### **GENERAL INSTRUCTIONS**

### FOR THE PREPARATION OF SEMI-ANNUAL ENERGY CONSUMPTION REPORT (SAECR) AND ANNUAL ENERGY CONSERVATION REPORT (AECR) FOR COMMERCIAL SECTOR

\_\_\_\_\_\_

Section 2 of the Republic Act No. 7638, otherwise known as, "Department of Energy Act of 1992" declares as policy of the State, among others, to ensure a continuous, adequate, and economic supply of energy through the judicious conservation, renewal and efficient utilization of Energy.

Adhering to the foregoing mandate, the Department of Energy through the Energy Efficiency and Conservation Division of the Energy Utilization Management Bureau collects data needed for benchmarking as a basis from which to estimate improvement potentials. provide valuable to information on sectoral energy use, to determine Specific Energy Consumption (SEC) and to establish Minimum Energy Performance (MEP) regulations.

# Administration of the Energy Consumption Report

Technology Promotion and Assessment Section (TPAS) collects data through online reporting, operates and maintains a computerized database system to facilitate retrieval and analysis of the energy consumption data. Energy evaluation and analysis are conducted for the establishment of a national energy utilization regulations for commercial sector; for the monitoring of the energy utilization performance; source of recipients for the "Don Emilio Abello Energy Efficiency Awards"; and for other monitoring activities such as total commercial sector's energy consumption profile, potential energy savings, energy conservation projects etc.

# 1. *Mandatory Submission of SAECR and/or AECR*

Commercial establishments with annual energy consumption of **500,000 kWh of electricity or 130,500 liters oil equivalent (LOE) or more** are required to submit Semi-annual energy consumption Report (SAECR). Those with an annual energy consumption **1,000,000 LOE or more** shall, in addition to SAECR, submit Annual Energy Conservation Report (AECR).

# 2. Schedule of Submission

The following are the schedules of submission:

# SAECR

First Semester Second Semester	July 31 January 31 of the following year
AECR	January 31 of the following year

All reports shall be sent online to:

# 3. Confidentiality of Report

All reports shall be treated with strictest confidentiality. Specific reports of each company shall not be divulged without the consent of the involved establishment subject to the exception provided by law.

#### 4. Definition of terms COMMERCIAL ESTABLISHMENT ACTIVITIES

This refers to activities involving office, hospital, hotel, mall, resort, golf course, and the like.

### SEMI-ANNUAL ENERGY CONSUMPTION REPORT (SAECR)

# Part A. TOTAL ENERGY CONSUMPTION

This part gives an overview of the energy consumption of the whole facility. The quantities reported in this section should be the total energy consumption for all activities and services in the commercial sector including generation of electricity and others.

# **ENERGY SOURCE -**

Items listed under this column are electricity, steam and other energy sources consumed as fuel.

# UNIT -

The column specifies the units of measurement which should be used when reporting the consumption of the various energy sources.

# QUANTITY -

This is the company's overall consumption of a particular energy

source.

### **CONVERSION FACTOR -**

This refer to column 4 of Part A for the conversion factor to Liters of Oil Equivalent (LOE). Values under this column are specified by DOE - Energy Efficiency and Conservation Division.

# LITERS OIL EQUIVALENT (LOE) -

The number of LOE (standard gross heating value: 41,800 KJ/l) that will liberate an amount of heat equal to the amount generated from the actual energy source used. The source may be liquid, solid or gaseous fuels and/or electricity.

# PURCHASED ELECTRICITY -

The total quantity of electricity purchased by the establishment from the distribution utility.

# Part B. ELECTRICITY GENERATION

This part consists of generating units, their capacity and fuel type, as well as the consumption, and hours of operation and maintenance runs of generators.

# **GENERATING UNITS -**

This column identifies the electricity generators in the facility. The brand of the generator may be specified.

# CAPACITY -

This is the capacity of a generating unit in Kw.

# FUEL TYPE -

This pertains to the classification of fuel used by different generating units.

# **CONSUMPTION QUANTITY -**

This is the amount of fuel used by different generating units.

#### HOURS OF OPERATION -

These are the numbers of hours in which the generators were operated.

This should include the time spent in operating the unit even for maintenance/test run purposes only.

#### **ELECTRICITY GENERATED -**

The amount of electricity kWh produced by each generating unit during operation and maintenance/test run checks.

# Part C. STEAM GENERATION

The information in this portion is the facility's total production of steam, whether for commercial operation or any other purpose.

#### **BOILER UNITS -**

This column identifies the different boilers in the facility. Brand and model name may be given.

