DEPARTMENT OF HEALTH AND HUMAN SERVICES

# Exhibit II.C.1
# Existing Building Assessment Tool

| BUILDING NAME | LOCATION | DATE OF ASSESSMENT |
|---|---|---|
| | | |

| PREPARED BY | SQUARE FOOTAGE (specify gsf or usf): gsf usf |
|---|---|
| | |

MISSION DEPENDENCY

Mission Critical Mission Dependent Not Mission Dependent

COMMISSIONING/RECOMMISSIONING

Completed Date Not completed Not Applicable

ASSESSMENT REPORT ATTACHED?

Yes No *The Assessment Report should include a comprehensive list of the building's strengths, weaknesses and deficiencies; a prioritized list of deficiencies that can be addressed by minor alterations or repairs (considering payback over the life cycle); and a status summary indicating whether a major renovation or replacement of the facility (and estimated time frame) is recommended by the assessment team.*

## A. ENERGY PERFORMANCE

### Energy Efficiency

Establish a whole building performance target that takes into account the intended use, occupancy, operations, and other energy demands. Establish a baseline building performance rating per the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE) and the Illuminating Engineering Society of North America (IESNA) Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings.

Reduce Energy Usage Intensity (EUI) by 20% below 2003 baseline, or receive a score of 75 or higher in Energy Star Portfolio Manager (ESPM).

PROOF

| | |
|---|---|
| **10** Establish an energy usage baseline using historic data (2003 EUI)<br>*OR*<br>Establish an energy usage baseline using ASHRAE/ IESNA 90.1-2007<br>*OR*<br>Evaluate using Energy Star Portfolio Manager | **50** Reduction in EUI of > 10% |
| **20** An Energy Conservation Plan has been developed | **65** Reduction in EUI of > 15%<br>*OR*<br>Achieved a score of 69 or higher in ESPM or equivalent Labs21 Benchmarking Tool score for laboratory buildings. |
| **35** Reduction in EUI of > 5% | **80** Reduction in EUI of > 20%,<br>*OR*<br>Achieved a score of 75 or higher in ESPM or equivalent Labs21 Benchmarking Tool score for laboratory buildings. |

**Score**

### Measurement & Verification

| | |
|---|---|
| **5** Building level metering installed for electricity, and where required by OPDIV energy plan advanced metering | **25** All utility meter performance data collected compiled and used to evaluate Energy Projects performance. |
| **10** Electrical meter performance data collected, compiled and used to evaluate Energy Projects | **30** Data entered in Energy Star Portfolio Manager |
| **15** Building level metering installed for utilities defined in EO 13423, EPAct 2005 and EISA 2007, and where required by OPDIV energy plan advanced metering | **40** Data entered in High Performance Buildings Database |

**Score**

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**Renewable Energy (Bonus)**

| | |
|---|---|
| **0** No renewable energy purchased (consumed) & no on site generation. | **15** 3% or more electricity consumed is from renewable sources and 1.5 % is from new sources (online after Jan 1, 1999) |
| **5** Less than 3% of Renewable Energy (thermal, mechanical or electrical) is purchased for use in the facility. | **25** Implemented cost effective on site renewable energy generation projects. |
| **10** 3% or more of Renewable Energy (thermal, mechanical or electrical) is purchased for use in the facility | **30** 3% or more electricity consumed is from renewable sources and 1.5 % is from new sources (online after Jan 1, 1999) and Implemented cost effective on site renewable energy generation projects. |

**Score**

## B. PROTECT & CONSERVE WATER

**Indoor Water**

Effectiveness of indoor water conservation. The water baseline, for buildings with plumbing fixtures installed in 1994 or later, is 120% of the Uniform Plumbing Codes 2006 or the International Plumbing Codes of 32006 fixture performance requirements. The water baseline for plumbing fixtures older than 1994 is 160% of the Uniform Plumbing Codes of 2006 or the International Plumbing Codes 2006 fixture performance requirements.

| | |
|---|---|
| **5** FY2007 water use intensity (WUI) established along with a water management plan. Procedures in place for following the indoor best management practices as developed by FEMP [1] | **30** Employs strategies that in aggregate use a minimum of 15% less potable water than the indoor water use baseline |
| **10** Building level water meter installed or estimated annual water use baseline developed for the building. | **40** Employs strategies that in aggregate use a minimum of 20% less potable water than the indoor water use *OR* 20% reduction in measured potable water use compared to building use in 2003 or a year thereafter with water quality data. |
| **20** Employs strategies that in aggregate use a minimum of 10% less potable water than the indoor water use baseline | |

