Description描述:

PURPOSE:
目的

To provide a means of monitoring each property's utility consumption and verifying the accuracy of the utility bills.
提供能源监控的方法并核实能源耗用账单的准确性

POLICY:
政策

The Chief Engineer will ensure that the utility consumption is monitored and controlled at all times.
总工程师确保始终有效的监管及控制能源耗用

STANDARDS:
reviewed标准

1. All utility meter readings will be recorded in a permanent log and by the Chief Engineer.
   所有能源表数应该记录在永久保存的日中，并由总工程师审核
2. The accuracy of utility bills will be verified based on meter reading tabulations and the Utility Rate Schedules.
   能源耗用账单的准确性建立在表数记录表及能源收费标准的基础上

PROCEDURE:
by程序

1. All the utility meter readings are to be recorded daily and reviewed the Chief Engineer to ensure accuracy and to identify abnormalities that may require immediate corrective action.
   每日记录能源表数并由总工程师审核，以确保准确性以及发现需要可整改的异常情况
2. The utility meter readings are to be recorded at approximately the same time each day.
   应尽可能在每一天的同一时间记录能源表数
3. A Daily Utility Log is to be set up.
   设立日能源记录日志
   The following information is to be recorded in the Daily Utility Log:
   每日应在能源记录日志中记录以下内容
   a. The Date - month, day and year
      日期 – 月份，日及年
   b. HDD/CDD Heating or Cooling Degree daily
      采暖度日数及制冷度日数

NOTE: To determine the HDD or CDD on any given day, add the day's high and low temperatures. Divide this by two (2) in order to obtain the average temperature. IF the average temperature is less than 18.3°c the number is expressed as heating degree days (HDD). If the average temperature is more than 18.3°c the number is expressed as cooling degree days (CDD).
注意：在某一天确定采暖度日数或制冷度日数，应将这一天的最高温度及最低温度相加除以2，得出这一天的平均温度。如果平均温度低于18.3°c，此数字被表示为采暖度日数。如果平均温度高于18.3°c，此数字被表示为制冷度日数

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EXAMPLE: High temperature for the day is29°c low temperature for the day is 16°c. 29 (high) + 16 (low) = 45 (total)/2 = 22.5 (average) 22.5 – 18.3 = 4.2
示例：这一天的高温为29°c，低温为16°c，29+16=45/2=22.5（平均温度）
22.5-18.3=4.2
Therefore, there are **4.2 CDD's** for the day.
所以，制冷度日数为4.2
NOTE: To determine the high & low temperature, use the local newspaper for the official temperatures, contact the local weather bureau or install an accurate high/low monitoring thermometer. The same daily source is to be used.
注意：使用当地报纸中的官方温度确定最高及最低温度，或者联系当地气象局或者安装精确地高温/低温检测器。使用相同的日常信息来源

c. Electric Meter Reading - KWH - To determine the electric KWH, record the reading on the kilowatt hour meter. Subtract the previous day's meter reading from the current reading in order to obtain the difference. Multiply difference by the meter constant to obtain the KWH consumed.
电表读数-千瓦小时-
记录电表度数以确定千瓦小时数。从现有电表度数减去前一天的电表读数以获得差额。用电表常数乘以差额获得千瓦小时消耗量

EXAMPLE: 6399 (today) - 6385 (yesterday) =
14 (difference)…14 x 2000 (meter constant) = 28,000
示例：6399（今天）-6385（昨天）=14（差额）
14X2000（电表常数）=28,000
Therefore, 28000 KWH were consumed.
由此得出，消耗28000千瓦时

NOTE: The meter constant should be identified on the KWH meter. If it is not, contact the Electric Utility Company's Service Representative.
注意：电表常数应该在电表上有标明。如果没有，联系电气公司服务代表

d. Gas Meter Reading – CU. meters – To determine the gas CU.Mts., record the reading on the gas meter. Subtract the previous day's meter reading from the current reading to obtain the difference. Multiply the difference by the meter constant to obtain the gas consumed.
煤气表读数-立方米-
记录煤气表数以确认煤气立方米消耗量。用当天的煤气表数减去前一天的煤气表数得出差额，用仪表常数乘以差额得出煤气消耗量

EXAMPLE: 14758 (today) – 14721 (yesterday) =
37 (difference)…37 x 100 (meter constant) = 3,700
示例：14758（今天）-14721（昨天）=37（差额）

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37X100（仪表常数）=3,700
Therefore, 3,700 CU.Mts. were consumed.
由此得出，消耗3,700立方米

NOTE: The meter constant should be identified on the gas meter. In many cases, permanent zeros appear on the meter. If there is no meter constant identified, contact the Gas Utility Company Service Representative.
注意：仪表常数用该在燃气表上有标明。多数情况下，仪表中显示永久的零。如果燃气表中没有标明仪表常数，联系燃气公司服务代表

e. Water Reading - Cubic Meters - To determine the water gallons, record the reading on the water meter. Subtract the previous day's meter reading from the current reading to obtain the difference. Multiply the difference by the meter content to obtain the water consumed.
水表读数-立方米-
记录水表读数，确认水的消耗量。用当天的水表读数减去其一天的水表读数得到差额。用差额乘以仪表常数得出水的消耗量

