

Scaling EE Retrofits for Small Commercial Apartment Properties (SCAPs)



ICAST (International Center for Appropriate and Sustainable Technology)

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Project Summary

Timeline:

Start date: June 2016

Planned end date: June 2019

Key Milestones

1. Retrofit 170 SCAPs by March 2018
2. Retrofit 500 SCAPs by Sept. 2019

Budget:

Total Project \$ to Date:

- DOE: \$500,000
- Cost Share: \$600,000

Total Project \$:

- DOE: \$998,000
- Cost Share: \$1 Million

Key Partners:

CU-Boulder	RMP
Kutak Rock LLP	Dominion Energy
NH&RA	NMGC
EEBC	NYSERDA
Innovation Pavilion	Rubin Brown LLP

Project Outcome:

1. Document and Improve on the current ICAST 'one-stop-shop' approach
2. Create Two New Services that further enhance the sustainability of the ICAST model
3. Add other service providers through a 'franchising' / "affiliate' model
4. Retrofit 170 SCAP bldgs. by end of Phase 1 and 500 by end of Phase II

TEAM

International Center for Appropriate and Sustainable Technology



- 17 year old 501C3 nonprofit spin-off from Univ. of Colorado, Boulder
- Mission: Provide economic, environmental, and social benefits to underserved communities
- Approach: Develop and Implement **market-based solutions** that are **scalable**
- Focus: Intersection of Clean Energy and Housing
- Partner with Academia, Service Providers, MF owners and Managers, Trade Associations, Contractors, etc.



Challenge: Target Market

- ❖ **Multifamily (MF) is ~25% of residential market**
 - Subsidized Affordable – HUD, LIHTC, USDA-RD
 - Naturally Affordable / Market Rate
- ❖ **Underserved and untapped market for EE retrofits**
 - Commercial Property but Residential Use
 - Complex Ownership / Management Structure
 - Split-Incentive hurdle – LPs, Agencies, Property Mgrs
 - Utility Rebate programs driven by Meter/Utility Account Holders



Scaling Energy Retrofits for SCAPs

Grant Deliverables:



1. Document and Improve on the current ICAST 'one-stop-shop' approach
2. Create Two New Services that further enhance the sustainability of the ICAST model
3. Add other service providers through a 'franchising' / "affiliate' model
4. Retrofit 170 SCAP bldgs. by end of Phase 1 and 500 by end of Phase II

One-Stop-Shop

✓ **Portfolio & Property Assessments**

1. eCNA / GPNA
2. Energy Assessments
3. Green Certifications

✓ **Design**

1. Bid Specifications

✓ **Access to Financing**

1. Off-Balance Sheet
2. Incentives and Rebates



✓ **Oversee Retrofit of MF**

1. Green Retrofit
2. Moderate Rehab

✓ **O&M Training**

1. Staff
2. At-risk Youth

✓ **Tenant Engagement**

1. On-Site
2. Online

Phase 1 Deliverables

(June 2016 – Dec 2017)

Key Deliverables	Results
Identify and Serve 170 SCAP properties	<ol style="list-style-type: none"> 1. 405 SCAP buildings actually retrofitted 2. Technical Assistance for over 1,000 buildings including energy audits and consulting services.
Improve “One-Stop-Shop” efficiency and efficacy	<ol style="list-style-type: none"> 1. Thorough review and revision of ICAST processes and SOPs completed. 2. All Depts. developed KPIs, Checklists and Training Manuals 3. A Continuous Improvement Program established
Develop business plan and launch 1 st new service	<ol style="list-style-type: none"> 1. Business Plan for both new services completed 2. Both new services launched: <ul style="list-style-type: none"> - Green Consulting Services - Utility DSM Services
Develop business plan for ‘franchising’ model	<ol style="list-style-type: none"> 1. Business plan for affiliate program completed 2. Franchising approach not viable yet