**Score**

**Outdoor Water**

Effectiveness of outdoor water conservation

| | |
|---|---|
| **5** FY2007 water use intensity (WUI) established along with a water management plan. Procedures in place for following the outdoor best management practices as developed by FEMP[1] | **30** Uses water efficient landscape and irrigation strategies, including water reuse and recycling, to reduce outdoor potable water consumption by a minimum of 40% over that consumed by conventional means (plant species and plant densities<br>*OR*<br>Reduces outdoor potable water consumption by a minimum of 40% compared to measured water use in 2003 or a year thereafter with quality water data |
| **10** Uses water efficient landscape and irrigation strategies, including water reuse and recycling, to reduce outdoor potable water consumption by a minimum of 20% over that consumed by conventional means (plant species and plant densities)<br>*OR*<br>Reduces outdoor potable water consumption by a minimum of 20% compared to measured water use in 2003 or a year thereafter with quality water data | **40** Uses water efficient landscape and irrigation strategies, including water reuse and recycling, to reduce outdoor potable water consumption by a minimum of 50% over that consumed by conventional means (plant species and plant densities),<br>*OR*<br>Reduces outdoor potable water consumption by a minimum of 50% compared to measured water use in 2003 or a year thereafter with quality water data,<br>*OR*<br>No use of potable irrigation water |
| **20** Uses water efficient landscape and irrigation strategies, including water reuse and recycling, to reduce outdoor potable water consumption by a minimum of 30% over that consumed by conventional means (plant species and plant densities)<br>*OR*<br>Reduces outdoor potable water consumption by a minimum of 30% compared to measured water use in 2003 or a year thereafter with quality water data | |

**Score**

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PROOF

**Process Water**

Effectiveness of Process water conservation, where applicable

| | |
|---|---|
| 20 | Cost effective conservation measures are in place to reuse or reclaim water used in increasing energy efficiency, such as cooling towers, boilers, etc. |

**Score**

**Maintain/restore site hydrology ( Bonus)**

| | |
|---|---|
| 20 | Where redevelopment affects site hydrology, maintain or restore the hydrology of the site with regard to temperature, rate, volume, and duration of flow using site planning, design, construction, and maintenance strategies. (EISA Section 438) |

**Score**

## C. ENHANCE INDOOR ENVIRONMENTAL QUALITY

**Thermal Comfort**

Effectiveness of measures to enhance indoor environmental quality for thermal comfort

| | |
|---|---|
| 0 | Building does not meet current ASHRAE Standard 55-2004 Thermal Environmental Conditions for human Occupancy. Complaints from occupants regarding thermal comfort levels are daily. |
| 5 | Building does not meet current ASHRAE Standard 55-2004 Thermal Environmental Conditions for human Occupancy. Complaints from occupants regarding thermal comfort levels are weekly. |
| 10 | Building does not meet current ASHRAE Standard 55-2004 Thermal Environmental Conditions for human Occupancy. Complaints from occupants regarding thermal comfort levels are monthly. |
| 15 | Building does not meet current ASHRAE Standard 55-2004 Thermal Environmental Conditions for human Occupancy. Complaints from occupants regarding thermal comfort levels are rare. |
| 20 | Occupancy survey performed, or thermal comfort parameters have been measured, and meet current ASHRAE Standard 55-2004 Thermal Environmental Conditions for Human Occupancy. |

**Score**

**Ventilation**

Effectiveness of measures to enhance indoor environmental quality for ventilation

| | |
|---|---|
| 0 | Building does not meet current ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality. Verification of design ventilation rates (testing & balancing) not performed. |
| 5 | Building does not meet current ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality. Verification of design ventilation rates (testing & balancing) not performed. O&M procedures in place for checking air supply and exhaust systems. |
| 10 | Building does not meet current ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality. Verification of design ventilation rates (testing & balancing) not performed. O&M procedures in place for checking air supply and exhaust systems. Occupant complaints are rare. |
| 15 | Building does not meet current ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality. Verification of design ventilation rates (testing & balancing) performed within the last 5 years. O&M procedures in place for checking air supply and exhaust systems. Occupant complaints are rare. |
| 20 | Verification of design ventilation rates performed through recommissioning or retrocommissioning, and meets current ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality established ranges per climate zone. |

**Score**

PROOF

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## Moisture Control

Effectiveness of measures implemented for controlling moisture flows and condensation to prevent building damage and mold contamination

**0** Severe moisture and or condensation damage and evidence of mold in the building. No policy in place for monitoring moisture occurrences. No strategy in place for controlling moisture flows and condensation.

