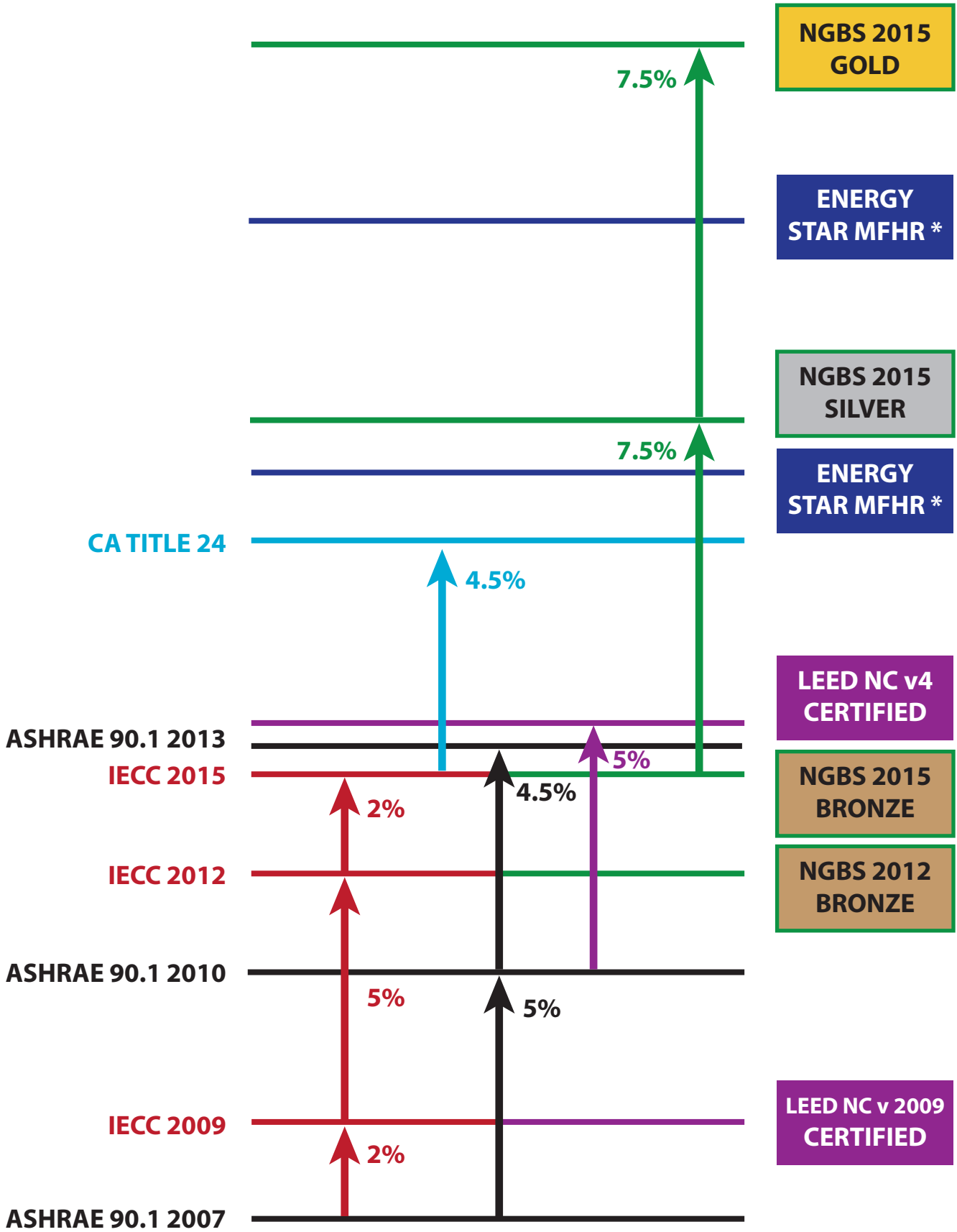


ENERGY EFFICIENCY COMPARISON

FOR MID- TO HIGH-RISE RESIDENTIAL BUILDINGS

Baseline Energy Code



National Residential Certification

* ESTAR MFHR 15% above state adopted code.

References

- Hart, Athalye, Rosenberg, Loper, Halverson, & Richman. (2015). *National Cost-effectiveness of ANSI/ASHRAE/IES Standard 90.1-2013*. Richland: Pacific Northwest National Laboratory.
- Hedrick, R., Brook, M., Geiszler, E., Ashuckian, D., & Oglesby, R. (2013). *Emergy Efficiency Comparison: California's Building Energy Efficiency Standards and ASHRAE/IESNA Standard 90.1-2010*. State of California Energy Commission.
- Mendon, Selvacanabady, Zhao, & Taylor. (2015). *National Cost-Effectiveness of the Residential Provisions of the 2015 IECC*. Richland: Pacific Northwest National Laboratory.
- U.S. Department of Energy. (2016, October 28). *ENERGY STAR Multifamily High Rise National Performance Path Requirements, Version 1.0*. Retrieved from U.S. Department of Energy: [file:///Q:/RLA/SGB/Toolkit/Comparison%20of%20Green/IECC%20vs%20ASHRAE/ENERGY%20STAR%20MFHR%20Performance%20Path Version 1.0 Rev03.pdf](file:///Q:/RLA/SGB/Toolkit/Comparison%20of%20Green/IECC%20vs%20ASHRAE/ENERGY%20STAR%20MFHR%20Performance%20Path%20Version%201.0%20Rev03.pdf)
- Zhang, Xie, Athalye, Zhuge, Rosenberg, Hart, & Liu. (2015). *Energy and Energy Cost Savings Analysis of the 2015 IECC for Commercial Buildings*. Richland: Pacific Northwest National Laboratory.
- USGBC, **LEED New Construction** Rating System v. 4.
- Ware, D., Bozorgchami, P. (2013) *Energy Efficiency Comparison California's Building Energy Efficiency Standards and the International Energy Conservation Code and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers and Illuminating Engineering Society of North America Standard 90.1*. California Energy Commission.