NSHP Energy Efficiency

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NSHP Training Workshop

Efficiency Requirements

- Incorporated 2013 Building Energy Efficiency Standards
  - Code Compliant Incentive Level
  - Tier I
    - 15% compliance margin for residential buildings
    - 10% compliance margin for non-residential buildings
  - Tier II
    - 30% compliance margin for residential buildings, 30% space-cooling compliance
    - 15% compliance margin for non-residential buildings, 15% space-cooling margin
- Solar Compliance Credit (2013 Standards only)
  - Available for single family projects in Climate Zones 9-15
  - Credit available only when 2015 federal AC standards are used
  - Cannot be claimed for 2013 Code-Compliant projects
  - Can be claimed for 2013 Tier I and Tier II projects.

Efficiency Requirements (cont.)

- Revised Title 24, Part 6 form names for 2013

Previous Name	Revised Name
CF-6R Certificate of Field Verification	CF-2R Certificate of Installation
CF-4R Certificate of Field Verification and Diagnostic Testing	CF-3R Certificate of Verification

- Revised NSHP Efficiency Verification Form Name

Previous Name	Revised Name
CF-4R-EE NSHP Certificate of Field Verification	NSHP EE-3 Additional Energy Features Checklist

NSHP EE Requirements

- Any building whose electric load is offset by the PV system must meet NSHP EE requirements.
- For Common Area PV System incentives:
  - Residential Subdivision
    - All Homes meet NSHP EE requirements
  - Multifamily Development
    - All least one residential building must meet NSHP EE requirements

Code Compliant Incentive Level Requirements

- Compliance documentation may be completed by anyone legally authorized to 2013 Title 24, Part 6 compliance documentation (Licensed architect, engineer, building designer).
- Not allowed to claim solar compliance credit .
- Must submit a copy of the Title 24 compliance documentation run using an approved version of the 2013 compliance software (CBECC, EnergyPro, etc).
  - Same as documentation submitted to local building department
- Must select a HERS Rater for the PV inspection
  - No NSHP specific energy efficiency verification will be required
  - All HERS verification for Title 24 purposes is still required

Utility New Construction Program Participants

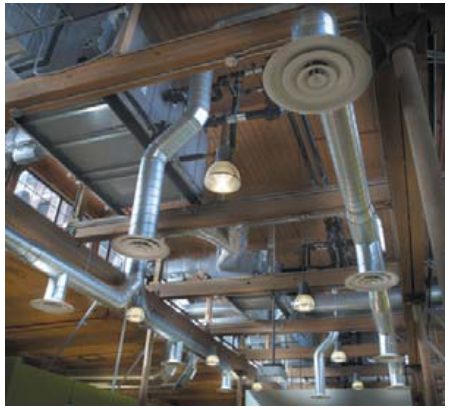
- Complete Utility EE Requirements, not NSHP EE requirements
  - Do not submit any EE documents to NSHP
    - CF-1R
    - Electronic input files (.bld, .mp8, .ribd)
    - Plan Set and Checklist Items – no NSHP Plan Check
  - Do not need to complete NSHP EE Verification
    - NSHP EE-3 does not need to be filled out
    - Only PV Verification by a HERS Rater needs to be completed
  - Required Documentation
    - Utility EE Program Approval Letter with Reservation Application
    - Submit Utility EE Program Payment Letter to NSHP with Payment Claim Application

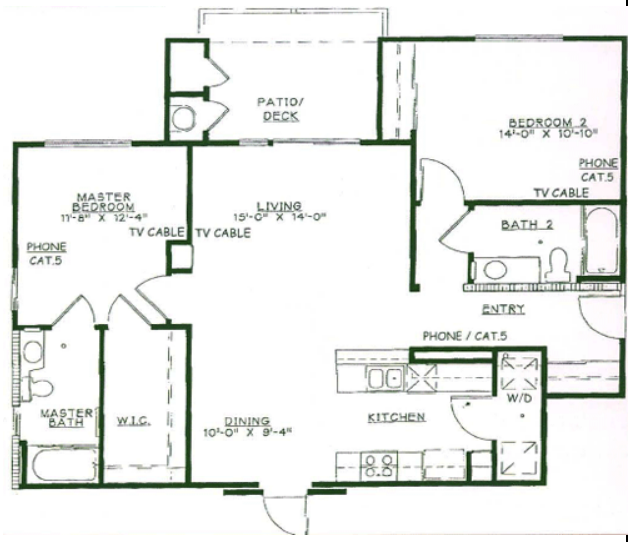
NSHP Plan Check Requirements

- NSHP Plan Checks Required for all projects except:
  - 2013 Code-Compliant NSHP projects
  - Projects with compliance documentation signed by a CEA certified for the 2013 Standards
  - Projects participating in a utility new construction energy efficiency program
- Projects that have their NSHP Plan Check waived do not need to submit:
  - Construction Plan Set
  - Electronic input files (.bld or .mp8)
  - Plan Set and equipment specification sheets

