



# SB 1 Eligibility Criteria and Conditions for Incentives

## Draft Guidelines

California PV Utility Program Managers Meeting

Long Beach

September 25, 2007



## SB 1 Assignments to Energy Commission

- In consultation with the CPUC, Publicly Owned Utilities, and interested members of the public;
- Establish Eligibility Criteria
  - Design, Installation and Electrical Output Standards;
- Establish conditions for ratepayer incentives
- Set rating standards for equipment, components and systems;



## SB 1 Specific Expectations

- High Quality Solar Energy Systems with Maximum System Performance to Promote the Highest Energy Production per Ratepayer Dollar
- Optimal System Performance During Periods of Peak Demand
- Appropriate Energy Efficiency Improvements in New and Existing Home or Commercial Structure Where Solar Energy System is Installed



## Integrated Energy Policy Report Guidance

- Leveraging Energy Efficiency Improvements Should be Primary Consideration in Deploying PVs
  - EE + PV will lead to proper sizing, contribute to state's efficiency goals, provide maximum benefits to PV purchasers and electricity customers
- Rational Targeting of PV Deployment to Achieve Greatest Cost Benefit
  - Target to Climate Zones with High Peak Demand for Air Conditioning
- Transitioning Away from Capacity-based Incentives to Performance-based Incentives
- Integrating Energy Efficiency and Time-of-Use



## Other California Energy Policy Goals

- Energy Action Plan – Follow the "Loading Order"
- Climate Action Initiative and AB 32
  - Reduce 2020 GHG Emissions to 1990 Levels
  - Energy Efficiency and Renewables Highlighted
- SB 1037 and AB 2021
  - IOUs and POUs first meet unmet resource needs via cost effective energy efficiency
- Green Building Initiative – 20% savings by 2015 for state buildings (encouraged for commercial buildings)



## NSHP Policies and Approaches

- Goal: Create a self-sustaining market for solar homes where builders incorporate high levels of energy efficiency and high performing solar systems
- Expected Performance Based Incentive Structure
- Independent Testing and Certification of Performance Characteristics of Modules/Inverters
- PV Calculator – Hourly Time Dependent Determination of Module/Inverter Interaction with Installation/Climate
- Installer and Third-Party Field Verification Protocols



## NSHP Energy Efficiency Approaches

- Pursue PV and EE goals in concert
- "Co-Brand" NSHP and Prominent EE Programs
  - Take advantage of EE marketing and incentives
- Tier I – minimum level; = IOU New Construction Level of 15% > Title 24
- Tier II – preferred level; = Building America Level
- Energy Star Appliances when Builder Installed
- Same philosophy used in development of SB 1 guidelines



## Guidelines Recommendations Equipment Rating Standards

- Modules
  - Safety UL listing
  - Detailed performance data (IEC test standards)
- Inverters
  - Safety UL listing
  - Detailed performance data (Current CEC protocol)
- Meters
  - Accuracy (ANSI standard) ANSI tests required for 2% accuracy meters and tests for 5% accuracy are being developed by the metering committee
  - Display and communication (PMRS) requirements and based on CSI at this time
  - CSI Handbook



# High Quality Performance Design and Installation Recommendations

- PBI Deployment on CSI Timetable
- Expected Performance Calculation Approach
  - Capture all Important Performance Characteristics and Incent Industry to Improve over Time
  - Encourage Avoidance of Shading And Attention to Performance Consequences of Shading
  - Address Time-of-Use of System Production
- Focus on Quality Installation Through Installer and Third party Field Verification Protocols



# Energy Efficiency Guidelines Recommendations New Construction – Residential

- NSHP Tier I and II Levels Statewide
- Encourage Utility Incentives for Each Level



# Energy Efficiency Guidelines Recommendations New Construction – Commercial

- "Co-Brand" with Prominent EE Programs
- Use NSHP-style Tiers
- Tier I – minimum level; 15% > Title 24
  - USGBC LEED Energy Efficiency Requirements
  - Savings by Design
- Tier II – preferred level: 30% > Title 24
  - EAct 2005 Tax Credits
  - ASHRAE Standard 189
  - “2030 Challenge”
- Provide Utility EE Incentives for each Tier



## Existing Buildings Information and Disclosure

- Provide information to the building owner:
  - Most recent 12 months of energy consumption
  - Results of the on-line, telephone or site visit audit
  - Audit and assessment tools available for future use
  - Efficiency measures applicable to that particular building
  - Energy efficiency incentives available from utility



## Information and Disclosure

- Building Owner to Disclose Information to Utility:
  - Certification customer received information
  - Which Assessment Tools Chosen
  - Which Measures Installed
  - Results of audit report



# Energy Efficiency Guidelines Recommendations Existing Buildings – Commercial

- "Co-Brand" with the Governor's Green Building Initiative
- Benchmarking for All Buildings Using Energy Star *Portfolio Manager*
- Retro-commissioning for all buildings  $> 50,000$  sq ft and that have a benchmarking score  $< 75$
- Implement cost effective recommendations
- Encourage utilities to provide incentives for retro-commissioning and EE improvements
- Information and Disclosure
- Commitment Agreement



## Energy Efficiency Recommendations Existing Buildings – Residential

- Build on CSI Online Audit
- Information and Disclosure
- Utilities to develop benchmark for homes
- Encourage homes to improve to best energy use quartile
- Provide utility incentives for cost effective EE improvements



## Energy Efficiency Exemptions Existing Buildings

- No exemption for Information and Disclosure
- Buildings built within the last three years
- Agricultural and Industrial facilities not covered in Portfolio Manager or CEC benchmarking tool
- Those systems not serving electricity to a building need not address EE at this time



## Alternative Program Energy Savings

- PAs may show a 20% reduction in energy savings across entire SB 1 Program Participants
- Submit 3 year plan to CEC for approval at regularly scheduled Business Meeting
- Can participate by building sector
- Submit annual report on progress towards 20% reduction



## SB 1 Guidelines Development Schedule and Proposed Effective Date

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|----------|--|
| 10/04/07 | Workshop on Draft Guidebook<br>Receive Public Input on Draft<br>Develop Final Guidelines |
| 12/19/07 | Energy Commission Adoption of Guidebook  |
| 1/1/08   | Minimum Program Requirements   |
| 1/1/09   | Proposed Effective Date  |



## Questions?

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