

Regional Building Decarbonization Technical Committee

Meeting date: April 1, 2025

Agenda Item #: 6 (Attachment C)

Incentives, Energy Advising and Low-Income Communities Programs

Agenda item type: Discussion

Summary

Presentation of relevant background information, a real-world example of a heat pump installation project, and discussion of some design considerations for upcoming incentive program design.

Background

DRCOG staff is completing the evaluation of proposals for administration of its Incentive and Energy Advising Program and will soon move into detailed design of program offerings. Staff will look to the Technical Committee to make recommendations and review high-level program design decisions. This presentation will address critical background information to level-set on typical user experiences and key considerations for program design decisions. The following topics will be addressed, and a discussion from all committee members is welcome to help reach common understanding and generate ideas for DRCOG's staff and vendors during detailed program design.

1. *Technical foundations:* A concise review of heat pumps and the buildings-as-systems approach home performance. This will build an important understanding of potential impacts of the building when evaluating heating and cooling system replacement.
2. *Heat Pump Replacement Case Study:* A real-world case study of a new heat pump installation project from a DRCOG staffer. We will use the example to put ourselves into the perspective of the homeowner and experience some of the challenges of understanding and planning projects as well as the importance of incentives and good advice.
3. *Current Incentive Landscape:* Taking a step back we will briefly review the landscape of existing incentives available in the region including utility, county, state and federal incentives. This will help the committee think about the best approaches for DRCOG's regional incentive programs.
4. *Other considerations for incentive program design:* We will provide a high-level review of other concepts and important considerations DRCOG staff and vendors will be evaluating during program design. A discussion is welcome to share experiences with these topics and provide more feedback for DRCOG staff.

Staff hope that this presentation will provide common background for the technical committee as well as prompt discussion to share experiences and individual expertise relevant to the topics discussed. The presentation should help the committee to better understand the complex program design considerations DRCOG is working through and help the committee engage readily in future feedback opportunities and recommendations.