**5** Recurring moisture and or condensation problems in various areas in the building. Some evidence of mold in the building. No policy in place for monitoring moisture occurrences. No strategy in place for controlling moisture flows and condensation.

**10** Recurring moisture and or condensation problems in various areas in the building. No evidence of mold in the building. No policy in place for monitoring moisture occurrences. No strategy in place for controlling moisture flows and condensation.

**15** Minor moisture and or condensation occurrences. No policy in place for monitoring moisture occurrences. No strategy in place for controlling moisture flows and condensation.

**20** Established and implemented moisture control strategy for controlling moisture flows and condensation to prevent building damage and mold contamination. All necessary repairs have been completed to remove prior contamination.

**Score**

## Daylighting or Lighting Controls

Effectiveness of measures implemented to control lighting or daylighting.

**0** No measures have been implemented.

**5** Accessible lighting controls (e.g., accessible manual lighting controls, glare control and automatic dimming controls) are provided for 10% of regularly occupied building space,
*OR*
10% of spaces have a minimum daylight factor of 2%.

**10** Accessible lighting controls (e.g., accessible manual lighting controls, glare control and automatic dimming controls) are provided for 30% of regularly occupied building space,
*OR*
30% of spaces have a minimum daylight factor of 2%.

**15** Accessible lighting controls (e.g., accessible manual lighting controls, glare control and automatic dimming controls) are provided for 40% of regularly occupied building space,
*OR*
40% of spaces have a minimum daylight factor of 2%.

**20** Accessible lighting controls (e.g., accessible manual lighting controls, glare control and automatic dimming controls) are provided for 50% of regularly occupied building space and occupancy sensors and/or light sensors for appropriate spaces such as bathrooms, conference rooms, etc.
*OR*
50% of spaces occupied for critical visual tasks have a minimum daylight factor of 2%.

PROOF

**Score**

## Low Emitting Materials

Effectiveness of measures implemented for the procurement of low emitting materials for maintenance, cleaning and pest management, including adhesives, sealants, paints, carpet systems, furnishings, cleaning products, and pest management products.

**0** No procurement policy in place regarding the use of low emitting materials for maintenance, cleaning or pest management

**5** Procurement policy in place for use of low emitting materials for maintenance, cleaning, or pest management, but not all.

**10** Procurement policy in place regarding use of low emitting materials for maintenance, cleaning, and pest management.

**15** Procurement policy in place and implemented for use of low emitting materials for maintenance, cleaning, or pest management, but not all.

**20** Procurement policy in place and implemented for use of low emitting materials for maintenance, cleaning, and pest management. Prohibit smoking within building and within 25 feet of all building entrances, operable windows and building ventilation intakes.

**Score**

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## D. ENVIRONMENTAL IMPACT OF MATERIALS

### Recycled Content

For EPA-designated materials used in operation and maintenance of the building, and new furnishings, use products that meet or exceed EPA's recycled content recommendations

| | |
|---|---|
| **0** No EPA designated materials used in the building meet recycled content recommendations. | **12** More than half of the EPA designated materials meet or exceed recycled content recommendations. |
| **5** Less than half of the EPA designated materials meet or exceed recycled content recommendations. | **15** All EPA designated materials meet or exceed recycled content recommendations, or no EPA designated materials are used in the building. |
| **8** Half of the EPA designated materials meet or exceed recycled content recommendations. | |

**Score**

For materials used in operation and maintenance of the building and furnishings that are not EPA designated materials, the recycled content is such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials used in the building.

| | |
|---|---|
| **0** No non-designated materials used in the building have recycled content. | **12** Recycled content of non-designated materials used is 5- 10% based on total values of materials used in the building. |
| **5** Recycled content of non-designated materials used is less than 5% based on total values of materials used in the building. | **15** Recycled content of non-designated materials meets or exceeds 10% based on total values of materials used in the building. |
| **8** Recycled content of non-designated materials used is about 5% based on total values of materials used in the building. | |

**Score**

### BioBased Content

For USDA-designated materials used in operation and maintenance of the building and new furnishings, use products meeting or exceeding USDA's biobased content recommendations.

