$ 21,628	$ 0.1520	$ 19,912	$ 1,716
Total	**1,604,000**	**$ 0.1519**	**$ 243,629**	**$ 0.1409**	**$ 226,059**	**$ 17,570[12]**

In the example above, the PHA needs to calculate the costs and savings monthly to account for all fluctuations.

[12] In the example above, the PHA correctly calculated savings each month in order to calculate the savings at the end of the year. If the PHA only used the total row to calculate the savings, the resulting value would be $17,644 due to rounding errors.

$$Savings = ((Default\ Cost) - (Actual\ Cost))$$
$$Savings_{July} = \big((Default\ Rate) - (Actual\ Rate))x(Consumption\big)$$
$$Savings_{July} = \big((\$0.1605) - (\$0.1509)\big)\ x\ (135{,}000) = \$\ 1{,}296$$

The overall savings calculation.

$$Total\ Savings = (Total\ Default\ Cost) - (Total\ Actual\ Cost)$$
$$Total\ Savings = \$\ 243{,}629 - \$\ 226{,}059 = \$\ 17{,}570$$

Example A2.4: Another Methodology proposed by the PHA and approved by HUD.

Appendix III: Sample PHA Submittal

In the example below, the Apple Housing Authority negotiated a lower water rate for public housing properties. The result is that the housing authority is paying 20 percent less than all other residential or multifamily customers. This rate is applicable at both of their AMPs.

Sample Submission

1. Apple Housing Authority (ZZ045)
2. AMPs included in the RRI: ZZ045001 and ZZ045002
3. Action Description: The Apple Housing Authority negotiated a lower water rate with the Town of Apple. The Town of Apple lowered the housing authority's water rate 20 percent as a result of the negotiation. See the attached letter from the Town of Apple Water Authority describing the negotiated rate.
4. Savings Calculation Methodology
   Savings = (Consumption) x (Default Rate – Actual Rate)
5. The Apple Housing Authority will claim 50 percent of the actual savings.

Appendix IV: Acronyms and Abbreviations

AMP	Asset Management Project
BTU	British Thermal Unit, a measure of energy
CCF	100 Cubic Feet, common unit of natural gas or water
CFFP	Capital Fund Financing Program
CFR	Code of Federal Regulation
EPC	Energy Performance Contracting
FO	Field Office
HUD	Department of Housing and Urban Development
kWh	Kilowatt hours, unit of electricity
M&V	Measurement and Verification
MTW	Moving to Work
OFFP	Operating Fund Financing Program
OGC	Office of General Counsel
OPH	Office of Public Housing
PHA	Public Housing Authority
PPA	Power Purchase Agreement
PV	Solar Photovoltaics, generates electricity from solar energy
RBCL	Rolling Base Consumption Level
RRI	Rate Reduction Incentive
UEL	Utility Expense Level
UPP	Utility Partnership Program