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BUILDING ENERGY ANALYSIS & ENERGY CODE COMPLIANCE



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The Development of the Marin County Energy Ordinance

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Overview of Presentation

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- **Development & Implementation Criteria**
- **California Energy Commission Review**
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- **2003 and 2005 Ordinance**
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Marin County Energy Ordinance Goals

In 2001, the County Board of Supervisors wanted to:

- **Reduce the size of larger homes (> 3,500 SF); and,**
- **Ensure that large homes were energy-efficient by requiring that they use no more energy than an equivalent 3,500 SF home.**
- **A local energy ordinance was proposed to accomplish both goals.**
- **Gabel Associates was retained to assist the Marin County Community Development Agency.**

Development & Implementation Criteria

- **Must meet the technical requirements to reach the required energy efficiency goals;**
- **Must address the issue of additions as well as new construction;**
- **Must translate the intent and details into appropriate code language;**
- **Must be relatively simple and consistent with the state's Title 24 energy standards for (a) California Energy Commission approval and (b) acceptance by the local building official; and,**
- **Must demonstrate to the building industry and the energy consultants that the proposed energy ordinance is reasonable and workable.**

California Energy Commission Review

- **State requires that the Commission review and approve all local energy ordinances before they take effect;**
- **A cost-effectiveness study must be submitted by the local jurisdiction;**
- **The local jurisdiction must demonstrate that the proposed local energy ordinance always meets or exceeds the current Title 24 standards;**

How Did the Ordinance Turn Out?

- **We developed a one page worksheet that the permit applicant (energy consultant) submits with the standard Title 24 report;**
- **All the energy measures installed, all the other documentation, the plan review process and field inspection are all standard energy code protocols;**
- **Any home > 3,500 SF has to exceed the Title 24 energy performance by the specified percentage (%) listed on the worksheet; and,**
- **Photovoltaic (PV) Systems are a credit which can be used to exceed the Title 24 benchmark and meet the energy ordinance requirement.**

2003 and 2005 Ordinance

- **Ordinance first took effect on January 1st, 2003.**
- **Approximately 100 homes have been permitted under the Ordinance with no problems or complaints (as of yet) by owners, architects or the building department.**
- **The Ordinance was recently revised to be consistent with the 2005 Title 24 Standards which just took effect on October 1st.**
- **The future: According to the Energy Commission, starting in 2008, photovoltaic (PV) systems may be allowed as a credit only after all building efficiency measures first exceed Title 24 by some additional percentage (e.g., 15%).**

Lessons Learned

- **Start with clear goals and a conceptual (but reasonable) implementation plan.**
- **Understand which energy measures are inside Title 24 and which are outside of it.**
- **What is “inside” Title 24 must be part of a whole that connects seamlessly and simply to the current Title 24 language, procedures and forms.**
- **Energy measures “outside” Title 24 may be best considered part of an extra (i.e., local) mandatory measures checklist – and then you’re on your own!**