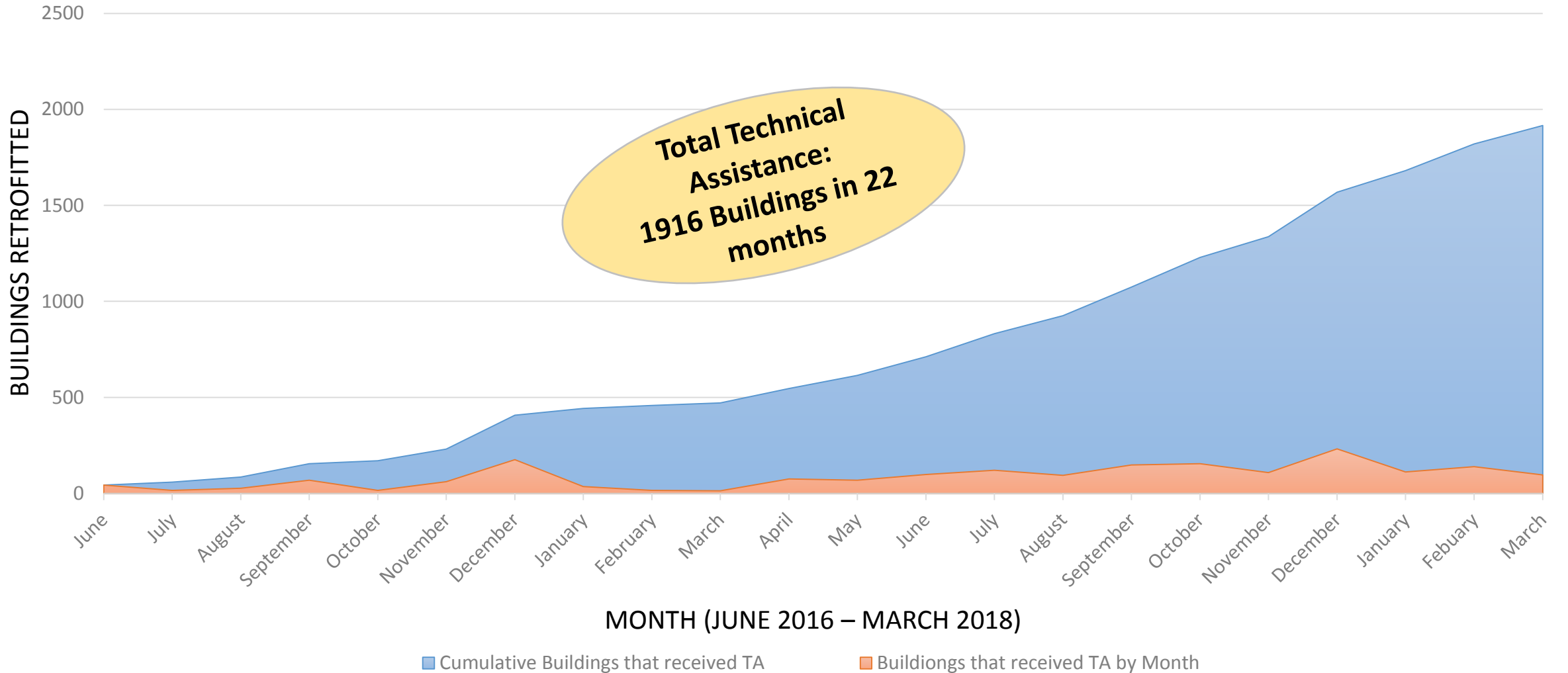


Phase 2 Deliverables

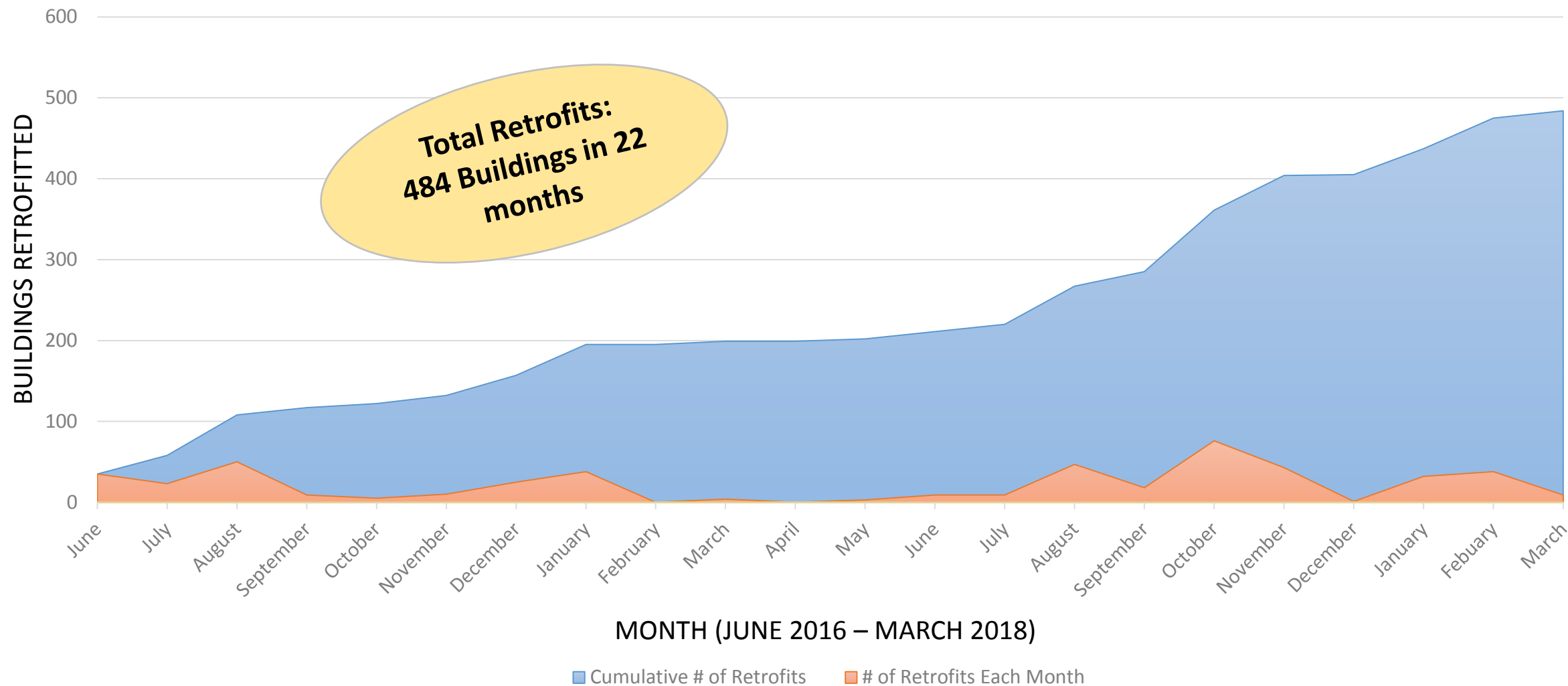
(Jan 2018 - June 2019)

Key Deliverables	Status
Establish National Presence	<ul style="list-style-type: none">○ Staff presence: CO, NM, UT and TX○ Projects completed: MS, OK, AZ and ND○ Contracts signed: NY and MO○ Pipeline: NV, AZ and CA
Develop and Launch 2 nd new service	<ul style="list-style-type: none">○ Completed in Phase I
Identify, Select and Train Two Franchisees/Affiliates	<ul style="list-style-type: none">○ 2 Youth Build Org. have signed as Affiliates – two more in pipeline<ul style="list-style-type: none">• Trained on simple EE retrofits – SFCC certification program○ 2 GC's have signed as Affiliates – one more in pipeline<ul style="list-style-type: none">• Training on one-stop-shop approach
Retrofit 500 Buildings, with 100 through Affiliates	<ul style="list-style-type: none">○ 484 SCAPs retrofitted at date○ 36 SCAPs with Affiliates within 3 months

