MISC-18-05, answer to question 1-c. of TN226165

Additional submitted attachment is included below.

MISC-18-05, answer to question 1-c. of TN226165,

"What is the most efficient and effective way for the Energy Commission to combine POUs' EE data with IOUs' EE data?"

Because the number for records obtained from the meters will be large, record size should be as small as possible. From the so-called "Non-interval" meters to "Interval" meters, all meters have a read interval. All one needs to analyze usage is a meter identifier, time of read, value and unit of measure (UOM).

A record may contain one read, UOM and timestamp or all reads at fixed UOM and intervals per day. By combining different utilities' meter data by table structure for initial processing, efficient and effective processing is achieved. This allows rapid query development and processing used to find events of interest.

To ensure data confidentiality, the meter identifier can be foreign key linked to supporting data such as account, location and efficiency program under study. Foreign key linking also allows for flexible supporting data sets. No need to define all supporting data, because you can add as needed. By using a foreign key as a meter identifier and combining different utilities' data, data can be shared will little worry that someone can identify the user of the meter without having access to the meter and account. Supporting data such as account, location and efficiency program under study can remain as arcane knowledge on a need to know basis.

Much can be learned from meter usage data without any knowledge of the supporting data. Patterns of usage both good and bad can be found. Efficiency trends can be identified and reported. Reports can contain the foreign keys identifying the meters of interest. Those with access to the supporting data can identify if a efficiency program was related to the period of study for the meters. Grouping can be made by ZIP code, county or region.

This type reporting system can make use of the idle computer time that exists in most offices (mostly at night) by dividing the work and parallel processing. Billions of records can be processed in little time, leaving no stone unturned.

This approach can lead to earlier detection of unintended consequences or biases.

ever onward,

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