Action by others

None

Previous discussion/action

None

Recommendation

None

Attachment

Staff presentation

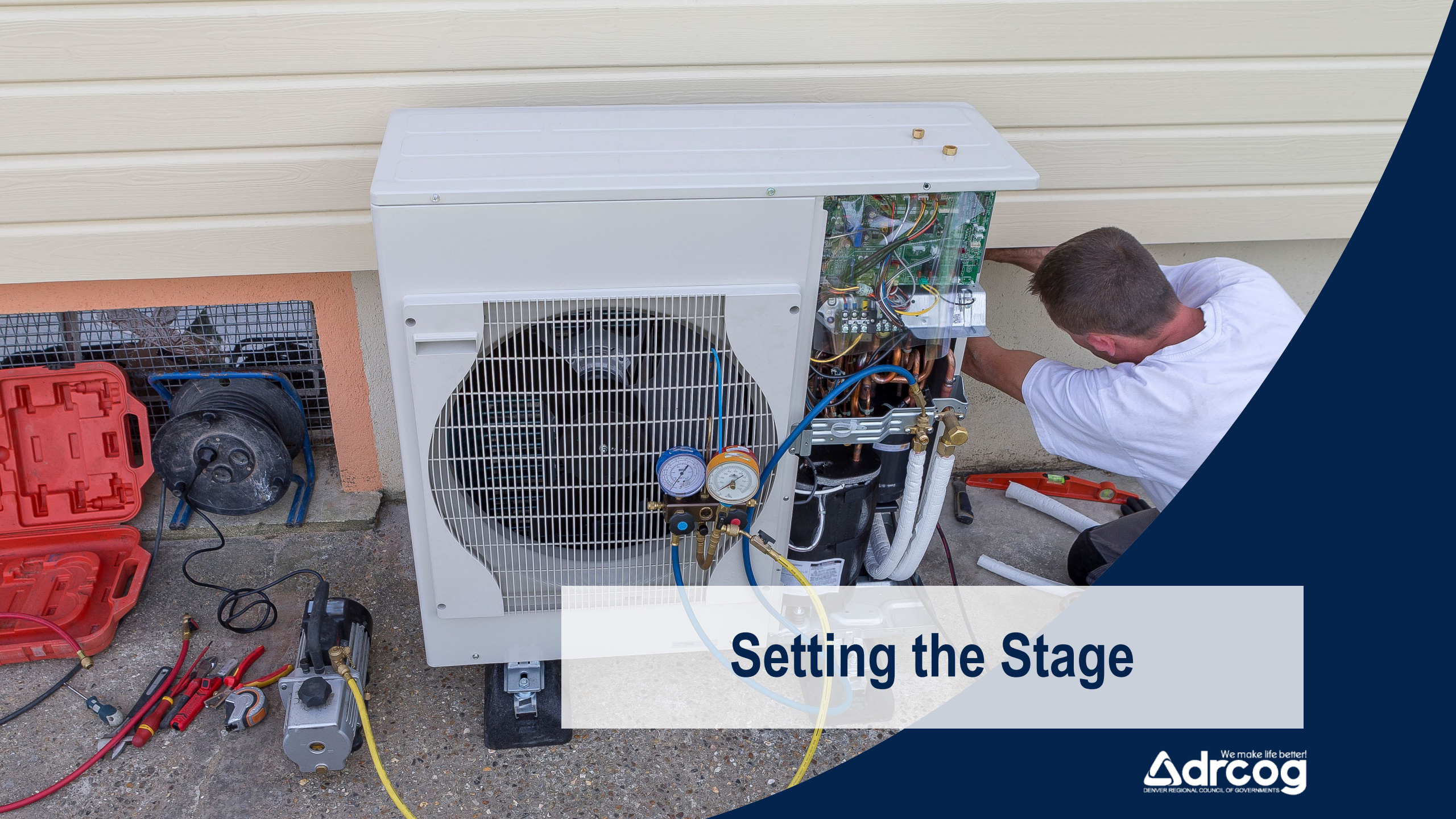
For more information

If you need additional information, please contact Mac Prather, Program Manager (Incentives, Advising, and Disadvantaged Communities) at mprather@drcog.org.





Incentive Program Considerations



Setting the Stage

“Whole building approach”