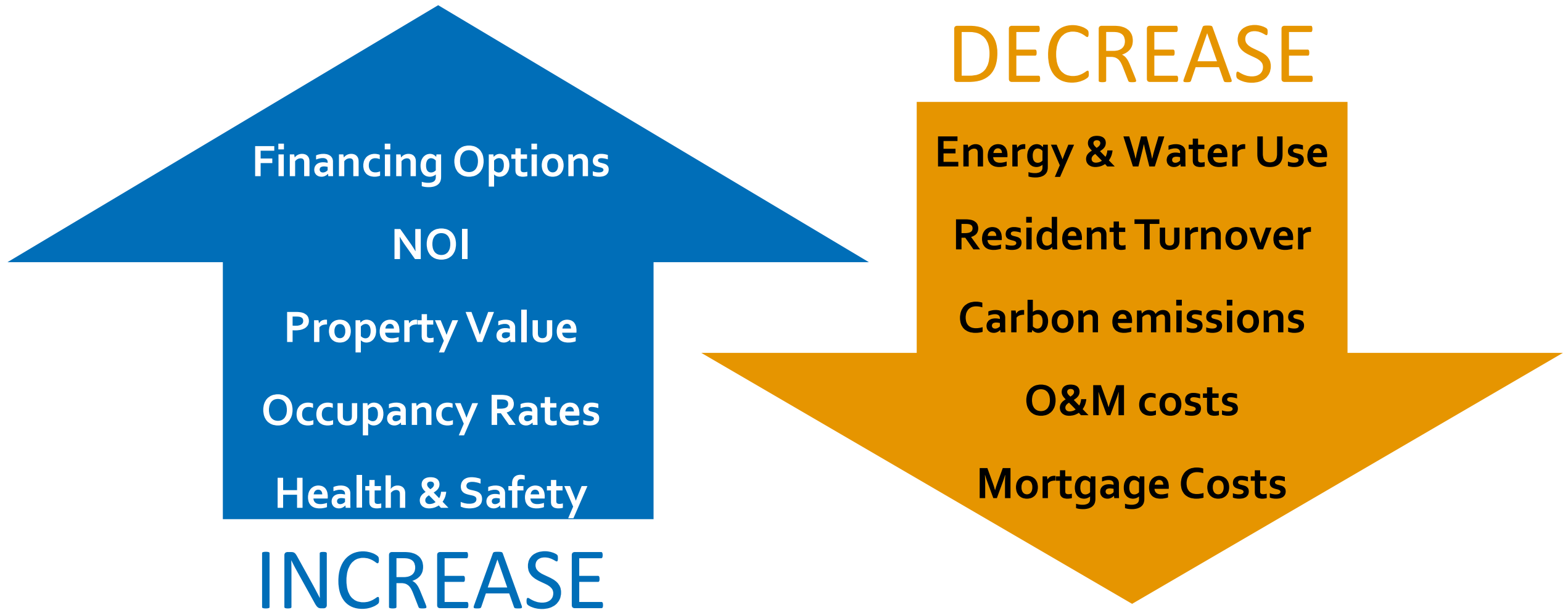
SCAPs Given Technical Assistance



SCAPs Retrofitted



The Benefits of Going Green



Green Financing Options

EQUITY
LIHTC
HOME FUNDS



Bridging the Gap in Financing

DEBT
BONDS
SOFT LOANS



Off-Balance-Sheet Financing

- EPC
- PACE
- PPA
- EaaS

Green Lending Incentives

- FHA – MIP Reduction
- Fannie – MF Green Financing
- Freddie – MF Green Advantage

Green Consulting



- EPC for HUD, USDA, Market-rate
 - 2 PHA contracts (5 properties)
 - Failure with USDA (18 properties)
 - 2 Market Rate in Pipeline
- RAD Green Incentives for PHAs
 - 3 clients contracted (5 properties)
 - 2 in pipeline (8 properties)
- PACE, for all MF, where applicable
 - 2 clients completed
 - 1 contracted (2 properties)

Green Consulting

- Green Loans for FHA, Fannie, Freddie
 - 2 clients (8 properties)
- NZE design-build
 - 1 client contracted



Utility DSM for MF

- Value Proposition to Utilities
 - Pay-for-performance
 - Comprehensive Custom program
 - Market Rate and Income Qualified
 - Residential and Commercial
- 3 Utility clients already contracted
- 1 RFP won - Contract Negotiations
- Partnership with Lockheed Energy
- Discussions with 2 Utilities underway



Case Study

EPC: Truth or Consequences Housing Authority



1. Two properties with total of 100 units (70 and 30)
2. EE upgrades incl. lights, low-flow devices & HVAC
3. 235 kW of Solar PV
4. Total value of EPC: \$587,500

Case Study

DSM: Rocky Mountain Power

1. RMP is Utah's largest electric utility
2. Goal is 30 million kWh over 3 years
3. Option to increase goal and territory into PacifiCorp.
4. 20% bonus for income qualified, which is 50% of total goal



Case Study

Sweetwater Construction, SLC, UT



- GC affiliates have existing ability to manage extensive retrofits that include EE.
- Training on one-stop shop delivery
 - Energy Auditing
 - Selecting higher efficiency equipment
 - Incentives for EE retrofits

Impact To-Date



1. kWh savings = 2,844,746 kWh
2. Therm Savings = 224,636 Therm
3. Utility Cost Savings = \$726,127
4. Investment in local communities = ~\$5 Million
5. Jobs created = ~110

Lessons Learned



1. DSM Services are a strong delivery method for EE retrofits to the SCAP market
2. Consulting Services are a successful expansion tool, especially for future trends
3. Solar PV projects for SCAPs have difficulty attracting equity financing
 - ICAST is working on an aggregation approach
4. PACE projects are a challenge for SCAPs, especially affordable housing
5. Ability to leverage all ICAST services will enhance sustainability of ICAST

