



Case Studies Bringing It All Together



NH&RA

NATIONAL HOUSING &
REHABILITATION ASSOCIATION





ICAST

- 22-year-old 501C3 national nonprofit
- **Greening of MFAH properties**
 - ✓ Turn-Key Projects - Assessment, Design-Build, Finance, Training
- **'Green' Services**
 - ✓ EE, Solar, EV, BESS, EMS, Water Conservation & Healthy Bldgs.
 - ✓ Workforce Training
- **MF customers served nationally**
 - ✓ National/Regional Portfolio Accounts
 - ✓ WAP & DSM Implementer (\$200M)
 - ✓ BIL/IRA Implementer (\$300M)

➔ **Turn-Key Retrofits for MFAH**



TBL FUND

- Community Development Financial Institution (CDFI) – Certified by US. Dept. of Treasury
- Financial Ally to US DOE and HUD
- Provide Debt, Tax Equity, and Energy Financing to MFAH
 - i. Bridge loans (for Rebates, Tax Credits, Incentives)
 - ii. Solar PPA (power purchase agreements),
 - iii. PACE (property assessed clean energy),
 - iv. EPC (energy performance contracts),
 - v. Leases
 - vi. Direct Pay or Transferability of ITC



Key Incentives for MFAH

Treasury

30% ITC + BONUS
Solar and Energy Storage

179D Tax Deduction
up to \$5/sq. ft.

30% ITC
EV Charging Stations

45 L Tax Credit
Up to \$5,000/unit

DOE through SEO Cash Rebates

Electrification Rebate
(HEEHR): \$4.5B
— Up to \$14K/unit

**Performance- Based,
Whole Home Rebates**
(HOMES): \$4.3B
~ Up to \$8K/unit

HUD - MFAH

GRRP (\$847M)

DOE - BIL

WAP (\$6.4B)
Retrofits for MFAH

EPA

GGRF (\$20B)
Intermediaries

Solar for All (\$7B)
NPO, Govt., Tribes

**Climate Pollution
Reduction Grants** (\$5B)
State & local govts

**EJ Community Block
Grants** (\$3B)
CBOs

EPA Programs for MFAH

1. \$20B in grants and mainly low-cost loans for green upgrades
 2. \$5B in grants to States and Local Govs for pollution reduction projects
 3. \$3B to CBOs and Local gov't for Pollution reduction grants and loans
 4. \$7B for solar and BESS installs through SEOs
- ➔ All of these programs can ultimately either grant fund or offer low-cost loans for EERE work in MFAH





Case Study: Electrification

Property Details:

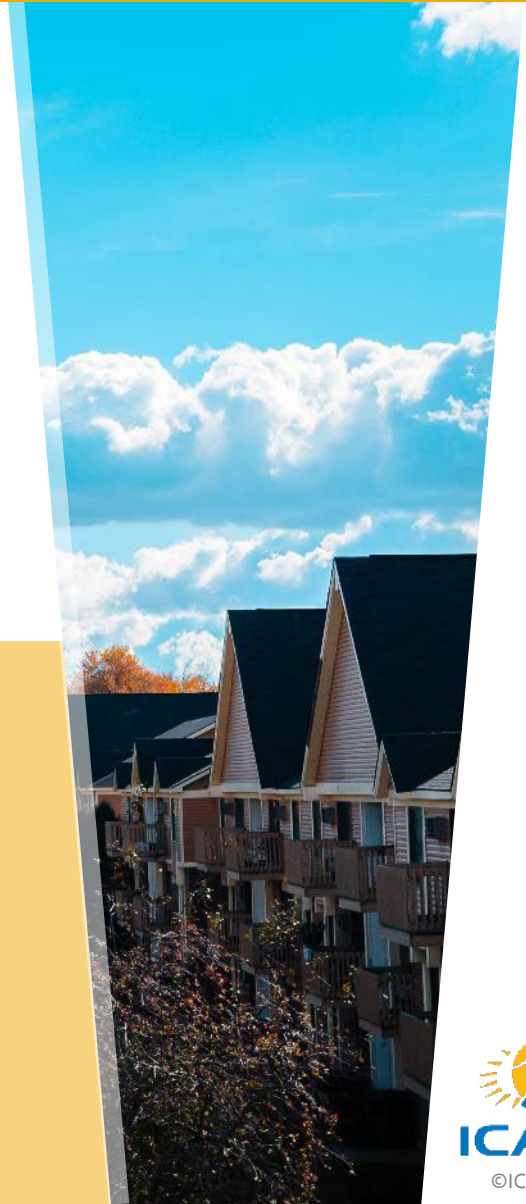
- ❖ HUD PBRA
- ❖ 104 Units
- ❖ Built in 1971
- ❖ Michigan

