



Energy Star Program Savings Estimates

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Energy Savings Estimates



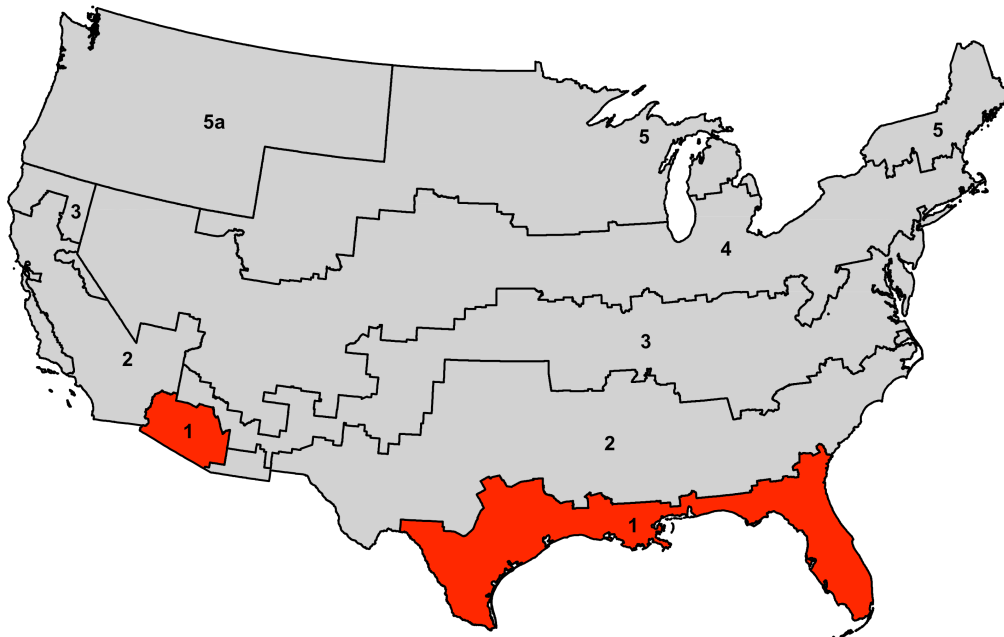
- Represent annual primary energy savings from 1 yr of sales.
- Zone savings \approx 1-2 tBtu/yr
 - 1 tBtu \approx \$10 million
- Baselines:
 - Phase I – Savings compared to 2006 IECC
 - Phase II – Savings compared to 2009 IECC
- Two key reasons for energy savings:
 - More stringent U/SHGC requirements for E^*
 - Entire market moves with E^* (penetration)

Savings: Zone 1



tBtu Savings	Heat	Cool	Total
Phase 1	1.0	0.9	1.9
Phase 2	-0.8	3.5	2.6

Phase 1 savings are against IECC 2006, **Phase 2** against IECC 2009



Formerly: Portions of Southern and South/Central Zones

Remarks:

Phase I:

- Heat improves due to very large drop in U-factor
- Cool improves due to SHGC 0.4 to 0.3

Phase II:

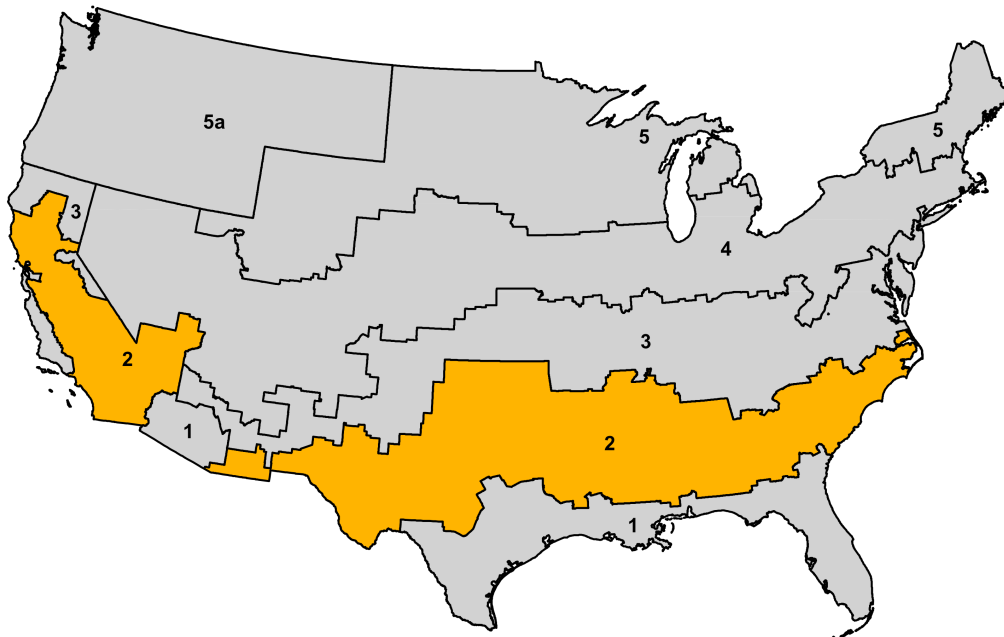
- Cooling savings from large drop in SHGC (to 0.2) outweigh heat penalty.

Savings: Zone 2



tBtu Savings	Heat	Cool	Total
Phase 1	3.6	0.5	4.2
Phase 2	0.4	2.0	2.4

Phase 1 savings are against IECC 2006, **Phase 2** against IECC 2009



Remarks:

- Substantial heating in this zone.

Phase I:

- Heat improves due to ~50% drop in U-factor

Phase II:

- Cool savings mostly due to penetration.

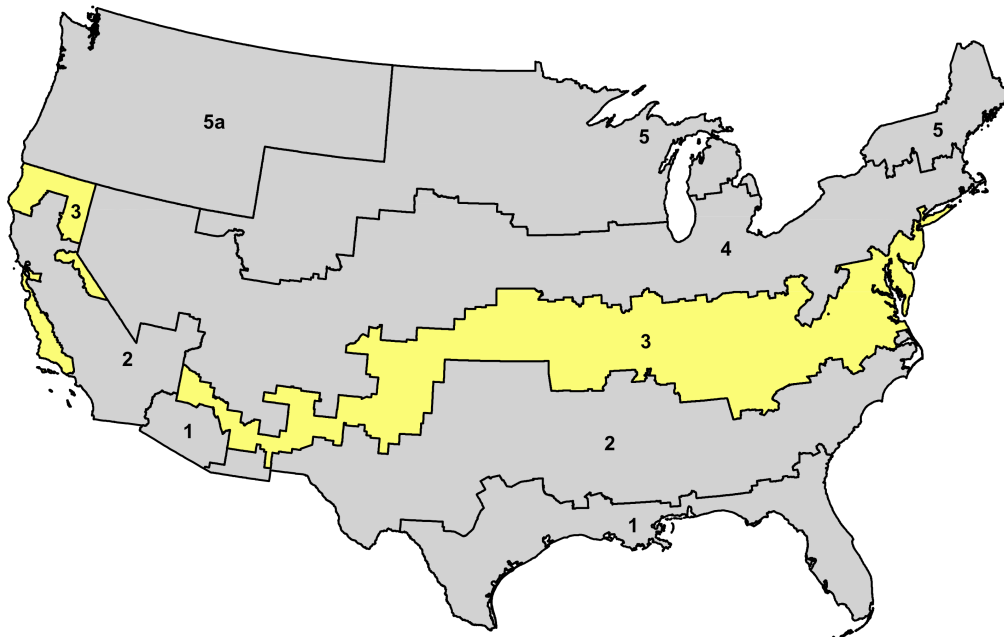
Formerly: Portions of Southern, South/Central and North/Central Zones

Savings: Zone 3



tBtu Savings	Heat	Cool	Total
Phase 1	1.3	0.4	1.7
Phase 2	0.7	1.5	2.2

Phase 1 savings are against IECC 2006, **Phase 2** against IECC 2009



Remarks:

Phase I:

- Heat savings dominate due to U-factor improvements.