- Water

Wet → Dry

- Air

High Pressure → Low Pressure

- Vapor

Moist → Dry

- Heat

Hot → Cold

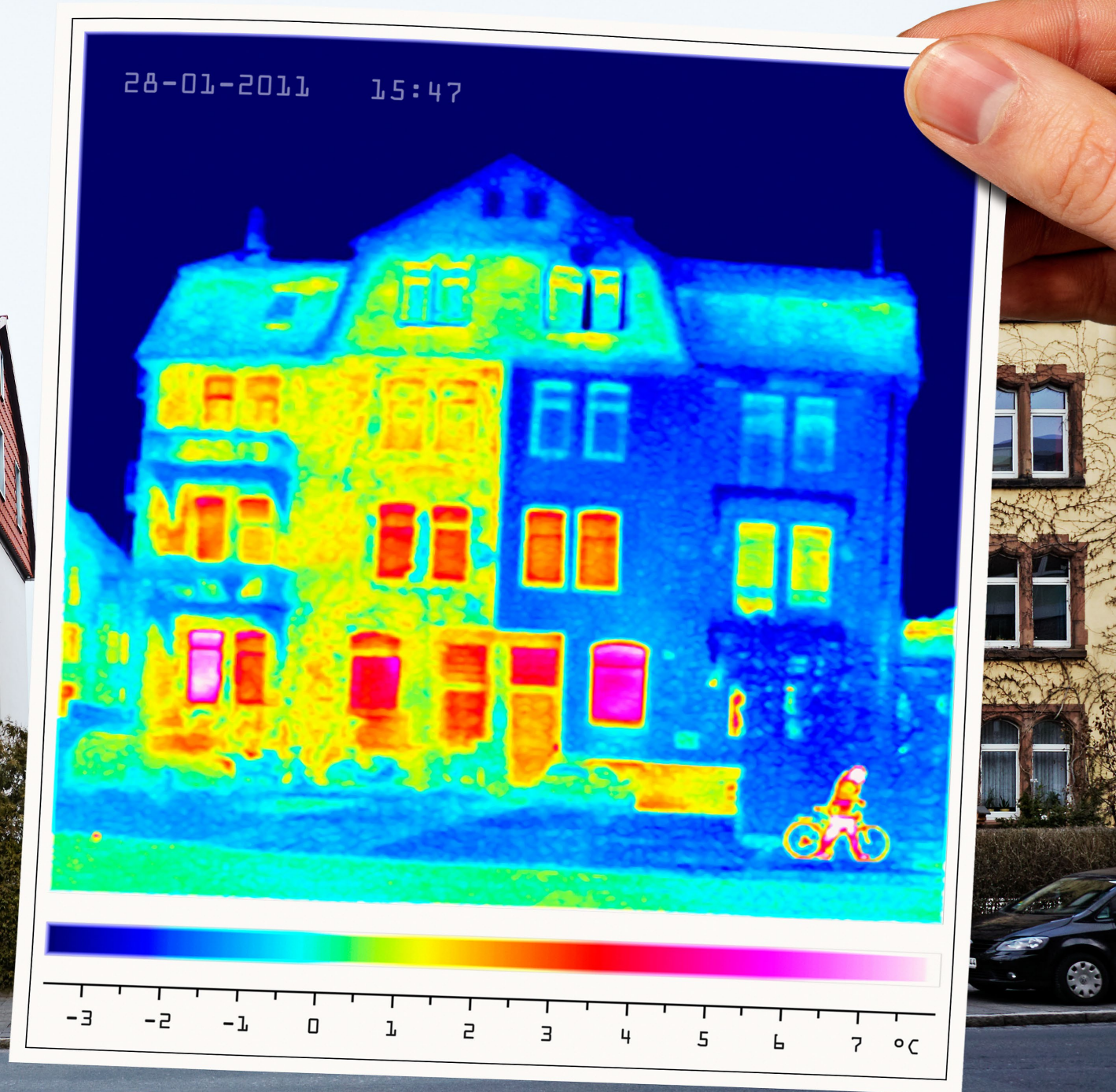


Energy Inefficient



Energy Efficient







A DRCOG example – replacing an aging furnace

Scenario: Aging Furnace and Adding Cooling

- Furnace getting older.
- No existing AC.
- Motivations:
 - **Comfort .**
 - **Value.**
 - **Environment / Health.**
- **Their solution:** New Cold Climate mini-split (ductless) heat pump.



MODELS

Mitsubishi

MXZ-3C24HZ

- MXZ-C Series
- Heating Heat Pump
- 2500 BTU

-10 Year Parts and Compressor Warranty if Registered Within 90 Days

(1) Mitsubishi

MSZ-FS12-U1

- Wall Mounted
- Heating And Cooling
- 10 Year Parts and Compressor Warranty if Registered Within 90 Days*

(2) Mitsubishi

MSZ-FS06NA

- Wall Mounted
- Heating And Cooling
- 10 Year Parts and Compressor Warranty if Registered Within 90 Days*

Included Deductions:

- 10% Off any new High Efficiency heat pump systems up to \$2500 (\$2,500.00)
- 5% SENIOR CITIZEN, MILITARY DISCOUNT UP TO \$500 (\$500.00)
- SERVICE AGREEMENT CUSTOMER DISCOUNT UP TO \$500 (\$500.00)

Other Incentives:

- XCEL COLD CLIMATE AIR SOURCE HEAT PUMP WITH QUALIFIED INSTALLATION (ccASHP) 18 SEER 2, 11.7 EER 2, 8.1 HSPF 2 INCLUDES MINI SPLIT Rebate stopped by xcel on 8/2024 (Customer to receive rebate directly from utility provider in the form of a check or bill (\$1,500.00)
- Denver Climate action rebate (\$3,500.00)
- Federal Tax credit (\$2,000.00)

Net Investment
\$17,020

Financing Details:
Min 3.49% minimum payment
0% APR Payment based on 12 Mos





Customer Questions

“It was complicated.”

- How do I get incentives?
- Will my bills change?
- Should I need to finance?



