Title 24

Per Capita Electricity Sales (not including self-generation) (kWh/person) (2006 to 2008 are forecast data)

U.S. per capita demand is 45% higher than CA

California Energy Commission

ConSol
Effect Of Title-24
(Source Energy)

Improvement from 1978 to 2005 = 47%
Improvement from 1990 to 2005 = 30%

ConSol 2008
Typical Energy Use In The Home

- Appliances: 17%
- TV, PC, Outdoor Lighting: 14%
- Indoor Lighting: 10%
- Misc.: 15%
- Envelope: 44%

- Water Heating: 14%
- Space Cooling: 13%
- Space Heating: 17%

http://www.energy.ca.gov/appliances/rass/
Climate Zones
### MICROPAS CARDINAL RUN SUMMARY

<table>
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<tr>
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<th>Energy Use (kTDV/sf-yr)</th>
<th>Standard Design</th>
<th>Proposed Design</th>
<th>Compliance Margin</th>
<th>Heating (Btu/hr)</th>
<th>Cooling (Btu/hr)</th>
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***Building complies with Computer Performance***
***HESD Verification Required for Compliance***
2008 T-24
Current Major Proposed Changes

Window Efficiencies
   Adopted cost effective u-values and SHGC

Ventilation for Indoor Air Quality (ASHRAE 62.2)
   Mandatory ventilation requirements

Cool Roofs
   Reflectance and emittance

Changes to Compliance Documentation Process
   Poor enforcement of regulations, automated process prior to C of O

Maximum cooling capacity = HVAC right sizing
   TXV no longer a credit; Charge Indicator Light
Out With the Old .... In with the new
Carbon Quiz!

A 12 Hour Flight .... How Many Homes?
1 Flight = 350 Houses 15% above T-24
1 House = 40 CFLs
## 2008 Analysis: Compliance Cost

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**Mandatory Features** = $250

**Total SF Estimated Cost** = $1,979

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**Mandatory Features** = $900

**Total MF Estimated Cost** = $1,529
Resources

ASSOCIATIONS

American Institute of Architects
www.AIA.org

Building Owners Managers Association
www.boma.com.org

California Air Pollution Control Officers Association
www.capcoa.org

California Building Industry Association
www.cbia.org

California Building Officials
www.calbo.org

California Building Properties Association
www.cbpa.com/eupdates

California Cities
www.cacities.org

California Chapter American Planning Association
www.calapa.org

International Council for Local Environmental Initiatives
www.iclei.org

National Association Industrial and Office Properties
www.naiop.org

US Green Building Council
www.usgbc.org
Resources

ENERGY EFFICIENCY
ConSol
www.consol.ws

GREEN PROGRAMS
California Green Builder
www.CAGreenBuilder.org

Energy Star
www.energystar.gov

NAHB / ANSI / ICC
www.nahbrc.org/technical/standards/greenbuilding.aspx

BIG/GPR
www.builditgreen.org

LEED
www.usgbc.org/LEED

GOVERNMENT
Air Resources Board
www.arb.ca.gov

California Department of Housing Community Development
www.hcd.ca.gov

California Energy Commission
www.energy.ca.gov

Collaborative for High-Performance Schools
www.chps.net

Institute for Local Government
www.ca-ilg.org

Land Use Subgroup of the Climate Action Team
http://www.climatechange.ca.gov/luscat/

Local Government Commission
www.lgc.org

Office of Planning and Research
www.opr.ca.gov

US Department of Energy
Building America Partner - Building Industry Research Alliance
www.bira.ws

US Department of Energy
Energy Efficiency & Renewable Energy
www.eere.energy.gov/buildings

INCENTIVES
Database of State Incentives for Renewables and Efficiency
http://www.dsireusa.org/

New Solar Home Partnership
www.gosolarcalifornia.com

LEGISLATION
AB32
www.climatechange.ca.gov

AB32 – Mitigation Issues
http://ag.ca.gov/globalwarming/

Attorney General’s global warming website
http://ag.ca.gov/globalwarming/

California Climate Change Portal
http://www.climatechange.ca.gov/

CEQA Guidelines and Greenhouse Gases
Resources

UTILITIES
Imperial Irrigation District
www.iid.com

Pacific Gas & Electric
http://www.pge.com/index.html

Southern California Edison
www.sce.com

SEMPRA
www.sempra.com

WATER
www.bewaterwise.com
www.mwdh2o.com