

## HUD MULTIFAMILY ENERGY POLICIES

### FACT SHEET

June 30, 2016

#### ENERGY INITIATIVES FOR INSURED MF MORTGAGE PROGRAMS

- MANDATORY 2016 MAP Guide requirements:
  - All applications must benchmark utility consumption using a specified HUD Custom version of Portfolio Manager's Statement of Energy Design Intent (SEDI) for new construction/gut rehab or Statement of Energy Performance (SEP) for existing buildings. The HUD Custom version of these reports delivers a machine readable Excel (xls) file which must be attached to the CNA in the CNA e Tool.
  - ENERGY STAR scores under 60 require further measures as follows:
    - New construction/gut rehab designs and specifications must be amended to achieve a minimum ENERGY STAR score of 60 on the SEDI
    - Substantial rehabilitation (less than gut rehab) must implement all cost beneficial improvements identified in an ASHRAE Level II Energy Audit
    - Refinancing/acquisition proposals must perform an ASHRAE Level II Energy Audit identifying cost beneficial improvements but implementation of such improvements is not mandatory.
- VOLUNTARY MIP Reductions for achieving both of the following:
  - a certification per a recognized green standard; and
  - achieving an initial and maintaining an annual ENERGY STAR® score of 75 or better on EPA Portfolio Manager's standard form (pdf) Statement of Energy Performance with data quality consistent with HUD minimum requirements.

#### COMMON ELEMENTS

- Benchmarking of utility consumption (including water)
- Verification of utility consumption data by credentialed Energy Professionals
- Use of EPA Portfolio Manager as the required benchmarking software tool
- Required delivery of specified Portfolio Manager reports showing ENERGY STAR® score, i.e., a 1 to 100 index score comparing energy/water use per square foot of a subject property to sample database of comparable properties.

#### KEY CONCEPTS

- Benchmarking: measurement of the utility consumption of a property or building for a specified interval (a year, 12 consecutive, whole months) assuming normal operations (sustaining occupancy by tenants in target demographic, e.g., elderly, family, commercial, retail, etc). Benchmarking IS NOT modeling. Benchmarking merely reports utility consumption, either actual metered results or forecasted results based on modeling, and typically provides a comparison to other properties of like kind.

- **Verification:** methods used by an Energy Professional to assure that utility consumption data is collected correctly and entered correctly in the benchmarking tool and that any accepted or prescribed methods for sampling, averaging, estimating or forecasting consumption data are correctly applied. Green standards also have particular methods for verification and/or quality control and when a green standard is used, these particulars must be observed.
- **Data Collection Plan:** a written description of the methods that will be used to obtain and maintain utility consumption data on an ongoing basis, e.g. master metering, or sub metering and how metered results will be read and recorded; or utility supplied whole building data delivered to the owner or directly uploaded to the owner's Portfolio Manager account.
- **Energy modeling:** analytical and often computer based methodologies used to forecast building systems performance characteristics and expected utility consumption based on proposed building design plans and specifications, and assuming sustaining occupancy by tenants in the target demographic, proposed energy sources, and mean annual degree days for the location. There are multiple software products available for this purpose. HUD does not recommend particular software products, but products and methods used should conform to generally accepted practice and published standards, e.g. ASHRAE standards, and the selected methods and practices must be fully disclosed by the Energy Professional.
- **Green Standard(s):** industry recognized standard(s) of building design, construction, renovation and/or maintenance that result in minimized consumption of non-renewable energy sources and optimum use of sustainable materials, resources and methods. Essentially a private, usually non-profit sponsored building code or building code overlay focused on maximizing energy and resource conservation in the construction and maintenance of buildings. Such standards may be prescriptive or performance based and often allow for an option for either. The HUD MIP Notice recognized a specific list of green standards.
- **Energy Professional:** an individual qualified by training and experience to collect and evaluate utility consumption data, to evaluate building performance, to use energy modeling methodologies to forecast utility consumption and/or to design and specify building systems. HUD has defined specific qualifications for Energy Professionals in the 2016 MAP Guide, Chapter 5.2. Each green standard keeper may also specify credentials for designers, verifiers and/or reviewers and may also require that members of the owner's project design and construction team meet training, experience or related credential requirements. Both the MAP Guide requirements and the requirements of the selected green standard must be met or exceeded.
- **Sampling:** the practice of randomly selecting buildings and/or units for inspection and/or collection of utility consumption data so as to obtain data or observations of building performance that will be representative of the whole allowing an extrapolation of the sample results to the whole with a known degree of statistical accuracy (e.g. +/- X%).

