2009 Seattle Codes

Energy

Overall Energy Code context

- **2030 Challenge:** new buildings to use 60% less energy than the average existing building
- **ASHRAE/IESNA Standard 90.1:** goal for 2010 version to use 30% less energy than 2004
- **IECC:** goal for 2012 version to use 30% less
- **Governor's Climate Action Team:** goal of 30% energy savings for next Energy Code
- **Seattle's 2009 Green Ribbon Panel:** goal of 30% energy savings for next Energy Code

Washington State Energy Code

- State Energy Code Act (19.27A):
  - State of Washington maintains its own Washington State Energy Code (WSEC)
  - WSEC updated every three years, on I-code cycle
  - Requires local jurisdictions to enforce
  - Local jurisdictions have some authority to amend
    - WSEC is the minimum for nonresidential, Seattle can adopt more stringent requirements
    - WSEC is both the minimum and the maximum for residential, Seattle not allowed to amend

2009 Seattle Energy Code goals

- Achieve the energy savings specified in Resolution 30280 (2001), 20% beyond current version of national ASHRAE Standard 90.1
- Incorporate addenda from Standard 90.1
- Incorporate ASHRAE/USGBC/IESNA Std 189.1, Design for High-Performance Green Buildings
- Improve implementation of existing amendments

Seattle public process

- Preliminary draft made available for general public comment during in January 2010
- 15 public meetings from February–July 2010
- Construction Codes Advisory Board (CCAB)
  - 13-member Board appointed by Mayor, confirmed by City Council
  - Briefed in December 2009 and April 2010
  - Detailed review in May 2010, approved with 2 amendments (which DPD accepted); review and approval of additional amendments in July 2010

2009 Seattle Energy Code

- Proposed 2009 Seattle Energy Code is:
  - 2009 Washington State Energy Code plus
  - Seattle amendments
- Detailed amendment list with transmittal
- Energy savings:
  - Preliminary estimate for one building type (office) is 15-20% compared to ASHRAE Std 90.1-2007 (Roughly10% compared to 2009 WSEC)
  - If wanted to achieve 20% energy savings, requiring compliance with tested building air leakage values would be a logical step, but this is not recommended by DPD or public

Envelope, mechanical

- Building Envelope
  - More insulation, address metal thermal bridging through insulation
  - Better windows, lower heat loss, less solar gain
  - Minimum visible transmittance for daylighting for buildings with larger window areas
- Mechanical
  - Higher equipment efficiencies
  - More heat recovery
  - Addresses some processes (e.g. compressed air)

Lighting, metering, renewables

- Lighting
  - More efficient lamps, better automatic controls
- Metering:
  - All buildings over 20,000 ft^2
- Renewable energy:
  - Minimum of 500 Btu/ft^2 per year
  - Alternate compliance options in Director's Rule
- Other:
  - RS-35: Advanced Criteria for Other Programs
  - RS-36: 2030 Challenge Goals for Seattle