





Sustain Arvada is a way of honoring Arvada's rich heritage and preserving our resources to foster economic prosperity, environmental stewardship and community vitality today and into the future.

Community Vitality/Community Agriculture

Energy

Land Use

Transportation

Waste

Water



Delva Community Garden, Arvada



GOALS



- **30% Participants of “Resource Smart Arvada” who install energy retrofits that total 20% or more energy reduction**
- **Reduce energy usage per capita by 5% below the 2014 baseline numbers by 2019.**

HISTORY



- Community inquiries
- Lack of funding for incentives
- Aging infrastructure
- Overwhelming
- RFP issued in 2012
- Small start up cost





ICAST



- Over 10 years of Experience
 - In managing end-to-end process
 - Customers from across CO – both residential and commercial
- Ability to look out for best interest of customers
 - Non-profit status
 - Neutral third party – do not own any technology or solution
 - No commissions/payments from contractors or vendors or banks
 - Negotiate best deal– including GC rates/volume discounts
- Experience in Education and Training



ResourceSmart Arvada



1. Energy Conservation
2. Demand Management
3. Renewable Energy
4. Water Conservation
5. Indoor Air Quality
6. Tenant Engagement
7. On-Going Services
 - M&V
 - O&M



Whole is Greater than Sum of Parts

www.ResourceSmart.org/Arvada

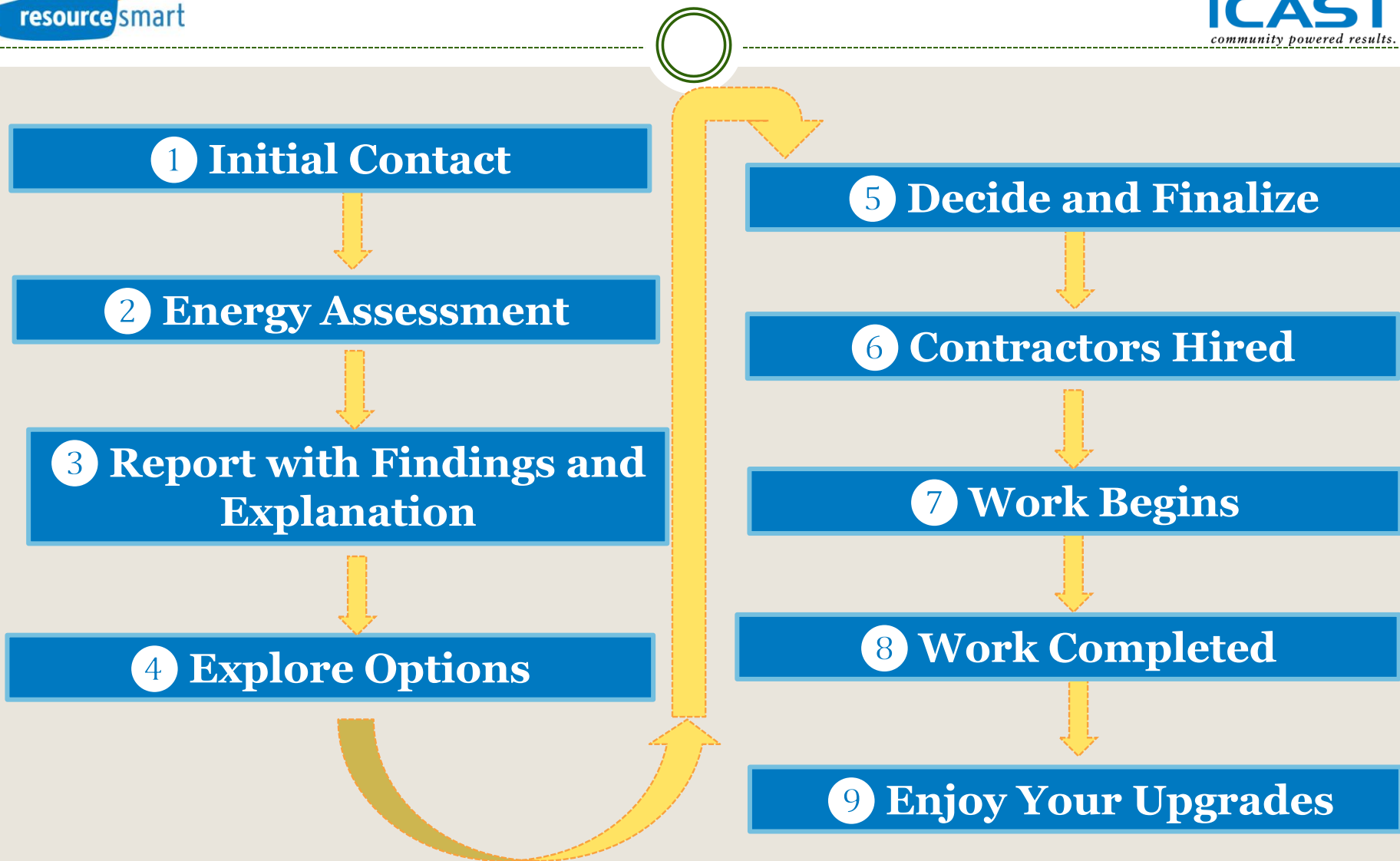


ResourceSmart Role



- **Owner's Representative**
 - **Provide customers a hassle-free, comprehensive program**
 - **Knowledgeable, efficient and neutral expertise**
 - **Access to financing, rebates and other funding**
 - **Access to local, qualified and trained sub-contractors**
 - **Establish and Oversee Inspection**
 - **Provide Client Education**
 - **Manage Invoicing and Payments**
 - **Manage Reporting and M&V**

Process



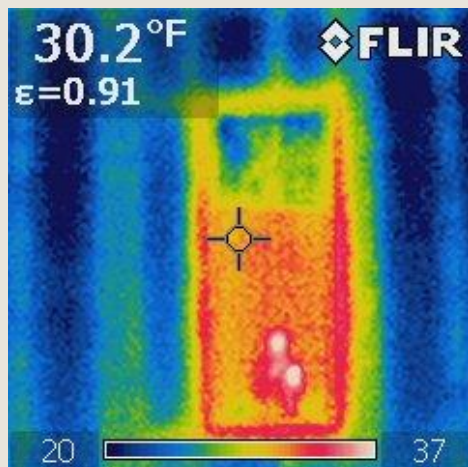


- Heating and Cooling systems
- Lighting
- Building shell
 - Air sealing
 - Insulation
 - Windows & Doors
- Appliances
- Water Consumption
- Indoor Air Quality
- Control Systems

- ✓ Infrared Camera Analysis
- ✓ Blower Door Testing
- ✓ CAZ Testing
- ✓ Energy Modeling
- ✓ Education & Training

Energy Efficiency

- Residential
- Commercial
- Trainings
- Turn-Key services

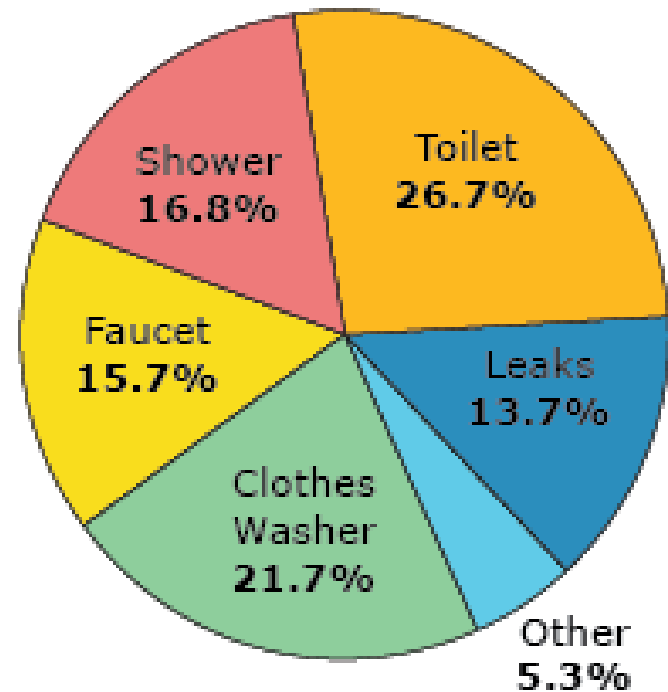


Water Conservation

By installing water-saving features:

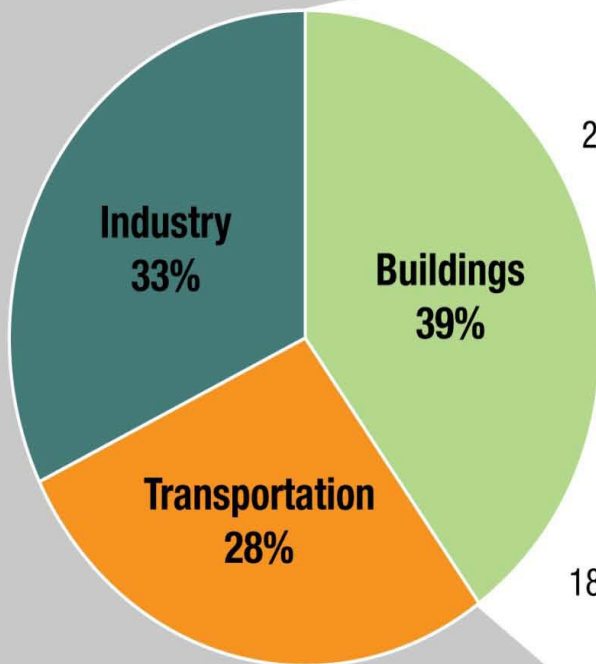
- water use could decrease by 30 percent

How Much Water Do We Use?

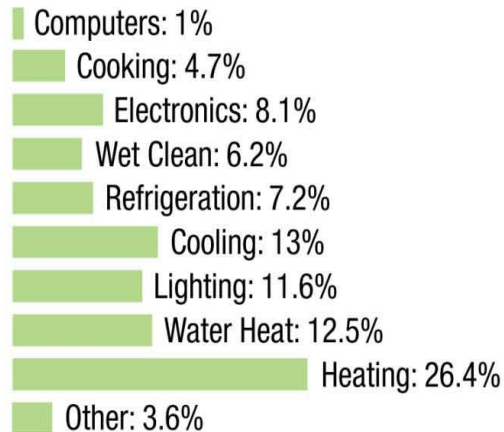


Source: American Water Works Association Research Foundation, "Residential End Uses of Water." 1999