#### TYPICAL SCENARIOS AND APPLICABLE STANDARDS

Some greens standard limit the uses or building types covered by the standard. It is the lender and the borrower's responsibility to select a standard that accommodates the entire property (all uses, all structures) that will be subject to the proposed insured mortgage.

Green standards also vary in the classification of work or extent of construction activity that can be evaluated and monitored using the standard. It is the lender and borrower's responsibility to select a standard appropriate for the classification of work or extent of construction activity proposed. Some standards, notably ENERGY STAR for Existing Buildings and LEED for Existing Buildings Operations and Management, do not evaluate and monitor construction at all, and accordingly are not appropriate for use in proposals where construction exceeds the level of activity otherwise permitted in a 223(a)(7) transaction.

Finally, some standards are geographically limited and the Enterprise Green Communities standards may only be used for affordable housing (where the Enterprise definition of affordable applies, not the HUD-FHA definition).

**GREEN STANDARDS-ELIGIBLE CONSTRUCTION AND OTHER LIMITS**

<b>Named Standard</b>	<b>NC/Gut Rehab</b>	<b>Substantial Rehab</b>	<b>223(f) w Repairs &gt; 223(a)(7) limits</b>	<b>223(f) w Repairs&lt;= 223(a)(7) limits</b>	<b>223(a)(7)</b>	<b>Other Limits, Geography</b>
Energy Star Existing Buildings	NO	NO	NO	YES, but prospective results must be modeled	YES, but prospective results must be modeled	National
Energy Star High Rise (6+ stories, + 4-5 stories w central HVAC)	YES	NO	NO	NO, unless already earned	NO, unless already earned	National
Energy Star HOME (1 to 3 stories, + up to 5 w individual unit HVAC)	YES	NO	NO	NO, unless already earned	NO, unless already earned	National
LEED Home/LO/Mid Rise	YES	NO	NO	NO, unless already earned	NO, unless already earned	National
LEED High Rise	YES	NO	NO	NO, unless already earned	NO, unless already earned	National
LEED for Existing (EBOM)	NO	NO	NO	YES, but prospective results must be modeled	YES, but prospective results must be modeled	National
Enterprise Green Communities	YES	YES	YES	NO, unless already earned	NO, unless already earned	National, Affordable Only
Earthcraft House (townhouse/rowhouse)	YES	YES	YES	NO, unless already earned	NO, unless already earned	Southeast (hot, humid zone)
Earthcraft MF	YES	YES	YES	NO, unless already earned	NO, unless already earned	Southeast (hot, humid zone)
Earth Advantage	?	?	?	?	?	Oregon, Washington
Green Point Rated New Home MF	YES	NO	NO	NO, unless already earned	NO, unless already earned	California
Green Point Rated Existing Home-MF Whole Building	NO	YES	YES	YES, but prospective results must be modeled	YES, but prospective results must be modeled	California
National Green Building Standard	YES	YES	YES	NO, unless already earned	NO, unless already earned	National
Passive House	YES	NO	NO	NO, unless already earned	NO, unless already earned	National
EnerPHit	NO	YES	YES	NO, unless already earned	NO, unless already earned	National
Living Building Challenge	YES	YES	YES	NO, unless already earned	NO, unless already earned	National

## REQUIRED LEVELS OF ACHIEVEMENT FOR GRADED STANDARDS

Many of the specified green standards recognize different levels of achievement, (e.g., “Certified”, “Bronze”, “Silver”, “Gold”, etc). The borrower must elect both a particular green standard as well as a level of achievement when the green standard defines graded levels of achievement. The achievement of these levels is typically based on a point system which recognizes numerous building practices which are environmentally beneficial but have little or no impact on an ENERGY STAR score. Except for the ENERGY STAR certifications, there is no definitive relationship between any level of achievement and an expected ENERGY STAR score. It is for this reason that a minimum energy performance metric is required. That metric is achievement of an ENERGY STAR score of 75 or better based on actual results, not projected future results. Accordingly, the borrower must select a green standard and a level of achievement that assures actual, not projected, energy performance that will earn the ENERGY STAR score of 75 or better. It is not acceptable to plan construction for a lesser level of achievement and separately plan for additional measures intended to nudge modeled results up to a projected ENERGY STAR score of 75. All proposed construction must be evaluated and monitored consistent with the chosen green standard and the quality control measures established by that standard. If a given level of achievement (e.g. “certified” or “bronze”) does not result in modeled results that assure actual performance, then a higher level of achievement must be selected and/or a greater number of Energy points must be selected.