Plan Check Documentation

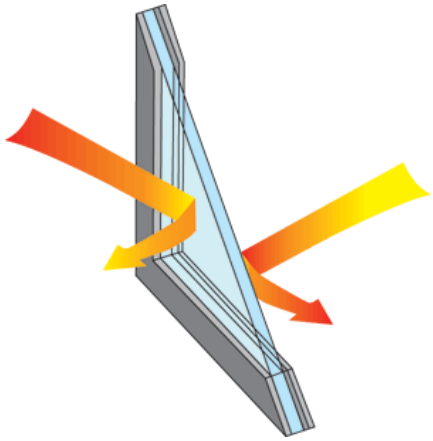
- Plan Check Checklist listed in Appendix C
- Construction Plan Set
  - Architectural, Electrical, Mechanical, and Plumbing
  - Window/Door Schedule showing sizes and including ALL skylights
  - Elevation, wall, roof, floor construction assemblies
  - Floor finish schedule (if CF-1R shows high mass design)
  - A site plan with a North Arrow (custom homes)





Plan Check Documentation

- Title 24 Compliance Documentation
  - CF-1R-prepared by a Certified Energy Plans Examiner or Certified Energy Analyst
  - Digital input file (.bld, .mp8, .ribd)
- Equipment and Materials Spec Sheets
  - Windows, Glazed Doors, Skylights
  - Space Heating
  - Air Conditioning(www.ahridirectory.org)
  - Water Heating
- To reduce plan check turnaround time, applicants should provide information about where



Plan Review Process

- Plan Checker is verifying that information on CF-1R matches the Plan Set
- Applicants should provide information about where in their plan set (sheet number) the following information can be found
  - Insulation R-Values (ceiling/attic, floor, walls)
  - Water Heater efficiency values
  - HVAC efficiency values
  - Window dimensions and efficiency values
- If required information is missing, project may be disapproved

NSHP HERS Provider

- CalCERTS and CHEERS are the only HERS registries certified for 2008 NSHP EE and PV field verification
- Only CalCERTS is currently certified for 2013 NSHP EE and PV verification

www.cheers.org

www.calcerts.com

CHEERS
Unmatched Service with Integrity

CalCERTS inc.
Home Energy Rating Systems - HERS

HERS Registry Process

- Parties Involved:
  - Project Created by: Energy Consultant/HERS Rater or CEC
  - Project Owned by: HERS Rater
  - Project Shared with: Energy Consultant, HERS Rater (PV and EE), CEC
- Steps Involved:
  - Approved CF-1R and NSHP PV-1 uploaded to registry by CEC
  - If not created by HERS Rater, project is transferred to Rater and shared
  - If Rater not on transfer list, CEC contacts Provider to have Rater added
  - Homeowner requested to sign off on CF-1R
  - After homeowner signoff, Rater can access CF-1R and can upload inspection results
  - If changes are made to building, a new CF-1R must be submitted for review

Energy Efficiency Inspection

- Before EE Inspection:
  - Rater must obtain applicable CF-2R(s) from installer
  - Rater must obtain NSHP EE-3 from registry
- HERS rater will verify installed features listed on form
  - Pre-drywall inspection
    - HERS Rater may need to come on-site
    - Pictures, invoices and CF-2Rs can be used as verification. Must be okayed by HERS Rater first.
    - QII must be completed pre-drywall
  - Final inspection
    - HERS Rater completes NSHP EE inspection (NSHP EE-3)

PERF-1 Projects

- No way to currently upload a PERF-1 to CalCERTS registry
  - Applies to non-residential buildings and high-rise residential buildings greater than three stories
- Must submit final building permit and any applicable HERS Test Results to the CEC for review.
  - After reviewing the submitted documents, the CEC will sign off that the project has met all NSHP EE requirements

Photovoltaic System Inspection

- Before PV Inspection
  - Rater must obtain applicable NSHP PV-2 (formerly CF-6R-PV) from installer
  - Rater must obtain PV checklist from HERS registry
- During PV Inspection
  - HERS rater will verify system installation matches NSHP PV-1 and NSHP PV-2
- After PV Inspection
  - HERS Rater uploads verification results to registry to generate NSHP PV-3

Questions ???

2008 Documents available at:

http://www.energy.ca.gov/title24/2008standards/

2013 Documents available at:

http://www.energy.ca.gov/title24/2013standards/

Energy Standards Hotline

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1-800-772-3300

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