Incentive design considerations

 **3.4**
million people

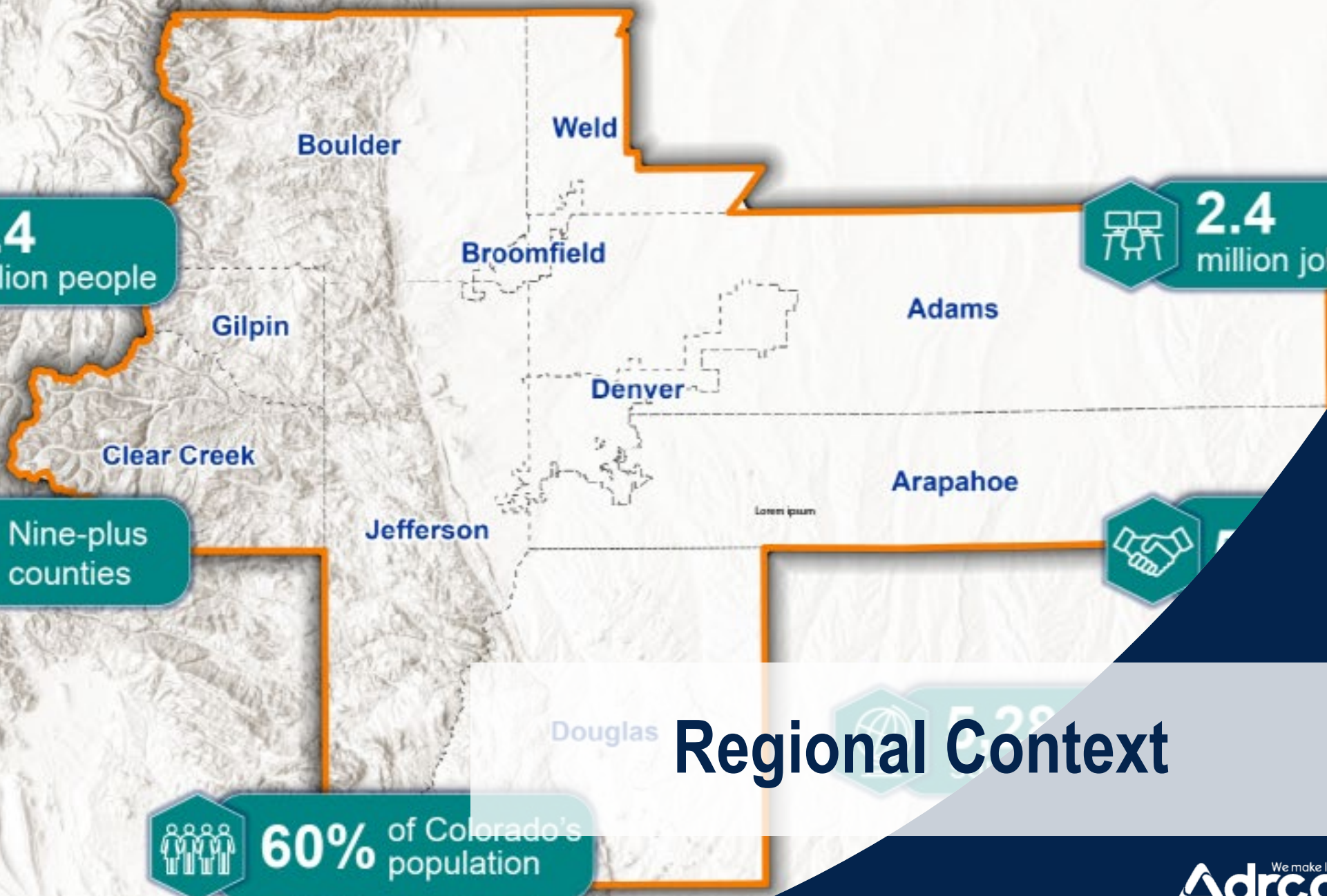
 **2.4**
million jobs

 **Nine-plus**
counties

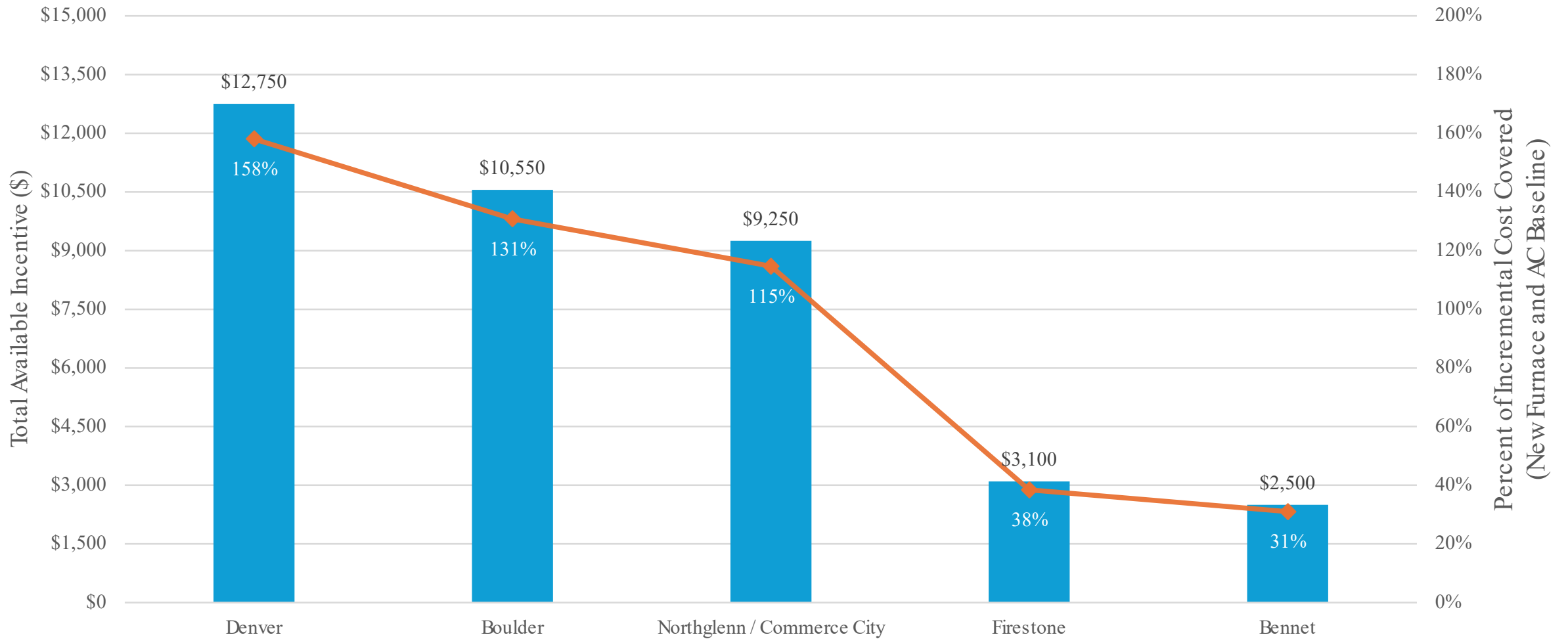
 **5.28**

 **60%** of Colorado's
population

Regional Context



Available Incentives for 3-ton Cold-climate ASHP from Gas furnace and AC (Feb. 2025)





Market Barriers

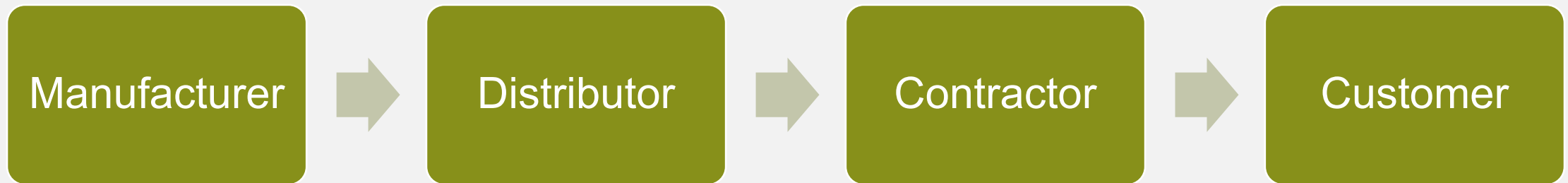
Major Market Barriers

- Contractor acceptance and training (especially whole home approaches).
- Heating system failures.
- Complicated incentive programs.
- Spark gap!
- AC substitutions.



Program Design Considerations

Incentive Intervention Types



Customer cost and financing

- First Cost.
- Differential Costs.
- Operational Costs.
- Maintenance Costs.

Confidence and Ease of Application

- Contractor risks.
 - “Floating incentives”.
 - Incentive amount and equipment uncertainty.
 - Uncertain and increased administrative requirements.
- Customer risks.
 - Contractors as sole source of truth.
 - Different incentive processes.
 - Inconsistencies between quotes.

Thank you!

Mac Prather

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