Most water meters record in Kilolitres, no conversion is necessary.
大多数水表记录以公升为单位，无需转换
EXAMPLE: 6599.8 (today) – 6596.9 (yesterday) = 2.9 (difference)…2.9 x 100 (meter constant) = 290
示例：6599.8（今天）-6596.9（昨天）=2.9（差额）
2.9X100（仪表常数）=290
Therefore, 290 cubic meters or KL were consumed.
由此得出，消耗290立方米或公升

NOTE: The meter constant should be identified on the water meter. In many cases, permanent zeroes appear on the meter. If there is no meter constant identified, contact the Water Utility Company Service Representative.
注意：仪表常数应在水表中有标明。多数情况下，仪表中显示永久的零。如果水表中没有标明仪表常数，联系水利公司服务代表

f. Other Meter Readings - Properties that use propane, fuel oil, purchase steam, or chilled water, are to use the format above.
其它仪表读数店使用丙烷、燃料油、采购蒸汽或冷却水，使用以上格式记录计算

Steam is metered in BTU and must be converted to CU.FT. Divide the recorded BTU by 1000 to convert to CU.FT.
蒸汽的记录以BTU为单位，而且必须转换成CU.FT（立方英尺）。用以BTU为单位的记录数除以1000，得到以立方英尺为单位的数值

Chilled water is metered in BTU and must be converted to Ton. Divide the recorded BTU by 12,000 to convert to Ton.

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冷却水的记录以BTU为单位，必须转换成吨。用以BTU为单位的记录数除以12,000，得到以吨为单位的数值

g. Multiple Meters - In case multiple electric, gas, or water meters, record each meter and compute the total of each meter group using the format above.
多个仪表果有多个电表、燃气表、水表，分别记录每个仪表读数，并根据上述方法计算每个仪表组的消耗量

4. Accuracy of the monthly utility bills is to be verified by the Chief Engineer in the following manner:
总工程师依照以下方法合适月能源消耗账单的准确性：

   a. Upon receipt of the utility bills, the Controllers Department is to forward copies to the Chief Engineer.
   在收到能源耗用账单后，财务部将账单复印件转发给总工程师
   b. The Chief Engineer will compare the billing consumption of each period against the total that has been recorded in the Daily Utility Log during the same period.
   总工程师将账单期间的能源耗量与相同期间的日能源记录日志中的数据相对比
   c. The billing cost should be compared by Computing the XXX based on the respective Utility Rate Schedule.
   根据各自的能源收费标准计算数值，并将账单费用与计算所得数值相对比

   d. If the bill is correct, initial it and send it to the Account Department for payment. If an error is discovered, advise the Controllers office, so that payment is not made until the problem is corrected by the utility company.
   如果账单无误，签名并发给财务部付款。如果发现错误，告知财务部，在能源公司将错误更正前不要付款

NOTE: Meter consumption from the Daily Utility log will not tabulate to the exact billing consumption, but will be very close. This is due to the difference in time-of-day the meters were recorded by the Utility Company, and those recorded by the Department. Utility Rate Schedules can be obtained from each utility company through their Service Representatives.
注意：根据日能源记录日志中的记录得出的能源耗量与账单中的能源耗量不会完全相同，但会非常接近。这是由能源公司及酒店部门记录时间的差异性产生的，能源收费标准可以从能源公司服务代表处获得

5. Total utility consumption and the average rates, are to be submitted to the Controllers office at the close of each month to ensure correct utility accruals.

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应该在每月底将能源耗量及平均价格提交财务部办公室以确保正确的能源应计项目

6. The utility meter readings are to be maintained in the Department files.
能源读数记录应该在部门文件中加以存档及维护

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FIGURE 1. - DAILY UTILITY LOG EXAMPLE
表1 – 日能源记录日志样板

DAILY UTILITY LOG
日能源记录日志

April 6 Tuesday…….1999
4月6日星期二…… 1999

High Temp高温: 29°c Low Temp低温: 16°c
29 + 16 = 45/2 22.5
22.5 - 16 = 4.5

_____ HDD采暖度日数
____4.5_____ CDD制冷度日数

ELECTRIC METER 电表

Today今天	6399
Yesterday昨天	- 6385
Difference差额	14
Multiplier乘以	x 2000
TOTAL KWH总千瓦时	28000

GAS METER燃气表

Today今天	14758
Yesterday昨天	- 14721
Difference差额	37
Multiplier乘以	x 100
TOTAL CU.Mtr.总立方米	3,700

WATER METER水表

Today今天	6599.8
Yesterday昨天	- 6596.9
Difference差额	2.9
Multiplier乘以	x 100
TOTAL CU.Mtr.总立方米	290

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