PROOF

| | |
|---|---|
| **0** No USDA-designated materials meet biobased content recommendations. | **8** Designated materials have biobased content greater than 50% of recommended amount. |
| **2** Designated materials have some biobased content but less than 50% of recommended amount. | **10** All USDA-designated materials used in the building meet or exceed biobased content recommendations, or no designated materials will be used in the building |
| **4** Biobased content of designated materials is 50% of recommended amount. | |

**Score**

For other materials used in operation and maintenance of the building and new furnishings, use biobased products made from rapidly renewable resources and certified sustainable wood products.

| | |
|---|---|
| **0** No biobased products made from rapidly renewable resources or certified sustainable wood products are used. | **8** More than 50% of the non-designated biobased products used in the building are made from rapidly renewable resources or certified sustainable wood. |
| **2** Some non-designated biobased products made from rapidly renewable resources or certified sustainable wood products are used but renewable or certified products will be less than 50%. | **10** For non-designated materials used in the building, all biobased products are made from rapidly renewable resources and certified sustainable wood products, or no materials used in the building can be made from biobased products. |
| **4** About 50% of the non-designated biobased products used are made from rapidly renewable resources or certified sustainable wood. | |

**Score**

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### Construction Waste

Identify local recycling and salvage operations that process construction waste from building operation and maintenance, minor repairs and renovations and discarded furnishings. Recycle or salvage at least 50 percent of construction, demolition and land clearing waste, excluding soil, from building operation and maintenance; minor repairs and renovations; and discarded furnishings where markets or on-site recycling opportunities exist.

**0** No attempt to identify local recycling and salvage operations that process building related waste have been identified, or building records contain no documentation of attempts to identify such operations or demonstration of non-availability. Opportunities exist yet no wastes are recycled or salvaged.

**5** Local recycling and salvage operations have been identified that can process some of the building related waste but less than 50% of the total amount.Less than 25 % of the wastes for which markets or on-site recycling opportunities exist are recycled or salvaged.

**15** Local recycling and salvage operations have been identified that can process 50% of the total amount of the building related waste. 25 % of the wastes for which markets or on-site recycling opportunities exist are recycled or salvaged.

**20** Local recycling and salvage operations have been identified that can process more than 50% of the total amount of the building related waste. 26-49 % of the wastes for which markets or on-site recycling opportunities exist are recycled or salvaged.

**30** Local recycling and salvage operations have been identified that can process building related wastes. At least 50 % of the wastes for which markets or on-site recycling opportunities exist are recycled or salvaged.

**Score**

### Ozone Depleting Compounds

Eliminate the use of ozone depleting compounds in the building where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title VI of the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.

**0** No ozone depleting compounds (ODC) used in the building have been eliminated or replaced with alternatives, where alternative environmentally preferable products are available for these compounds. There is no inventory of ODC containing equipment in building.

**5** Less than 50% of the ozone depleting compounds used in the building have been eliminated or replaced with alternatives where environmentally preferable products are available for these compounds. An inventory of ODC containing equipment has not been completed.

**15** About 50% of the ozone depleting compounds used in the building have been eliminated or replaced with alternatives where environmentally preferable products are available for these compounds. An inventory of ODC containing equipment has not been completed.

**20** More than 50% of the ozone depleting compounds used in the building have been eliminated or replaced with alternatives where environmentally preferable products are available for these compounds. An inventory of ODC containing equipment has been completed.

**30** All use of ozone depleting compounds in the building have been eliminated or replaced with alternatives where alternative environmentally preferable products are available.

**Score**

## E. ECONOMICS

### Cost

Current and avoidable potential costs associated with ownership and use of buildings

**5** Cost to incorporate the Guiding Principles is greater than 11% of Present Replacement Value (PRV)

**10** Cost to incorporate the Guiding Principles is 7% to 11% of PRV

**20** Cost to incorporate the Guiding Principles is 3% to 7% of PRV

**30** Cost to incorporate the Guiding Principles is 1% to 3% of PRV

**40** Cost to incorporate the Guiding Principles is 0.5% to 1% of PRV

**50** Cost to incorporate the Guiding Principles is less than 0.5% of PRV

**Score**

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PROOF

**Payback**

Potential payback for improvements over the remaining life cycle or lease

| | | | |
|---|---|---|---|
| **5** | Payback period is greater than the remaining useful life of the building, or 10 years based on Life Cycle Cost (LCC) of the improvements | **30** | Payback period is 3 to 5 yrs based on LCC of the improvements |
| **10** | Payback period is 7 to 10 yrs based on LCC of the improvements | **40** | Payback period is 1 to 3 yrs based on LCC of the improvements |
| **20** | Payback period is 5 to 7 yrs based on LCC of the improvements | **50** | Payback period is less than 1 yr based on LCC of the improvements |

