



Solar Ready Proposed Amendments to Energy Code

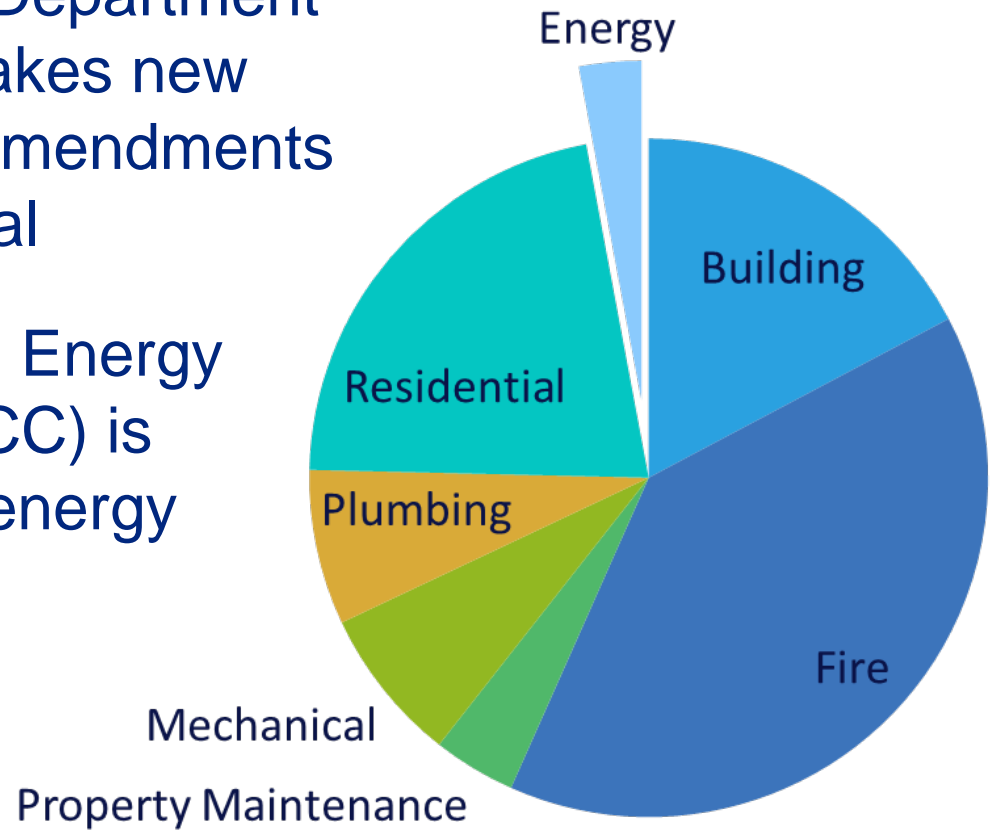
Electric Utility Commission

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Austin Energy Green Building
4/17/17



Regulations

- Development Services Department (DSD) enforces code, takes new codes and associated amendments through Council approval
- For Austin, International Energy Conservation Code (IECC) is the governing code for energy





Energy Code & Solar Ready Amendment

Texas House Bill 1736, mandated adoption of the 2015 International Energy Conservation Code (IECC) by all local jurisdictions

- 2015 IECC (with local amendments) became effective in Austin 9/1/16
- Proposed Solar Ready Amendment is modeled after Appendix RB of IECC
- Solar Ready Amendment is compatible with either the Uniform Plumbing Code or the International Plumbing Code



Energy Code & Solar Ready Amendment

TIMELINE

Solar Ready Amendment Initiated by RMC

Apr 2016

Initial Solar Ready Drafts approved
6/20/16 EUC
6/21/16 RMC

Jun 2016

Energy Code Effective
9/1/16

Sep 2016

Additional Solar Ready Stakeholder Engagement
4/17/17 EUC
4/18/17 RMC

April 2017

May 2016

Solar Ready Stakeholder Engagement

Jun 2016

Energy Code Passed by Council 6/23/16

Feb 2017

Item from Council - staff to solicit additional feedback on Solar Ready from relevant Boards & Commissions 2/2/2017

April 2017

International Residential Building Code passed by Council

Legend: EUC - Electric Utility Commission RMC - Resource Management Commission



What Does “Solar Ready” Do?

