

# Building Codes Basics - Green Excerpt

## ENERGY METERING AND MONITORING

The IgCC requires all buildings that consume energy, regardless of compliance path, to have capabilities for energy measuring, monitoring, and reporting, or to incorporate features that readily facilitate those capabilities in the future.

This energy metering and monitoring addresses all forms of energy delivered to the building or building site, including, but not limited to, energy distribution design and load-type isolation; HVAC system total energy use; lighting system total energy use; building operations such as elevators, escalators, automatic doors, motorized shading systems, fountains, fireplaces, swimming pools, and snow-melt systems; and plug loads and process loads. This metering and monitoring is key in making determinations for how systems are working and any necessary future modifications that may be needed to reduce energy consumption and to increase efficiency. In addition to energy that comes from an electrical utility, the metering and monitoring provisions also apply to any energy that is produced on site from renewable energy sources such as solar, wind, or geothermal, to name a few (Figure 9-3). [\[Ref. 603\]](#)

### You Should Know

Energy metering and monitoring takes place continuously while the building is in use, and this is particularly important in buildings that have a higher demand for energy while occupied with a workforce, such as an office or manufacturing facility.



**FIGURE 9-3** Monitoring devices are placed in this air-handling system, with efficiency data being transmitted back to a central computer monitoring station where the building engineer can make changes to the operation of the system if necessary