

INTERNATIONAL CODE COUNCIL

ENERGY PLAN REVIEW REQUIREMENTS

Commercial Energy Plan Reviews are based on Chapter 7 of the IECC or the referenced edition of *ASHRAE/IES 90.1-1989, Energy Code for Commercial and High-Rise Residential Buildings* as applicable. In order to perform a thorough Energy Plan Review, the following specifications, drawings and details should be submitted:

ENVELOPE

1. Architectural plans and specifications to include:
 - a. Description of uses and the proposed use group(s) for all portions of the building.
 - b. Thermal performance of envelope components.
 - c. Fenestration performance details (U-factor, SC, SHGC, VLT, air leakage rates, etc.).
 - d. Fully dimensioned drawings to determine gross and net areas of all envelope components.
 - e. Details of vapor barrier and insulation installation, caulking, gasketing, weatherstripping and other means of sealing joints, cracks, holes and penetrations in the building envelope.
 - f. ENVSTD output (where applicable).^a
2. Design conditions (interior and exterior) consistent with local climate.

ELECTRICAL POWER & LIGHTING^b

1. Complete plans and specifications of all electrical work.
2. Riser diagram(s) of the distribution system indicating:
 - a. Check metering provisions for individual dwelling units.
 - b. Subdivision of feeders by end use: 1) Lighting, 2) HVAC, 3) SWH and systems over 20 kW.^a
3. Lighting fixture schedule(s) depicting location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, power factor, etc.
4. Lighting plan(s) for building exteriors including total exterior Connected Lighting Power (CLP).
5. Lighting and power floor plans for building interiors including total interior CLP.
6. LTGSTD output (where applicable).
7. Interior and exterior means of lighting control.
8. Electric motor schedule including type, HP and efficiencies.^a

MECHANICAL SYSTEMS & EQUIPMENT

1. Mechanical equipment data, plans and specifications of all mechanical work including:
 - a. Equipment type, capacity (Btuh) and efficiency (peak and part-load).
 - b. System design air flow rates (cfm).
 - c. Details of equipment/system sizing.
 - d. System and/or zone control capabilities including terminal device schedule, provisions for humidity control (where applicable) and the corresponding testing of system controls.^a
 - e. Provisions for automatic setback/shutdown.
 - f. Indicate supply and exhaust systems to have automatic shutoff or volume reduction dampers.
 - g. Energy consumed by fans in the form of an Air Transport Factor (ATF) and pumps.^a
2. Economizers (air or water) including provisions for integrated control.^a
3. Duct construction and system static pressure(s), including provisions for sealing.
4. Duct and/or hydronic-piping lining and insulation materials.
5. Provisions for air and/or hydronic system balancing.
6. Boiler and water heater equipment and piping details including safety controls and distribution piping layout.

SERVICE WATER HEATING (SWH)

1. SWH equipment data including type, capacity and efficiency.
2. SWH pipe insulation, thickness, conductivity and vapor retarder (where appropriate).
3. Water conservation requirements.
4. Energy conservation measures for swimming pools (where applicable).

^a Commercial buildings and residential buildings greater than three stories in height only.

^b Multifamily residential buildings three stories or less in height; the non-dwelling-unit portions only.