## PROJECTED VS ACTUAL PERFORMANCE-MARGIN FOR ERROR

It is not uncommon that proposed scoring points are not actually achieved during construction, or that management or tenant behavior is less favorable than projected, resulting in actual performance less than projected. The required actual performance is not waived or reduced because of any shortcoming or error either in planning or execution of construction. It is the lender and the borrower’s responsibility to provide a margin for error whenever energy performance results are projected as opposed to actual.

## DATA QUALITY STANDARDS

All utility consumption analysis, whether historical or projections of future results, must include all utilities used by the whole property. No buildings or uses may be excluded. Accordingly, the analysis must include all accessory buildings, site features such as lighting, or other site power usage and water used for pools, fountains or landscaping. Each standard specifies data quality (estimation methods, degrees of accuracy, sampling item or units for inspection, etc) necessary to maintain the validity of the standard. In each case the data quality requirements of the standard must be met in their entirety. The fact that HUD, or EPA, or another standard keeper may use a different measure or method in the same or similar circumstance is not relevant to the requirement to conform to the selected standard.

For example, a variety of different sampling routines may be relevant in a transaction: the HERS ResNet sampling protocol is used for selecting units for inspection during construction; the ENERGY STAR for Existing buildings certification requires a Statement of Energy Performance (SEP) based on 100%, all meters, whole building data for utility consumption; whereas the HUD Custom SEP will permit a sample of unit meters to obtain utility consumption data. These sampling routines are intended for different purposes and are used at different times. They are not interchangeable and should not be confused...even though it is certainly easy to become confused.

## DATA COLLECTION PLAN

One thing we know for certain about green standards: they depend on lots of good data. We also know that obtaining good data can be difficult in the multifamily business where owners have many tenants who usually live in apartment

units that are separately metered for some or all utilities. Moreover, HUD requires that owners who earn a reduced MIP must maintain energy performance during the term of the mortgage and this performance is confirmed by providing an SEP annually. Owners must plan how this data collection task will be executed and lenders must confirm that the plan is realistic and will produce data of acceptable quality.

How can this be done?

1. Arrange for whole building data to be reported by local utilities. Only some utilities can or will do this now, but the number is growing. EPA provides a website showing parts of the country where utilities provide such data.

[https://www.energystar.gov/buildings/owners\\_and\\_managers/existing\\_buildings/use\\_portfolio\\_manager/find\\_utilities\\_provide\\_data\\_benchmarking](https://www.energystar.gov/buildings/owners_and_managers/existing_buildings/use_portfolio_manager/find_utilities_provide_data_benchmarking)

Some of these utilities are able to report data directly to Portfolio Manager on a monthly or other periodic basis. Such direct reporting avoids the need for an Energy Professional to verify annual utility data.

2. Arrange for or install master or submetering devices. In some cases, a master meter(s) can be installed at the site or building level, in “front” of tenant meters enabling measurement of whole site or whole building consumption volume. Some utilities may provide this service for a fee, most will not. But owners may be able to install such equipment with the utility’s consent. When master metering is not possible, submeter devices may be installed “after” tenant meters in all or in a conforming, permanent sample of units (selected with the assistance of an Energy Professional to assure a valid sample). This would require tenant consent, which initially would need to be obtained individually from existing tenants, but for new tenants should become a standard practice incorporated in a lease addendum or standard lease for any submetered unit or for all units. Such devices typically report data to a central building point or site location where management can collect and aggregate consumption periodically for each submetered unit. The cost of metering solutions is often easily justified by the value of the reduced MIP and by comparing such costs to the time and effort required by other data collection methods. In this scenario the data collection plan must specify the proposed metering plan, the proposed sample of units, the means of aggregating and reporting results to Portfolio Manager and the form of any new or amended standard lease or other tenant authorization.
3. When neither utility reporting or metering of utility consumption is possible, owners, assisted by an Energy Professional, should identify a set of units meeting or exceeding the sampling requirements and secure tenants’ authorization to obtain utility data directly from the utility provider(s), or if utilities refuse to recognize such authorizations or act on them, secure the tenants’ commitment to provide utility consumption data (the most recent bill), most likely with each month’s rent payment or other workable frequency. Over time such tenant authorization or commitment should be made routine in a standard lease. The data collection plan in this scenario must identify how tenant cooperation will be obtained initially and maintained over time, the means of aggregating, recording and reporting results and the form of any new or amended lease or other tenant authorization.
4. Owners unable or unwilling to obtain required data and to develop and maintain a procedure for maintaining such data in future years are not eligible for an MIP reduction based on green standards. The owner’s willingness and ability to obtain required data must be evidenced in the Data Collection Plan.