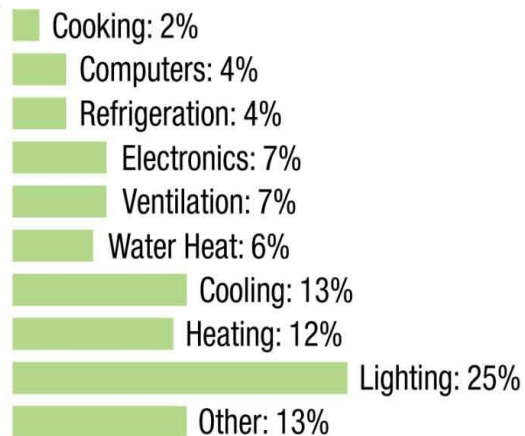
Energy Use by Sector



21% Residential

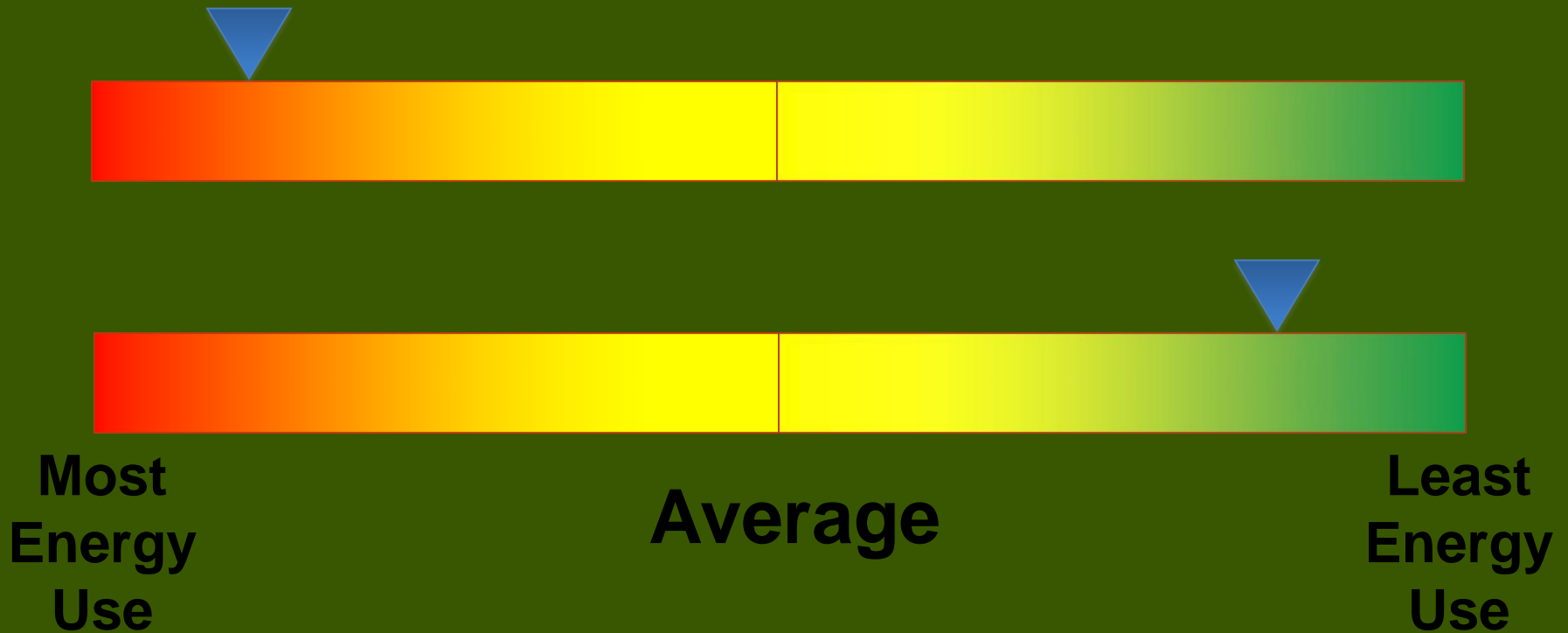


18% Commercial





Your Energy Use compared to your neighbors:



Objectives

- Reduce operating costs
 - Energy, Water, O&M costs
- Increase comfort, health and safety
- Increase value of property
- Benefit your mission
 - Savings for next 20 years are spent furthering mission
- Create business opportunities and jobs for local contractors
- Reduce waste and peak demand
- Environmental benefits
 - Reduced GHG, Hg, SO_x, NO_x,...