Phase II:

- Cool savings mostly due to penetration.

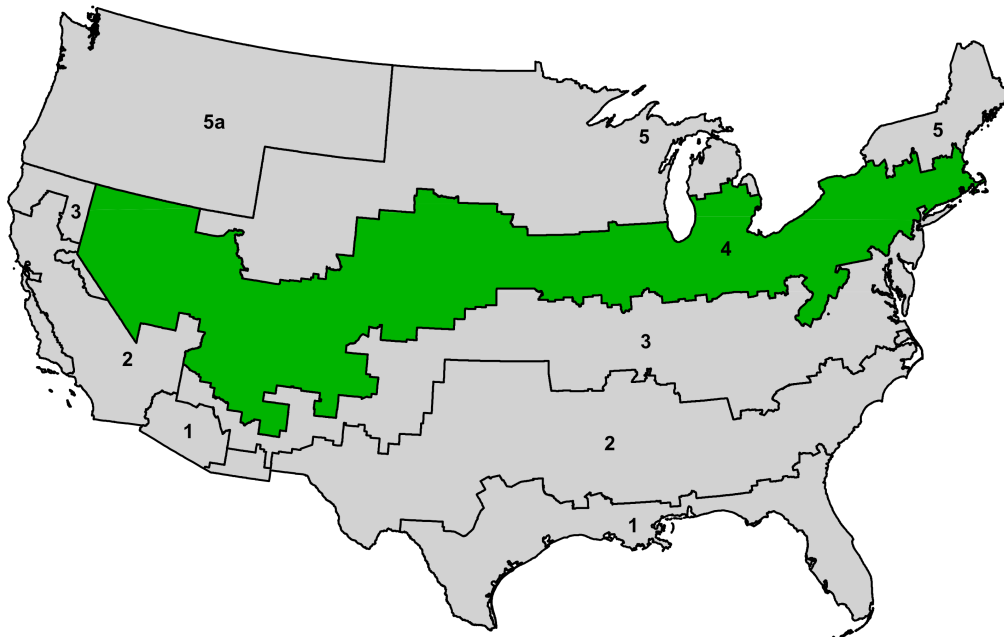
Formerly: Portions of South/Central, North/Central and Northern Zones

Savings: Zone 4



tBtu Savings	Heat	Cool	Total
Phase 1	0	0.4	0.4
Phase 2	1.6	1.1	2.7

Phase 1 savings are against IECC 2006, **Phase 2** against IECC 2009



Remarks:

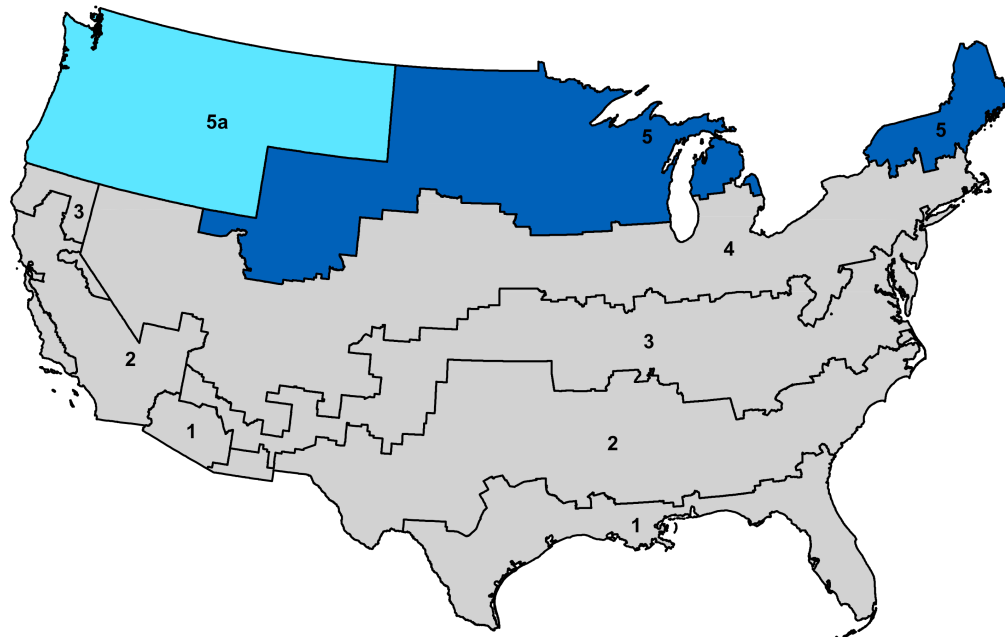
Energy Savings primarily in Phase II, when significant U-factor and penetration effects take place.

