Recent Legislation & Trends in Sustainability & Energy Conservation
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Capitol Campus, Olympia
Legislative Building 20 KW
Largest array of any Capitol Building in the US
Outline

- Setting the Stage
- Recent Legislation
- Trends in Sustainability
- Energy Conservation
Setting the Stage

Energy Prices are Skyrocketing

- Oil prices over $145/Barrel (up 107% in one year)
- Retail electricity rates up 29% in 5 years
- Retail natural gas rates up 89% in 5 years
Setting the Stage
Climate Change the Hot Topic

- G-8 Summit (Kyoto expires in 2012)
- Western Regional Climate Action Initiative (WA, OR, CA, NM, AZ)
- US Conference of Mayors Climate Protection Agreement (850 cities representing 80 million citizens)
- 32 Cities in WA Participating
Setting the Stage

Energy Independence

- Reduce the Need to go to War
- Keep Energy Dollars Here in the US
- Create Jobs Here in the US
- Improve the Imbalance of Trade
- Become a World Leader in the “Beyond Oil” Economy
2005 Legislation

- ESSB 5509 – High Performance Green Buildings
  - Buildings over 5,000 SF
  - New and Renovations
  - Receiving Funds from the Capital Budget
- Over 80 State Projects Pursuing LEED Silver or Higher
2008 Legislation

- E2SHB 2815 – Greenhouse Gas & Green Jobs
  - CO2 to 1990 levels by 2020
  - 25% below 1990 levels by 2035
  - 50% below 1990 levels by 2050

- SHB 3120 – Sales Tax Exemption for Green Certified Buildings (Study)

- Initiative 937 – Conservation and Renewables
Trends in Sustainable Design

- Hybrid Buildings (with natural ventilation mode)
- Electric Based HVAC Systems (Ground Source & VRF)
- Displacement Systems (underfloor and low wall)
- Heat Recovery
- Design for Proper Daylighting
Displacement Ventilation
Daylight / Ventilation Shafts
Trends in Sustainable Design

- Wilson HS, Tacoma SD
- Exterior Light Shelves
Trends in Sustainable Design

- Wilson HS, Tacoma SD
- Low Wall Displacement Diffuser
Trends in Sustainable Design

- Wilson HS, Tacoma SD
- Light Well and Exhaust Duct
Trends in Sustainable Design

- Metering Energy and Water
  - Energy Tracking Important for Reporting and Meeting Climate Change Goals
  - Tax Incentives and Carbon Trading

- Renewable Energy
  - Integrated Photovoltaics
    - (window, light shelf, roof membrane)
  - Solar Thermal (campus, high demand hot water applications and residential)
Trends in Sustainable Design

- Low Impact Development
- Buy Washington Building Products
  - A Part of ESSB 5509
- High Levels of Construction Waste Recycling
Trends in Energy Conservation

- I-937 Driving New Utility Programs in Conservation
- Improved Incentives (i.e. PSE up 50%)
- Energy Policy Act of 2005
  - Provides up to $1.80/SF Tax Credit for Energy Improvements (designer can get credit on a public facility)
  - Tax Credits for Renewables
  - Many Tax Credits Expire at the End of the Year
- New Energy Policy Act Expected Before the End of the Year
Thank You
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www.ga.wa.gov/eas/green