

# Solar Ready Proposed Amendments to Energy Code

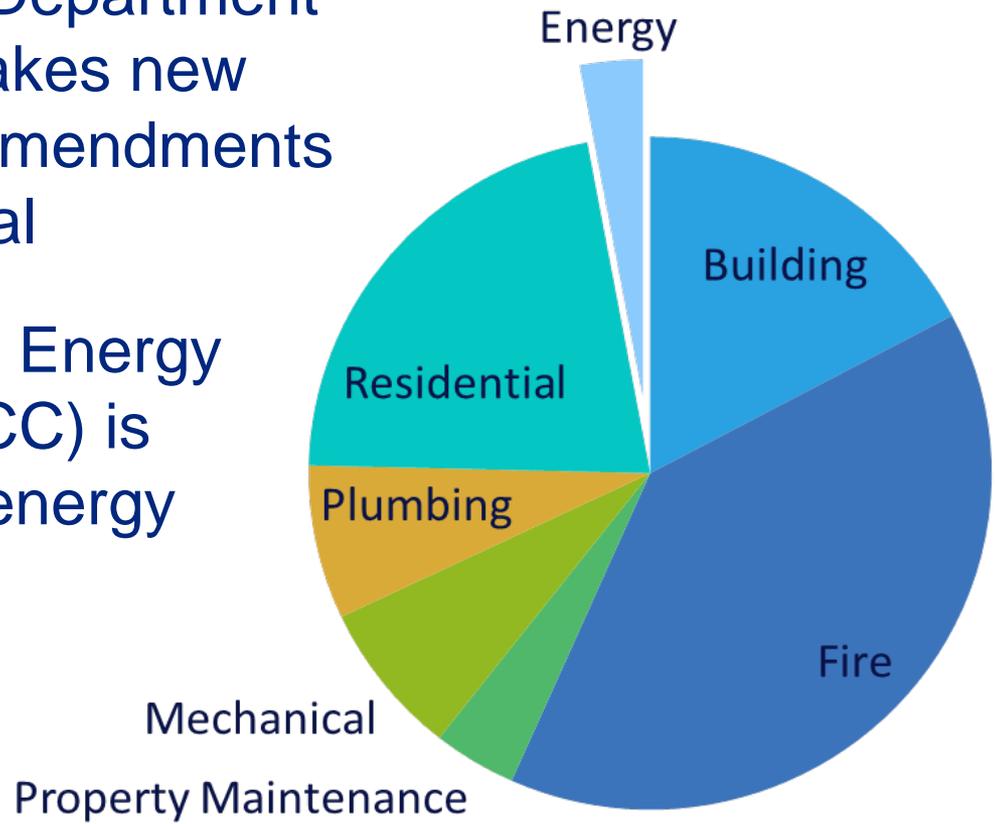
Resource Management Commission  
April 18, 2017





## 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

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

Energy Code Effective  
9/1/16

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

Apr 2016

Jun 2016

Sep 2016

April 2017

May 2016

Jun 2016

Feb 2017

April 2017

Solar Ready Stakeholder Engagement

Energy Code Passed by Council 6/23/16

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

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**

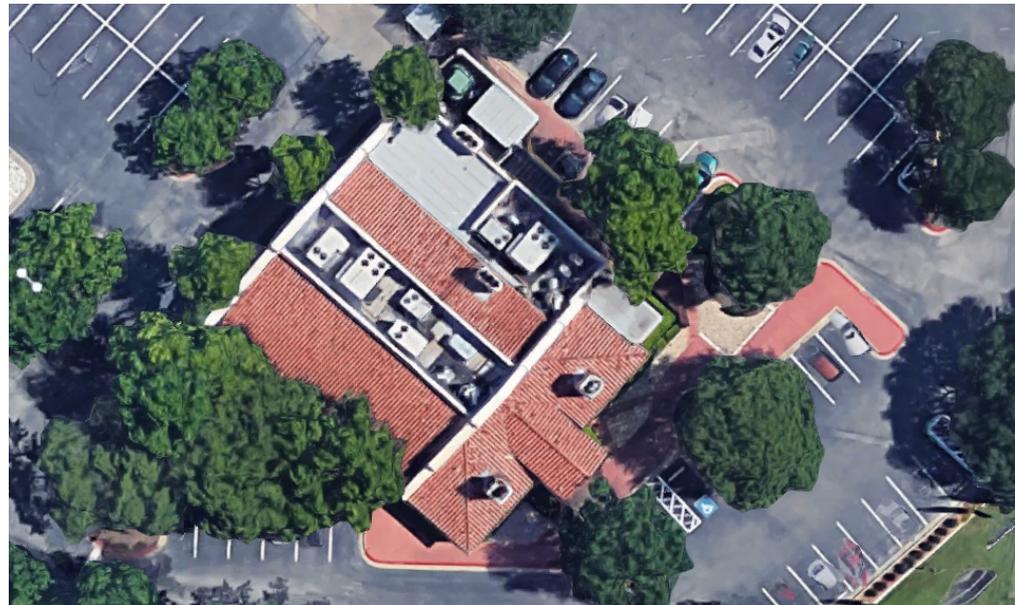
- Amends 2015 International Energy Conservation Code
- Designate portion of roof as “Solar Ready Zone”
  - Free from obstructions, for example:
    - vents, mechanical equipment
  - Appropriate orientation of roof
  - Reserve electric panel space
  - Supports solar goals
- Allows for exceptions, for 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 ≤ \$50 admin/review \$100 - 500 to move vents
  - Other Residential ≤ \$50 admin/review - difficult to quantify other costs if not compliant at plan review