Formerly: Portions of South/Central, North/Central and Northern Zones

Savings: Zones 5, 5a



tBtu Savings	Heat	Cool	Total
Phase 1 (5)	0.1	0.1	0.2
Phase 1 (5a)	0.3	0.0	0.3
Phase 2 (5+5a)	1.1	0.4	1.4



Remarks:

Energy Savings primarily in Phase II, when significant U-factor and penetration effects take place.

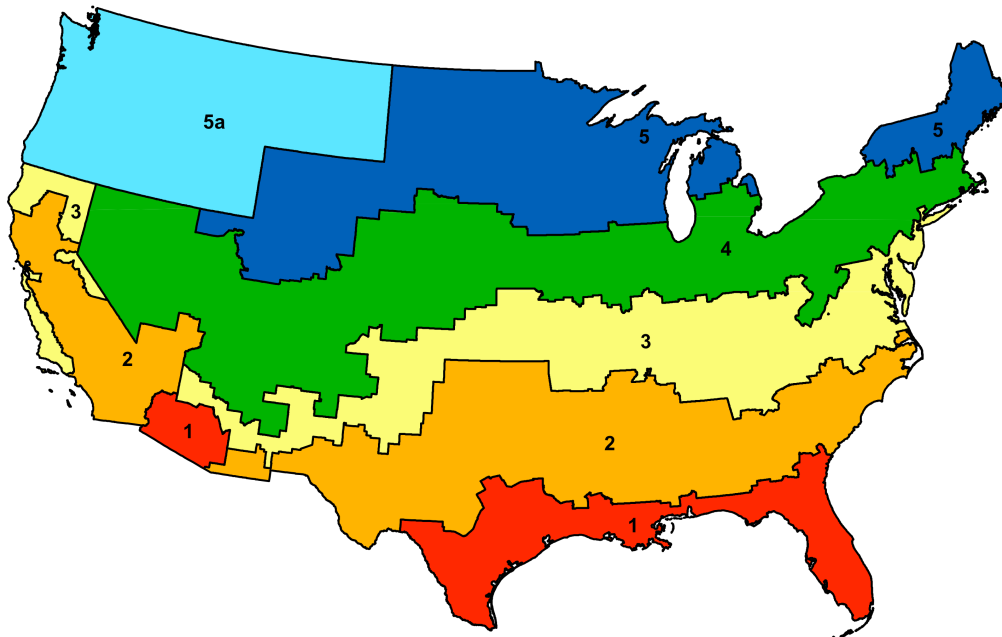
Formerly: Portions of Northern Zone.

Conclusion: National Savings



tBtu Savings	Heat	Cool	Total
Phase 1	6.2	2.3	8.5
Phase 2	3.0	8.4	11.4

Phase 1 savings are against IECC 2006, **Phase 2** against IECC 2009



Remarks:

- Significant annual savings from both phases.
- ~10 tBtu / yr \approx \$100m/yr
- Annual savings from program compound each year as stock penetration of E* products increases.