

Title 24 High-Performance Attic Designs

Unvented Attics using Spray Polyurethane Foam Insulation

The California Energy Commission 2016 Title 24 requirements call for High-Performance Attics (HPAs) in new single-family residential buildings. While Title 24 provides two prescriptive HPA designs, a proven alternative design for HPAs is the application of spray polyurethane foam (SPF) insulation on the underside of the roof deck to create an unvented attic (UVA).

Modeling simulations using Title 24-approved software demonstrate that an R-28 SPF UVA outperforms the prescriptive HPA designs across California Climate Zones. Consult an SPF professional to learn more about the opportunities with SPF insulation.

An SPF UVA design can:

- Moderate temperature extremes in the attic
- Reduce air leakage rates through the roof deck
- Capture energy loss from leaky duct work
- Increase wind uplift resistance of roof systems
- Reduce HVAC system size
- Achieve performance with a single product
- Eliminate attic vents in wildfire-prone areas



Resources:

- **Energy Modeling for SPF UVAs in Title 24-Approved Compliance Software Programs:**
<https://polyurethane.americanchemistry.com/Spray-Foam-Coalition/Guidance-Documents>
- **SPFA-141 Technical Document: Cathedral Roofs and Cathedralized Attics:**
<http://www.sprayfoam.org/technical/spfa-technical-documents>
- **U.S. Department of Energy's Building America Research on Unvented Attics:**
<http://energy.gov/eere/buildings/downloads/building-america-top-innovations-hall-fame-profile-unvented-conditioned>

Visit www.WhySprayFoam.org and www.sprayform.org for more information.

Questions:

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