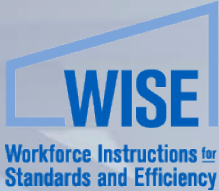


WISE

Workforce Instructions for
Standards and Efficiency





2019 Compliance Options



BPEC – CBIA Summer Governance Meetings
Megan Cordes, WISE Program Manager



What is the WISE program?

WISE – Workforce Instruction for Standards and Efficiency

Mission: Educate the homebuilding industry on solutions for **meeting high-performance envelope requirements** in California's 2016 and 2019 Title 24 Energy Efficiency Standards.

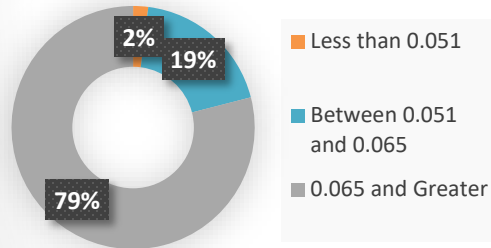
- Sponsored by the California Energy Commission (CEC)
- Managed by ConSol and the California Homebuilding Foundation
- Timeline 2016 to 2019
- Free classroom training, on-site instruction and reference materials

Market Adoption of High Performance Attics and Walls

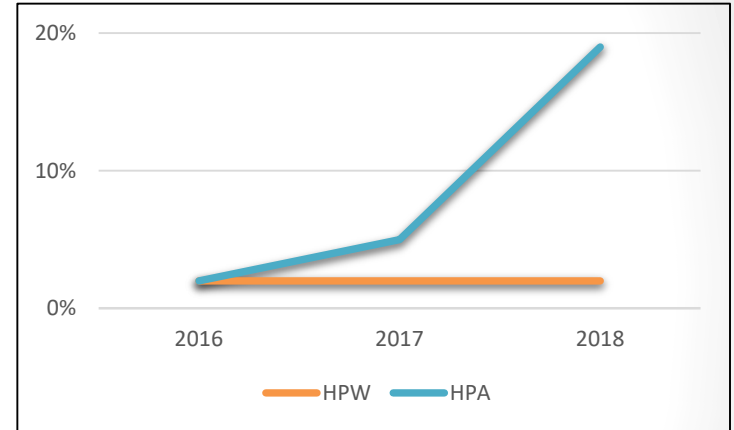
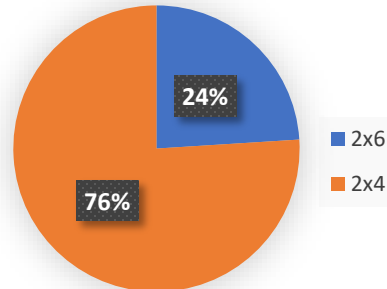
Homes permitted under the 2016 Standards:

- **2%** of subdivisions observed installed HPW
- **19%** of subdivisions observed installed HPA

Installed U-Values



Framing

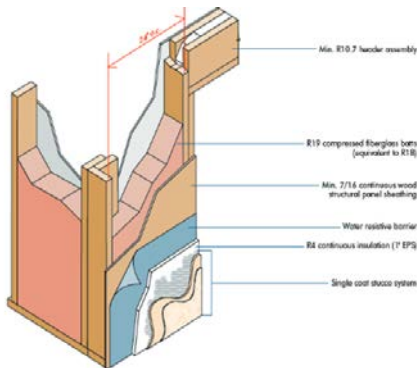


- **25% - 30%** SF homes installed solar

High Performance Attics and Walls in 2020

- 2016 Standards – builders using solar and other trade-offs
- 2019 – fewer compliance options

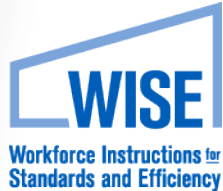
Increased efficiency requirements + No more solar trade-off =
Efficient envelope **AND** solar



Source: APA, The Engineered Wood Association



2019 Compliance Options – CZ 12

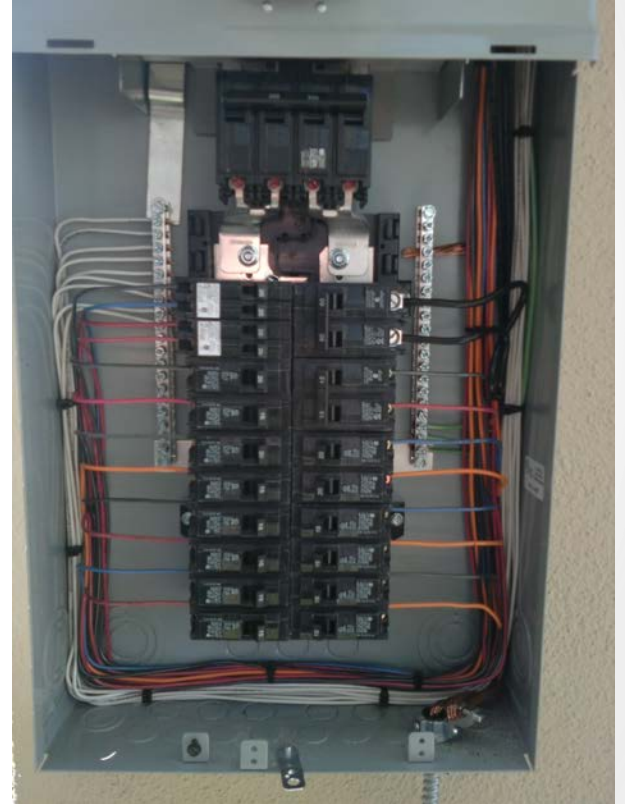


	Base	All Electric	Battery	Unvented Attic
Walls	2x4, R-5 Ext	2x4, R-5 Ext	2x4, R-5 Ext	2x4, R-5 Ext
Attic	R-19 BD	R-21 BD	R-19 BD	R-38 Unvented
Whole House Fan	Yes	No	No	No
Windows (U/SHGC)	0.30/0.23	0.30/0.23	0.30/0.23	0.30/0.23
HVAC	15 SEER/13 EER 0.92 AFUE	Heat Pump 16 SEER/13 EER/8.5 HSPF	14 SEER/12.2 EER 0.80 AFUE	15 SEER/13 EER 0.80 AFUE
Water Heating	Tankless 0.94 UEF	Heat Pump HPTU 50 120 DWHR 48.8% Eff	Tankless 0.81 UEF	Tankless 0.94 UEF
Solar/Battery	3.2 kW	3.2 kW	3.2 kW/14 kWh	3.2 kW
Incremental Cost		\$1,681	\$3,328	(\$494)

Impacts on Electric Infrastructure

- Pros:
 - Remove gas infrastructure
 - Avoid NOx emissions standards
- Cons:
 - May need to increase electrical panel size
 - Increased electric infrastructure cost?

Ongoing research into this



WISE Services

- Training – Classroom and on-site
- Installation Protocols
- Technical Information - www.wisewarehouse.org
 - [*HPA Protocol Reference Manual*](#)
 - [*HPW Protocol Reference Manual*](#)
 - [*HPW/HPW Product and Strategy Assessment*](#)



Thank you.

For more information on WISE Contact:
Megan Cordes, Program Manager—
info@wisewarehouse.org