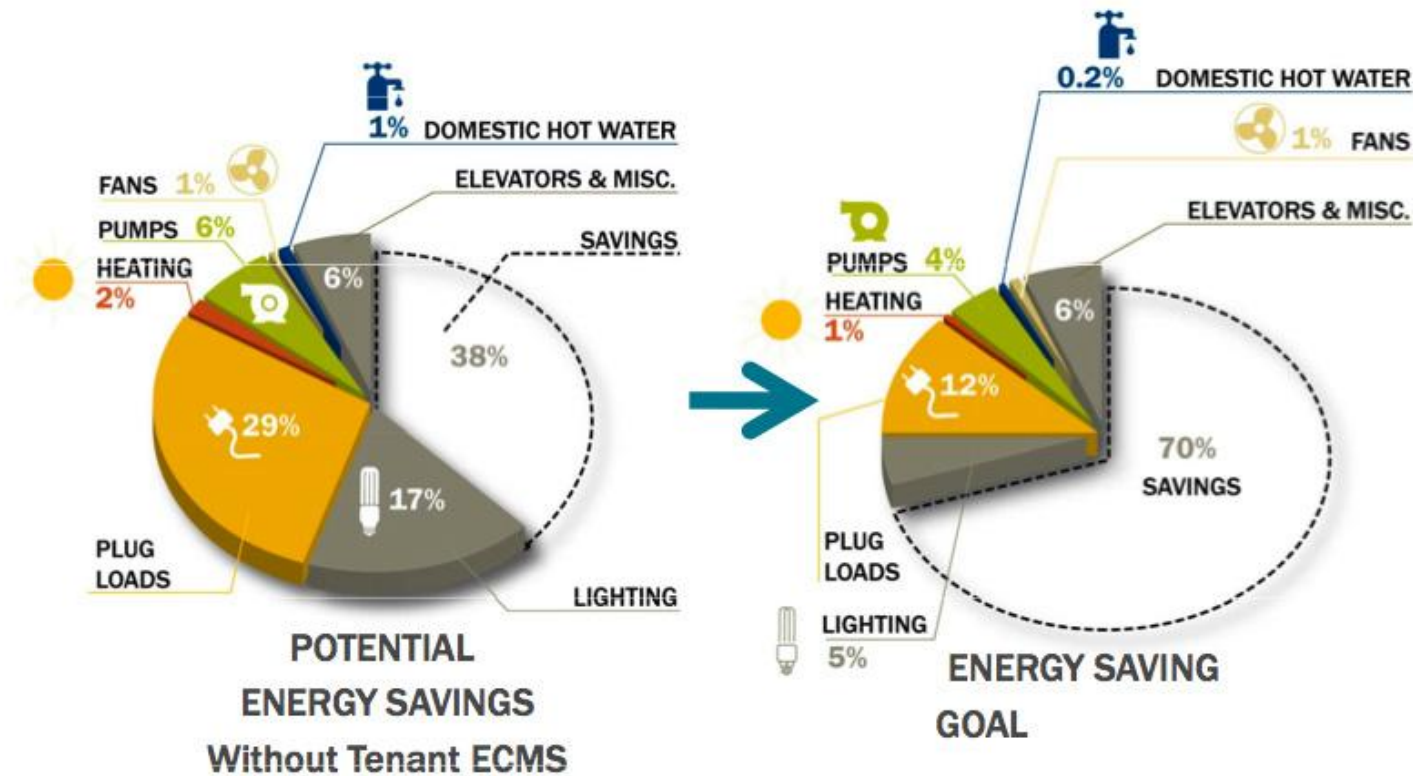


Why Engage Tenants?



- Even in efficient buildings, energy/water use can stay constant or increase over time
- Tremendous potential to further reduce waste through behavior change
- Case studies:
 - Fort Collins HS reduced energy use by 50% over 7 year period through a behavior change campaign
 - University residence halls decreased energy usage by 46% through a behavioral change initiative
- Behavior change optimizes and reinforces 'Green' measures currently in place

ENERGY DISTRIBUTION with TENANT ENGAGEMENT





ResourceSmart Arvada



- Since the program launch, iCAST has completed 332 residential units have been retrofitted saving 42,802 kilowatt hours of energy saving \$38,000 per year.
- \$200,000 per year of Arvada funds
- Revolving loan fund
- 80% AMI to qualify
- iCAST continues to reach out to property management companies and onsite managers to try to get more participants in the program
- HUD EIF grant for affordable housing properties as much as 30% including 20% from Arvada for qualifying customers (min. 20% energy reduction and Behavior Change Measures)



Case Study



Arvada Place Apartments

Economic Impact:

An estimated \$13, 936/year on energy costs with a payback of 9 years

Total Project Cost: \$165,000

Arvada's portion: \$41,000

ECMs Installed:

Replaced 228 existing windows with Cascade Windows that include glass panels with a .31 U value. Replaced two boilers with high efficiency Raypak Xfyre boilers including new pumps, and circulators. Replaced existing large wall lights with more efficient LED wall fixtures. Rewired 150 watt fixtures on the building's corners and installed 11 Phillips 38-19.5 watt LED lamp fixtures.



March 2015 Recognition Event with Jefferson County Housing Authority and HUD





Customer Fit/Challenges



- ✓ Why do you wish to improve your property at this time?
 - What are your motivating factors?
 - What specific goals/expectations do you have?
- ✓ What factors/issues would stop you from moving forward?
 - No Time?
 - Lack of Knowledge?
 - Lack of Funds?
 - Is your ability to take a loan hindered in some way?
- ✓ Who are the decision makers? Are they aligned?



THANKS



QUESTIONS?

**JESSICA PROSSER, AICP SUSTAINABILITY
COORDINATOR**

JPROSSER@ARVADA.ORG 720-898-7511

BARRET RAMEY, LEED AP
BARRETR@ICASTUSA.ORG
W 303.462.4100 X 822