|  |  |
| --- | --- |
| **COMMERCIAL BUILDINGS ENERGY ASSESSMENT**  **MIDWEST INDUSTRIAL ASSESSMENT CENTER** | |
|  | Image result for doe eere logo |
| **Dr. Sanjeev Khanna**  Director, Midwest Industrial Assessment Center  Professor, Mechanical & Aerospace Engineering, E3412 Lafferre Hall  University of Missouri  Columbia MO 65211, USA.  Ph: **(573) 884-9109**; email: [Khannas@missouri.edu](mailto:Khannas@missouri.edu) | |
| **Please submit this form as per the options below:**   1. Print and return this completed form by postal mail to:   Dr. Sanjeev Khanna  Department of Mechanical & Aerospace Engineering  E3412 Thomas and Nell Lafferre Hall,  University of Missouri  Columbia, MO 65211  Or,   1. Return via email to address below:   [khannas@missouri.edu](mailto:khannas@missouri.edu) | |

**Contact Information**

|  |  |
| --- | --- |
| Company/Building Name: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Mailing Address: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Street Address: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Contact Person: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Title/Position: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Phone: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Email: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Building Information**

|  |  |
| --- | --- |
| Building Name: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Age of Building (years) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Major Renovations (Date and Year) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Purpose of Building (Office, Warehouse etc.) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Number of Floors | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Operating Hours (*e.g., M-F 8-6, Sa 10-4*) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Total Occupants | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Building Automation  (HVAC controls, Light Controls etc.)  Any other information: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Please check off the information that is being provided to IAC:

* Copy of 12 consecutive months of utility bills (electric, gas, water) **Required**
* Screen shot of EMCS or DDC control system Copies of previous energy audit reports.
* Copies of action plans or capital improvement plans Copies of any M&V plans.
* Copies of nameplates from HVAC and chiller equipment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Floor Name or Room Number** | **Activity Type *(e.g., laboratory, executive offices, reception, etc.)*** | **Floor Square Footage or % of Building Area (ft2 or %)** | **Total Occupants** | **Daily Operational Hours or Percentage** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Utility Information

|  |  |
| --- | --- |
| ***Electricity*** | Utility Provider:  Annual Electric Consumption (kWh):  Annual Electric Cost ($): |
| ***Natural Gas*** | Utility Provider: Annual Gas Consumption (MMBtu/CCF):  Annual Gas Cost ($): |
| ***Water*** | Utility Provider: Annual Water Consumption (Gallons/CCF):  Annual Water Cost ($): |
| ***Sewer***  (Is Sewer metered? Y/N) | Annual Sewer (Gallons/CCF):  Annual Sewer Cost ($): |
| (Please list any other fuels or specialty gases; e.g. coal, propane, CO2, Nitrogen, etc.) | |
| If using any other fuels/gases | Size of Tank:  Delivery Schedule  Total Cost |

**ADDITIONAL INFORMATION (provide to the best you can)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lighting** | | | | | | | | |
| Floor Name or Number | Location Description  (Near window, internal office, hallway, etc.) | Lamp Type | Ballast Type | Wattage | Total Number of Lamps | Number of hours lights are left on each day | Total kWh per Day | How are lights controlled? |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Heating, Ventilation, and Air Conditioning Systems** | | | | | | | | |
| What type of HVAC | What fuel type does this system use? | How is the |  | What type of chilled water system does the building have, where relevant (e.g., rotary screw chillers with cooling towers, etc.)? | How old |  |  | Do any of these systems have weather optimization sensors? If so, which systems and what brand of sensor? |
| system does the building | HVAC system | What are the | is the | What is the | What are the |
| have (e.g., constant | controlled (e.g., | operational | chilled | capacity of | operational |
| volume, multi-zone, VAV, | manually, DDC | setpoints? | water | the system? | setpoints? |
| etc.)? | system, etc.)? |  | system? |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

Who is responsible for managing and trouble-shooting the control system?

Are there any recurring or major occupant complaints about being too hot, too cold, etc.?

What energy efficiency efforts have been completed, started, or planned?

Are any capital improvement projects planned? If so, what are they and how will they affect the energy use of the building?

A screenshot of a computer

Description automatically generated

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PLUG LOADS** | | | | | | | | | |
| **Equipment Type** | **Manufacturer** | **Model or Size** | **Total Number** | **Wattage** | **Hours of Use per Day** | **Days of Use per Year** | **Total kWh** | **How is Equipment Controlled?** | **Description, Observations, or Notes** |
| *Vending machine* |  |  |  |  |  |  |  |  |  |
| *Computer* |  |  |  |  |  |  |  |  |  |
| *Printer* |  |  |  |  |  |  |  |  |  |
| *Computer Screen* |  |  |  |  |  |  |  |  |  |
| *Refrigerator* |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

Please specify where you feel there is room for improvement either in efficiency measures or renewable energy technologies:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Building Envelope** | | | | |
| Building Element | Condition  (Excellent, Good, Poor) | Type | Observations | Possible Energy Saving Opportunities |
| *Windows* |  |  |  |  |
| *Doors* |  |  |  |  |
| *Roof* |  |  |  |  |
| *Walls* |  |  |  |  |
| *Floors* |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Operations and Management

Does the organization have an environmental policy?

Does the organization have an energy policy?

Does the organization have an environmental or energy manager?

Does the organization review these policies on an annual basis and establish reduction targets?

Do organizational stakeholders or shareholders value environmental and social responsibility?

BLANK PAGE FOR ANY OTHER RELEVANT INFORMTION.