

Barriers for Energy Efficiency

Title:

Lack of analytical / simulation or software tools for the analysis

Category:

Analysis and report preparation

Summary:

During the energy audit, detailed analysis is required to evaluate the energy loss components, performance evaluation, and arriving at various energy conservation measures. At present in India not many properly applicable analytical / simulation tools are available to get quick and detailed analysis and simulation aspects.

Back ground:

The analysis and report preparation part is very crucial part of the energy audit services and consumes significant amount of time and resources. This aspect invariably increases the duration of the energy audit.

More over in India, there are not many appropriate analytical tools available to the energy audit consultants which are user friendly to use for the detailed analysis. The analytical tools or software tools where the application of these is more effective are:

- Boiler efficiency evaluation under standard test codes (BIS / PTC). Simulation of efficiency Vs fuel consumption to analyze impact of change in each individual parameter on the efficiency and fuel consumption
- Power factor management
- Estimation of distribution losses in electrical network
- Efficiency evaluation of the fans, blower, compressors, pumps, furnaces, dryers, ovens, waste heat recovery etc,
- Templates of the report on each equipment / section wise
- Check list on each category of report preparation so that no conservation measure will be missed

All these above reduce the time significantly (about 40-60% of the report preparation time) at the same time it provides in depth analysis. In addition to these, these will help in convincing the plant personnel very easily. In case of simulation, it helps the operator to operate equipment at best possible point.

Message learnt:

User friendly analytical tools will reduce the time required for the analysis and at the same time gives better output. Even pre-configured work sheets will help in the evaluations, etc. and finally result in reduction of cost of energy audit services. This will result in easier market penetration of such services.