# Solar Ready Timeline – Next Steps

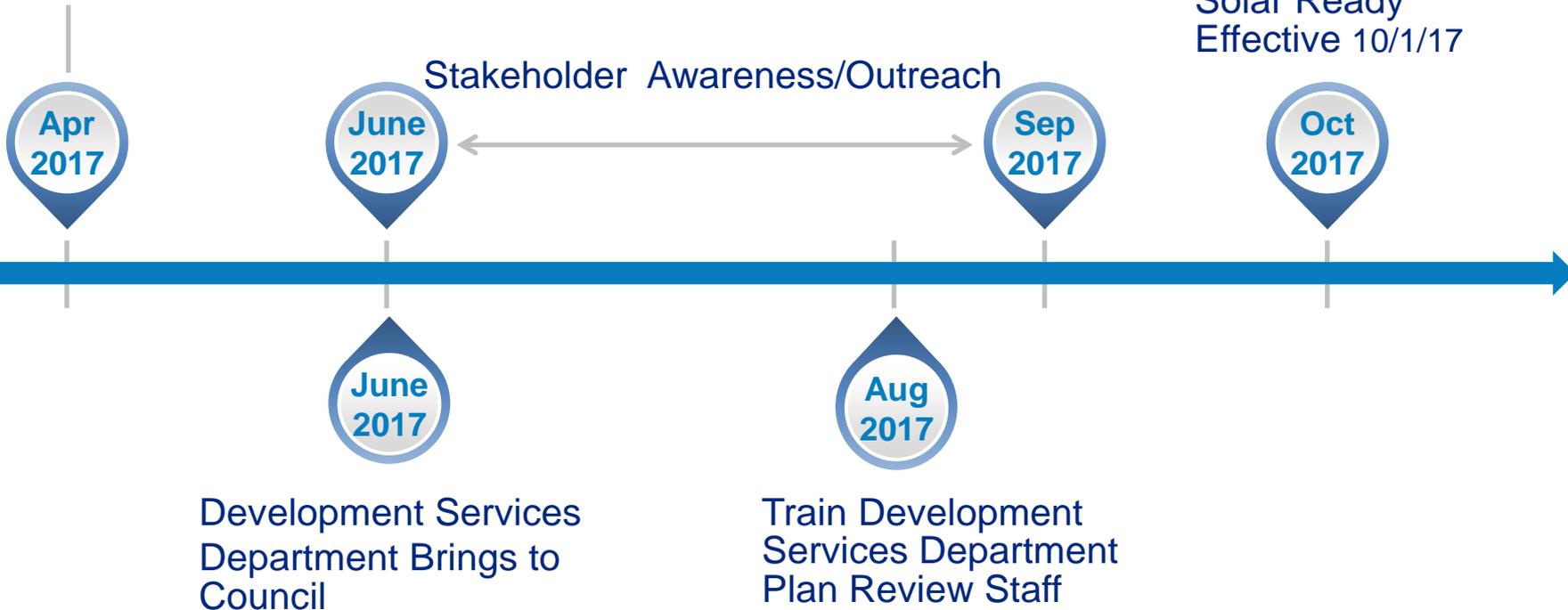
## Additional Board/Commission Review

- 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



# Questions?

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