# CAPACITY -

This is the capacity rating of the different boiler units, in kg/hr.

#### FUEL TYPE -

This pertains to the classification of fuel used by each boiler unit of the facility.

#### **CONSUMPTION QUANTITY -**

This is the amount of fuel used by different boiler units. Any convenient unit of measurement may be used provided the said unit is specified.

#### HOURS OF OPERATION -

The number of hours in which the boilers are operated.

#### STEAM GENERATED -

This is the generated steam in metric tons corresponding to the reported

energy consumption. This should be expressed in terms of equivalent evaporation from and to 100°C @ 1 atm.

#### Part D. ENERGY CONSUMPTION, ELECTRICITY AND STEAM UTILIZATION

#### **OPERATION**

This refers to the amount of electricity or steam directly used for the establishment's operation.

#### AUXILIARY SERVICES -

The portion of the electricity and steam consumption that went into offsite services such as maintenance shops, laboratories, perimeter lighting, administrative offices, canteens and staff houses. The consumption for operation should not be included.

#### LOSSES -

This is the amount of energy source losses in the Energy Consumption

# Part E. ENERGY CONSUMPTION PER ACTIVITY

This part indicates the amount of energy consumption for every activity of an establishment.

# E.1.0 ENERGY CONSUMPTION PER ACTIVITY

The quantities entered under these columns cover the consumption for every activity of an establishment, which do not include fuel consumption for steam and electricity generation.

#### STEAM -

This is the total amount of steam, whether generated or purchased, which

was consumed during operation. This should be expressed in terms of equivalent evaporation from and to 100°C @ 1 atm.

#### PURCHASED ELECTRICITY -

This is the total amount of purchased electricity which was consumed during operation.

#### GENERATED ELECTRICITY

This is the total amount of electricity generated consumed in the operation.

#### E.2.0 FLOOR AREA/PER ACTIVITY

#### UNIT –

This refers to the indicative unit of measure used in the operation, e.g. sq.m., cover, room night, etc.

#### QUANTITY -

This is the actual quantity of the indicative unit for every activity of an establishment during the reporting period.

#### HOURS OF OPERATION -

These are the number of hours of operation of the establishment during the reporting period.

#### HOURS SHUTDOWN -

These are the number of hours during the reporting period in which the facility stopped its operations for maintenance and other purposes.

# ANNUAL ENERGY CONSERVATION REPORT (AECR)

# Part I. A. ENERGY EFFICIENCY PROJECTS

1.0 This part requires the specification of projects that commenced during the reported year but which have not yet been completed as of year-end.

# DATE STARTED -

This refers to the first day of implementation of the project.

#### ESTIMATED COMPLETION DATE -

This refers to the estimated end of project life.

#### ENERGY SAVINGS THIS YEAR -

These are the savings realized from the project as of the end of the reported year, specifying the unit of measurement being used.

# TOTAL INVESTMENT AS OF YEAR END-

The total Investment that has been placed in the project as of the end of the reported year.

2.0 This refers to projects that have reached the end of their project life.

3.0 This refers to projects that are ongoing of the reported year. Same as in 1.0.

#### Part I. B.

This section requires to specify energy conservation measures that may be carried out in the establishment but which have not been implemented nor are lined up for implementation, and also to indicate possible difficulties and constrains that may hinder the said implementation.

# PART II. A.

These columns under "Reported Year" cover the <u>targeted</u> energy consumption as well as the <u>actual</u> energy consumption which is set at the start of the reported year.

The consumption values should be given under the column "QTY" using the standard of measurement specified in the column "Unit".

The "QTY" values should be converted to LOE values and entered in the LOE column. The appropriate conversion factors is found at Part A of SAECR Form.

Target consumption for the current year are entered in the columns under "Current Year Target"

# Part II. B.

Items in this section are similarly defined as those in Part E of SAECR Form, but instead of actual consumption, Consumption Targets are given. These are the targets set by the establishment for the current year.

#### SPECIFIC ENERGY CONSUMPTION

**(SEC)** –This is the specific energy consumption which to be filled out by DOE.

\* \* \* \* \*

The report should be prepared by competent and duly authorized personnel preferably the establishment's designated energy

# manager, or energy conservation officer.

For more information please call:

Technology Promotion and Assessment Section Energy Efficiency & Conservation Division Energy Utilization Management Bureau DEPARTMENT OF ENERGY Energy Center, Bonifacio Global City, Taguig City Tel. Nos.: (632)840-2243, (632)479-2900 local nos. 214, 201