**Score**

## F. CONFORMANCE WITH LOCAL ENVIRONMENTAL REQUIREMENTS

**Environmental Regulations**

Facility/Building is in compliance with all applicable federal, state and local environmental regulations (e.g., compliance with fuel storage tanks system, air emissions such as boilers and emergency generators, illicit discharges to storm and/or sanitary sewer, NPDES and Sanitary Discharge permits)

| | | | |
|---|---|---|---|
| **0** | Facility/building management has NOT established procedures for an environmental compliance program through the facility/organization's EMS as required by Executive Order 13423 | **30** | Facility/building management met criteria in Column B AND has conducted evaluations of compliance with applicable legal and other requirements. The facility/organization has not completed the evaluations for all of the facility/organization, or has not initiated corrective actions. |
| **10** | Facility/building management has established an environmental compliance program through the facility/organization's EMS that includes<br>(a) procedures to identify and account for applicable legal and other requirements,<br>(b) protocols to periodically evaluate compliance with those applicable legal, and<br>(c) a system for implementing corrective action | **40** | Facility/building management criteria in Column B and C AND has completed evaluations of compliance with applicable legal and other requirements for the entire facility/building, Corrective actions have been initiated or have been scheduled (as appropriate considering technical and budgetary constraints). |
| | | **50** | Facility/Building is in full compliance with all applicable federal, state and local environmental regulations |

**Score**

**Environmental Management System (EMS)**

Executive Order (EO) 13148 required all Federal Agencies to determine 'appropriate' facilities for implementing EMS.

EO 13423 requires that EMSs serve as the primary mechanism for achieving compliance with all aspects of the order.

| | | | |
|---|---|---|---|
| **0** | Facility/building management has not established requirements/procedures to address applicable sustainable practices as required by Executive Order 13423 through the facility/organization's EMS. | **30** | Facility/building management has met all the criteria in Column B, AND<br>has incorporated at least one of the applicable sustainable practices through the EMS, AND<br>the facility/organization has established an implementation schedule to complete incorporation of the remainder of the applicable sustainable practices through the EMS. |
| **15** | Facility/building management has established requirements/procedures to address applicable sustainable practices as required by Executive Order 13423 through the facility/organization's EMS, including procedures for setting objectives and target as appropriate, monitoring, training, and management review, but has not implemented the requirements/procedures | **50** | Facility/building management has met all the criteria in Column B and C AND<br>Facility/organization has verified conformance and performance through monitoring and management review *OR*<br>Facility/Building in not included in the HHS 'appropriate' facility list and is not required to have an EMS |

**Score**

[1] www1.eere.energy.gov/femp/water_fedrequire.html

[2] 1992 Energy Policy Act fixture performance requirements: showerheads: 2.5 gallons per minute at 80 psi; urinals: 1 gallon per flush; faucets: 2.2 gallons per minute at 60 psi; toilets: 1.6 gallons per flush

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## G. SCORES

### GUIDING PRINCIPLES

| Building Attribute | Building Condition Scoring Criteria | |
|---|---|---|
| | Achieved Score | Maximum Score |
| A. Energy Performance | | |
| Energy Efficiency | | 80 |
| Measurement & Verification | | 40 |
| B. Protect & Conserve Water | | |
| Indoor Water | | 40 |
| Outdoor Water | | 40 |
| Process Water | | 20 |
| C. Enhance Indoor Environmental Quality | | |
| Thermal Comfort | | 20 |
| Ventilation | | 20 |
| Moisture Control | | 20 |
| Daylighting or Lighting Controls | | 20 |
| Low Emitting Materials | | 20 |
| D. Environmental Impact of Materials | | |
| Recycled Content | | 30 |
| BioBased Content | | 20 |
| Construction Waste | | 20 |
| Ozone Depleting Compounds | | 30 |
| **GUIDING PRINCIPLES SCORE** | | **420** |

### NON-GUDING PRINCIPLES

| Building Attribute | Building Condition Scoring Criteria | |
|---|---|---|
| | Achieved Score | Maximum Score |
| Economics | | |
| Cost | | 50 |
| Payback | | 50 |
| Conformance with local Environmental Requirements | | |
| Environmental Regulations | | 50 |
| Environmental Management Systems (EMS) | | 50 |
| **Bonus Categories** | | |
| Renewable Energy | | 30 |
| Maintain/Restore Hydrology | | 20 |
| **TOTAL NON-GUIDING PRINCIPLES AND BONUS SCORE** | | **250** |
| **TOTAL SCORE** | | **670** |

PROOF