Next Steps



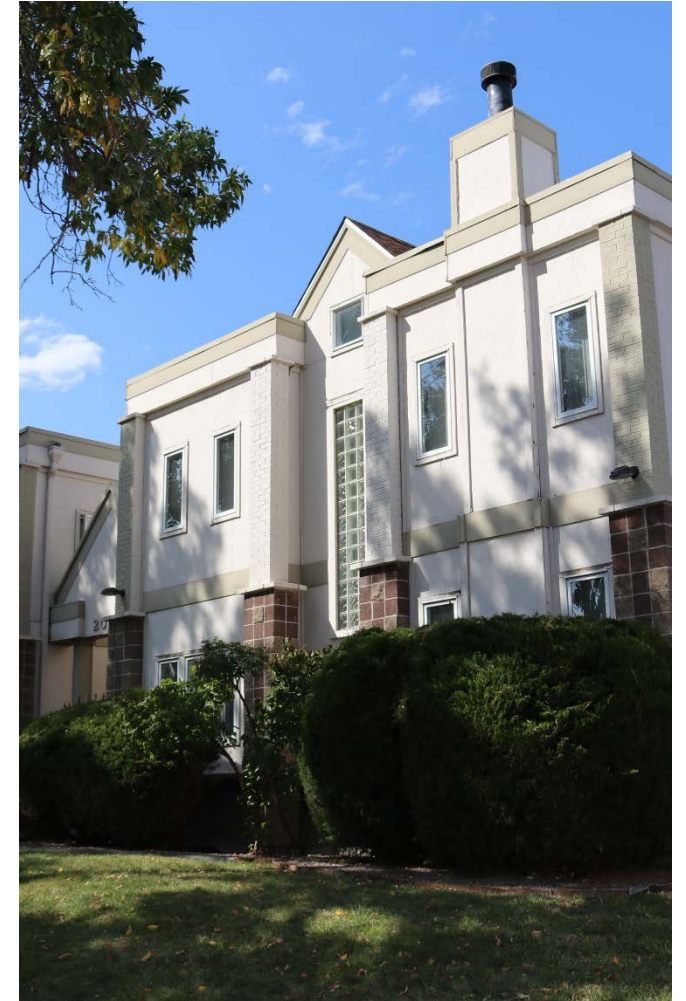
- Continue to service SCAP buildings with enhanced one-stop-shop model
- Continue to expand Consulting and DSM Services
- Finalize training with current Affiliates on one-stop-shop model
- Select and train 2-3 additional Affiliates
- Develop business plan for the future of ICAST

Thank you!



Questions?

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Project Budget

Project Budget: \$2.1 Million

Variances: None

Cost to Date: 50%

Additional Funding: Numerous

Budget History					
June 2016 – FY 2017 (past)		FY 2018 (current)		FY 2019 – June 2019 (planned)	
DOE	Cost-share	DOE	Cost-share	DOE	Cost-share
\$200,000	\$300,000	\$300,000	\$300,000	\$500,000	\$600,000

Project Plan and Schedule

Tasks to be performed	Quarters											
	1	2	3	4	5	6	7	8	9	10	11	12
Activity 1: Enhance Current Model for EE Retrofit of small commercial MF properties												
Continue Providing Current EE Retrofit Services in CO, NM and TX	■	■	■	■	■	■	■	■	■	■	■	■
Learn from current practices to improve processes and systems and document them		■	■	■								
Develop Training program for franchisees to replicate ICAST model				■								
Activity 2: Develop New Services												
Research best practices and conduct feasibility analysis for new services	■	■										
Develop business plan including operations model for viable new services		■	■									
Launch new services and refine service model and business plan			■	■			■	■		■	■	
Document processes and establish efficient systems for successful new services					■				■			■
Develop training program for franchisees to provide the successful new services						■				■		■
Activity 3: Establish National Presence												
Research best practices and conduct feasibility analysis for geographic expansion	■	■	■	■								
Develop business plan including marketing plan & operations model for franchise model		■	■									
Attract franchisees and evaluate the applicants to select first two franchisees				■	■							
Activity 4: Scale Up												
Finalize Resource Manual with processes, case studies, training modules, white papers, etc.										■	■	■
Present Knowledge gained from this project at national and regional Conferences & Seminars					■	■	■	■	■	■	■	■
Advertise successful ICAST model to potential franchisees										■	■	■
Train new franchisees in 1-stop-shop model and oversee retrofits by them												■