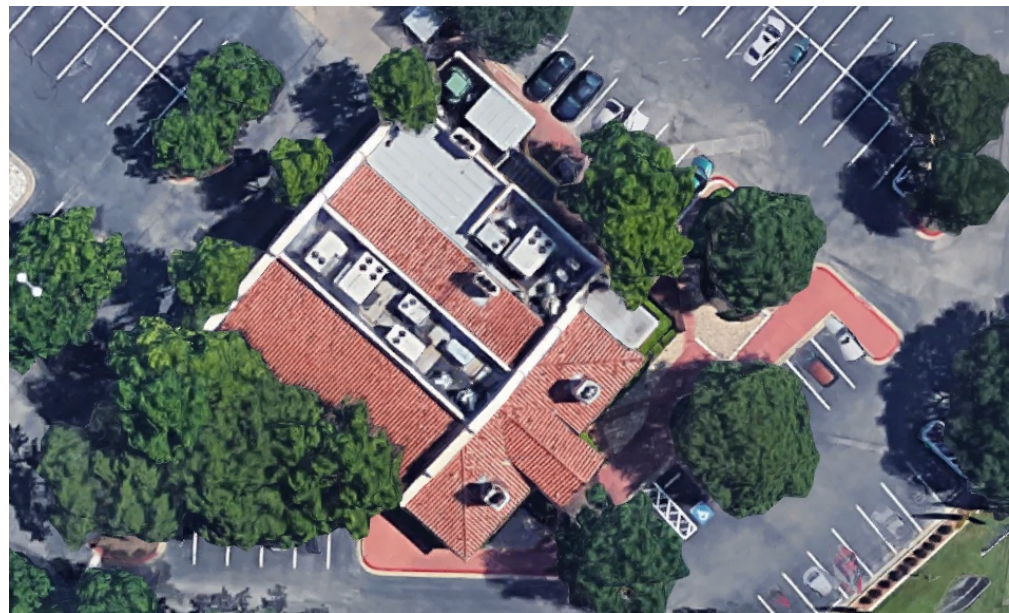
New Commercial & Residential Construction

- Amends 2015 International Energy Conservation Code
- Designate portion of roof as “Solar Ready Zone”
 - Free from obstructions, for example:
vents, mechanical equipment
 - Appropriate orientation of roof
 - Reserve electric panel space
 - Supports solar goals
- Allows for exceptions, for example...
 - Downtown Network, shading, small roofs, orientation, on-site renewable energy, rooftop parking, skylights, heliports
- Does **not** require solar or conduit installation



Constrained Commercial Buildings

Equipment placement and space make these sites exceptions to compliance





Commercial Solar Ready

The vast majority of new commercial buildings (up to 95%) will meet solar ready requirements as designed currently



Mechanical equipment and vent clustering to free up roof space



Residential Solar Ready vs. Constrained

South facing roofs (optimal for solar production)



Bunched vents
permit solar
installation



Widely spaced vents
Limit solar potential





Affordable Housing



Simpler roof designs
make accommodating
solar more straightforward

80% or more of the
affordable homes
as designed and
built may already
be solar ready





Cost Implications of Solar Ready

Commercial

- Requires consideration in design
- Challenge when rooftop is occupied by features integral to code or occupancy
- Material impact to most projects will be negligible
- Exceptions





Cost Implications - Residential

Affordable Housing

- \leq \$50 in review and administrative expenses for houses already compliant
- \$100-500 for houses that require adjustment of roof penetrations

Other Housing

- Similar review and administrative expenses for houses already compliant
- Costs for houses out of compliance highly variable

Exceptions



Avoided/Opportunity Costs

Putting Solar on a house not built Solar Ready...

- Venting
 - Not currently moving vents, work around them
 - Impacts size of installation, aesthetics
 - Too many vents = no solar
- Electric panel space
 - \$300 - 1,400
for new panel
and installation





Summary

Solar Ready Amendment...

- Designates portion of roof as a “Solar Ready Zone”
- Reserves electric panel space
- Supports Council-approved solar goals
- Allows for exceptions

Most new buildings already comply as designed

There is a cost

- Limited for commercial
- Residential
 - Affordable \leq \$50 admin/review \$100 - 500 to move vents
 - Other Residential \leq \$50 admin/review - difficult to quantify other costs if not compliant at plan review



Solar Ready Timeline – Next Steps

Additional Board/Commission Review

4/24/17 Austin Energy Utility Oversight Committee

4/25/17 Mechanical Plumbing & Solar

4/26/17 Building & Fire Code Board of Appeals

Issue Solar Ready
Guidelines

Solar Ready
Effective 10/1/17

Stakeholder Awareness/Outreach

Apr
2017

June
2017

Sep
2017

Oct
2017

June
2017

Aug
2017

Development Services
Department Brings to
Council

Train Development
Services Department
Plan Review Staff

Questions?

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