Scope of Work:

- ✓ ccASHPs (fuel-switch)
- ✓ HPHW (fuel-switch)
- ✓ Weatherization
- ✓ Induction stoves (fuel-switch)

Project Budget: \$1.5M

- Utility Rebates: **\$32K**
- WAP Funding: **\$208K**
- DOE Home Electrification Rebates: **\$1.2M**





Case Study: WAP + DOE Rebate

Property Details:

- ❖ LIHTC
- ❖ Garden-style
- ❖ 275-unit property
- ❖ Built in 2003
- ❖ Tennessee

SOW: Phase I - 72-units

- ✓ ccASHP HVAC + Smart T-Stats
- ✓ Weatherization
- ✓ ES Fridges*
- ✓ LED Lighting
- ✓ H&S upgrades

Project Budget: \$1.6M

- WAP Funding: **\$298K**
- DOE Rebates: **\$576K**
- Total Net Customer Cost: **~\$134K**



Case Study: Comprehensive

Property Details:

- ❖ PBRA
- ❖ 120 units over 16 buildings
- ❖ Built in 1985
- ❖ Washington, DC

SOW:

- ✓ ccASHP HVAC + Smart T-Stats
- ✓ HPHW
- ✓ 134 kW solar PV
- ✓ Level 2 EV Chargers
- ✓ BESS

Project Budget: ~\$2.8M

- DOE Home Electrification Rebates: ~\$1.2M
- Solar, BESS & EV - ITC @ 50%: \$500K [or \$300K if @ 30%]
- EPA SFA*: ~\$400K
- HUD's GRRP** - Leading Edge cohort - \$1.2M

Case Study: Comprehensive

Property Details:

- ❖ PBRA
- ❖ 150-unit property
- ❖ 33 buildings
- ❖ Built in 1973
- ❖ North Carolina

SOW:

- ✓ ccASHP HVAC + Smart T-Stat
- ✓ HPHW
- ✓ Induction Stoves
- ✓ Electrical Infrastructure Upgrades
- ✓ Energy-Efficient Refrigerators
- ✓ Solar PV w/ BESS

Project Budget: \$6.15M

- ❖ Utility Rebates: **\$450K**
- ❖ Solar & BESS ITC: **\$180K @ 30%**
- ❖ DOE Electrification Rebates: **\$2.1M**
- ❖ EPA GGRF*: **\$3.4M debt at 3.5%**

Bringing It All Together

Possibilities for Green Funding / Apartment

1. **\$14,000 (or \$8,000) rebate from DOE**
2. **\$5,000 TC from 45L or \$3,750 TD from 179D**
3. **\$10,000 grant from WAP (for retrofits only)**
4. **\$5,000 rebate from local Utilities**
5. **\$3,500 - Solar ITC & Depreciation**
6. **\$2,000 from EV Tax Credits + Utility Rebates**
7. ***\$25,000 Low-cost loan from EPA GGRF or DOE RLF***
8. **\$80,000 grant from HUD's GRRP**
9. **\$10,000 grant from USDA (rural for profit business)**

➔ **Opportunity to preserve MFAH as High-Performance Bldgs.**





Thank You!

Questions?

Ravi Malhotra
Founder and President, ICAST
ravim@icastusa.org