#### HUD SAMPLING ROUTINE FOR SEPS

As indicated HUD intends to allow a sample of units/meters to be used for purposes of providing utility consumption data to Portfolio Manager when the SEP is purely a HUD requirement and not one required by to satisfy a green

standard. For simplicity, it is our intent that the data standard for SEPs be the same for all HUD required SEPs to the extent possible. Accordingly, we will use the same sampling routine both for SEPs required by the 2016 MAP Guide in conjunction with the CNA e Tool as well as for SEPs provided annually to show that energy performance is maintained as required by the MIP Notice.

#### What Is That Routine?

1. If whole building data is available either from the local utility or from a metering system, then whole building data must be used.
2. If whole building data is not available, then the following sample routine should be used:
3. 25% of all units, randomly selected, provided however, that the sample must be representative
  - a. all unit types;
  - b. each primary (largest) unit exterior elevation/exposure by direction (e.g.north, south, east, west);
  - c. each floor or building level;
  - d. and each HVAC package if there are material differences in the design of such equipment.
4. The statistical validity of sampling is still under study. So this sampling regime may change, but this routine may be used until further notice.

#### OTHER QUESTIONS:

1. What to do about surplus language in the new form HUD 92103-D?

If the intent is to certify “Green” strikeout the language on affordability. Vice versa if the intent is to certify “affordable”. No one should certify to both inasmuch as no further reduction of MIP is possible. It is either, or.

2. Is a SEDI (Portfolio Manager “Statement of Energy Design Intent”) required for new construction/gut rehab proposals?

The MIP Notice is completely silent on SEDIs since the energy performance requirement is “actual” not “projected”. The SEDI is a form of an SEP which is used by ENERGY STAR as part of its certification process for ENERGY STAR High Rise and ENERGY STAR Home new construction proposals. But it also can AND SHOULD be used to convert the estimated, i.e., modeled, energy consumption for a proposed project to an ENERGY STAR score. How else will the project team, the lender and HUD know if the proposed drawing and specifications will result in a score that will exceed the required actual performance of 75 or better? It is possible to create your own spreadsheet to do this calculation after a careful reading of EPA’s white paper explanation of the methodology used to produce the MF ENERGY STAR scores. But why do that, when you can just use Portfolio Manager and obtain a formatted report that will not need explanation or justification concerning whether you correctly calculated the score. So yes, a SEDI should be run repeatedly in the process of developing a scope of work that will satisfy the MIP Notice requirements and the final version of the SEDI should be submitted with your application.

3. What about using green standards not named in the MIP Notice?

We will consider nominations of other standards not named in the Notice. We are still working on the process and procedure for us to do this in an orderly way. We will not do this on a deal by deal, retail basis, i.e., a standard for borrower Mr. A and another for borrower Ms. B. So, most likely, the source of nominations will be a group or organization of owners, or of lenders, or a standard keeper who believes their standard should be available for HUD programs. We already have several nominees and we will address these first when and as we complete our arrangement of a standard operating procedure for vetting such nominees.

4. Is an ASHRAE Level II Energy Audit the only energy audit procedure HUD will accept. It is most appropriate for mid and high rise buildings. Low rise, 2 and 3 story, conventional light frame construction buildings are better suited to the HERS ResNET energy audit procedure. Will you accept that?

Most likely yes, but we have not yet had an opportunity to fully consider this question and whether and how our answer should be qualified. Please stay tuned.