ET 332b Energy and Demand Measurement Homework

The following meter reading was seen on October 1, 1997 on a customers meter.



On October 30, 1997 the meter was read again and the dials on the meter were as shown below.



10-30-97 Meter Reading

Find the following:

The meter reading on 10-1-97

The meter reading on 10-30-97

The total energy usage for the period from 10-1 to 10-30 ______ (Assume that the meter is scaled like the class example)

If the above meter is coupled to the load through instrument transformers with the following ratings:

potential circuit: 13.8 kV / 115 Vac current circuit: 1200/5 A connected on the 800/5 tap

Find the following: PTR= _____ CTR = _____

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Power Ratio

The total energy consumed with the meter readings from 10-1 and 10-30.

The an estimate of the instantaneous demand is made with the above meter. The meter has a k_h of 7.2 Wh/rev. The meter disk makes 20 revolutions in 12.5 seconds. What is the value of D_i for this case? (Show work for credit.)

What is the demand if the meter is connected to the load through the instrument transformers above? (Show work for credit.)

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10-1-97 Meter Reading

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10-30-97 Meter Reading

Find the following:

The meter reading on 10-1-97

The meter reading on 10-30-97

The total energy usage for the period from 10-1 to 10-30 ______ (Assume that the meter is scaled like the class example)

PTR=

If the above meter is coupled to the load through instrument transformers with the following ratings:

potential circuit: 13.8 kV / 115 Vac current circuit: 1200/5 A connected on the 800/5 tap

Find the following:

CTR = _____

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Power Ratio _____

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