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| Docket Number: | 21-BSTD-03 |
| Project Title: | 2022 Rulemaking for Part 11 (CalGreen) and Parts 2-5 of the Building Standards Code |
| TN #: | 238642 |
| Document Title: | Document relied upon - Summary of 2022 CALGreen Energy Design Rating Margins |
| Description: | Document relied upon for the California Building Energy Efficiency Standards, 2022 California Green Building Standards Code, Title 24, Part 11 and Parts 2, 2.5, 3, 4, and 5. |
| Filer: | Amber Beck |
| Organization: | California Energy Commission |
| Submitter Role: | Commission Staff |
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California Energy Commission

Proposed Single-Family EDR1 (Hourly Source Energy) Margins for 2022 Title 24, Part 11 (CALGreen)

| CA Climate Zone | Proposed EDR1 Margin | 2,700 ft ² CEC Prototype (represent ~55% of newly constructed single-family homes) | | | | 2,100 ft ² CEC Prototype (represent ~45% of newly constructed single-family homes) | | | |
|-----------------|----------------------|---|------------------------|----------------------|----------------|---|------------------------|----------------------|----------------|
| | | 2022 Standard (Either HPWH or HPSH) | CALGreen Proposed EDR1 | CALGreen EDR1 Margin | Percent Margin | 2022 Standard (Either HPWH or HPSH) | CALGreen Proposed EDR1 | CALGreen EDR1 Margin | Percent Margin |
| 1 | 4.3 | 58.2 | 54.1 | 4.1 | 7.0% | 65.9 | 61.3 | 4.6 | 7.0% |
| 2 | 4.4 | 42.2 | 38.0 | 4.2 | 10.0% | 46.4 | 41.7 | 4.7 | 10.1% |
| 3 | 6.0 | 41.2 | 35.6 | 5.6 | 13.6% | 44.2 | 37.7 | 6.5 | 14.7% |
| 4 | 5.8 | 43.2 | 37.8 | 5.4 | 12.5% | 45.9 | 39.6 | 6.3 | 13.7% |
| 5 | 5.8 | 34.3 | 29.3 | 5.0 | 14.6% | 38.2 | 31.4 | 6.8 | 17.8% |
| 6 | 3.5 | 38.2 | 35.1 | 3.1 | 8.1% | 39.0 | 35.0 | 4.0 | 10.3% |
| 7 | 2.9 | 37.0 | 34.1 | 2.9 | 7.8% | 37.7 | 34.8 | 2.9 | 7.7% |
| 8 | 2.1 | 36.5 | 34.1 | 2.4 | 6.6% | 36.6 | 34.8 | 1.8 | 4.9% |
| 9 | 3.6 | 36.9 | 33.0 | 3.9 | 10.6% | 37.6 | 34.4 | 3.2 | 8.5% |
| 10 | 6.5 | 45.6 | 39.7 | 5.9 | 12.9% | 47.8 | 40.5 | 7.3 | 15.3% |
| 11 | 4.3 | 41.6 | 37.7 | 3.9 | 9.4% | 43.9 | 39.2 | 4.7 | 10.7% |
| 12 | 4.4 | 41.2 | 37.2 | 4.0 | 9.7% | 43.4 | 38.5 | 4.9 | 11.3% |
| 13 | 4.9 | 41.0 | 36.5 | 4.5 | 11.0% | 45.4 | 40.1 | 5.3 | 11.7% |
| 14 | 5.8 | 41.2 | 36.2 | 5.0 | 12.1% | 44.5 | 37.7 | 6.8 | 15.3% |
| 15 | 1.8 | 37.2 | 35.2 | 2.0 | 5.4% | 38.4 | 36.8 | 1.6 | 4.2% |
| 16 | 4.3 | 53.6 | 49.7 | 3.9 | 7.3% | 57.8 | 53.1 | 4.7 | 8.1% |

Notes

Energy Design Rating (EDR) - EDR is a way to express the energy performance of a building using a scoring system where 100 represents the energy performance of a reference design building meeting the envelope requirements of the 2006 International Energy Conservation Code (IECC).

Summary results were generated using CBECC-Res, using the 2,700 ft² and 2,100 ft² CEC building energy model prototypes

HPWH - heat pump water heating

HPSH - heat pump space heating

TOU - time of use operation assumed in modeling