MULTI-FAMILY ENERGY EFFICIENCY AND HOUSING AFFORDABILITY PROGRAMS

Multi-family Energy Efficiency and Housing Affordability (MEEHA I) 2009 – 2011

- Federal Department of Energy (DOE) State Energy Program (SEP)
- Regional Greenhouse Gas Initiative (RGGI) Maryland Strategic Energy Investment Fund (SEIF)

MD BeSMART Multi-family Program 2011 – Present

- Federal Department of Energy (DOE) Energy Efficiency and Conservation Block Grant Program (EECBG)

EmPOWER Maryland (MEEHA II) 2012 – Present

- Participating Utility Rate Payer funded

Customer Investment Fund 2014 - Present

- Exelon-Constellation merger
MARYLAND DHCD

- DHCD also is the Housing Finance Agency for the State of Maryland
- $1.5 billion portfolio of multi-family loans to over 400 developments
- Strong working relationship with Developers and property owners
- Strong understanding of complex financing instruments
- Existing 30 year experience and funding for energy efficiency measures
CREATING OWNER INCENTIVE

• Qualified Allocation Plan – Low Income Housing Tax Credits
  – Requires rehabilitation projects to achieve at least 15% savings from post rehabilitation
  – The availability of energy efficiency funds provides the vehicle to require projects to be more energy efficient at minimal cost to owners
  – Applications are scored through a competitive process. Projects achieving higher savings receive more points
  – Every project submitted for financing is evaluated for energy efficiency funding

• Energy audit requirements are the same for all multi-family programs for ease of use and application of energy efficiency funding

• An energy efficiency audit firm must be part of the initial development team
MEEHA I (2009)

- Developed as a partnership between the Maryland Energy Administration (MEA) and the Maryland Department of Housing and Community Development (DHCD)

- $9.5 million over three years

- MEA provided the technical training and guidance for DHCD staff and review of the plans and specification

- Energy audits were not initially required
MEEHA I

- Project by Project Energy Analysis submission
  - Analyzed energy efficiency specifications
  - Verified by MEA
  - Funded measures predicting positive Savings to Investment Ratio (SIR)
- Construction progress inspections completed jointly by DHCD construction inspectors and MEA technical staff
- Consciously designed to incorporate flexibility with building owners
- Provided funds as grants and loans for energy efficiency projects predicting an overall project Savings to Investment Ratio (SIR) greater than 1.1 and CER 10
MEEHA I

- Created strong and clear separation to ensure that funds went only to energy efficiency versus filling equity gaps in financing

- Identified that despite credentials, projected savings from analysis provided by engineers and architects were seriously flawed and inconsistent

- Deep energy retrofit
  - 50% reduction in bills, year over year
  - Identified significant problems with understanding of energy efficiency by top engineers, contractors and architects
  - Identified issues related to permitting and cost containment
MEEHA I RESULTS

- Significant impact on new construction and retrofit projects
- 48 projects consisting of 5,184 units
- Total awards: $8,885,407
- Average residential household expected to save over $500 annually on utility bills
- Savings kWh (unverified): 26,615,787
  (savings based on project engineer/architect submitted analysis)
- Savings Therm (unverified): 359,085
  (savings based on project engineer/architect submitted analysis)
MEEHA I – A LOOK BACK

• Identified different projects required different funding: loan/grant

• Expanded beyond the DHCD portfolio

• Identified need for “Best Practices” for consistency with energy analysis
  – Implemented energy audits with building simulation

• Significant learning curve for DHCD staff
  – DHCD needed knowledgeable and experienced staff
MEEHA II (2012)

• EmPOWER Maryland
  – EmPOWER is the Maryland State program which aimed to reduce energy consumption by 20% by 2015
  – Funded through a utility rate payer surcharge
  – Requires a low income program component
  – DHCD submitted a proposal to the Maryland Public Service Commission which was awarded December 2011 for implementation in 2012

• Proposal focused on the following:
  – Consistent guidelines and measures Statewide due to the existing DOE Weatherization Program
  – Alignment with application intake process
  – Consistent reporting
  – Relationship with a large network of property owners
  – Ability to develop a Maryland-centric process
MEEHA II

- Maryland Public Service Commission awarded DHCD $12.5 million from 2012-2014
- Work was generally restricted to individually metered electric heated/air conditioned tenant based units
- Allowance of up to 15% of project funding for common areas
- Minimum SIR of 1.1 for the overall project
- 2012 IECC resulted in a major reduction in eligibility for funds for new-construction
MEEHA II CHALLENGES

• Tenant sign-off for utility consumption

• Obtaining utility usage
  – Privacy concerns

• Business Structures and complexity

• EmPOWER time constraints (3 Years)
  – Multi-family projects can take 18-36 months to complete the underwriting and construction process

• DHCD qualified staffing
MEEHA II - CHALLENGES CONTINUED

• Education and communication related to understanding the affordable housing industry by utility partners and Public Service Commission Staff and other stakeholders

• EmPOWER – a new arena
  – Historically, utilities provided energy efficiency programs
  – DHCD is the odd man out as both a state agency and new implementer
    • Utilities have a historical comradery
    • Language, metrics, evaluation, and performance is utility centric
    • DHCD is unfamiliar with industry terminology and requirements
    • Learn as you go - Few rules are written but many unwritten “rules” exist
MEEHA II CHALLENGES - CONTINUED

• Limited improvements (15%) to Common areas
  – Missing opportunities while on-site

• Lack of consistency
  – Guidance did not provide specific enough direction
  – Too many building simulation tools allowed

• Territorial and Fuel usage limitations
  – EmPOWER is limited to the service territories of the five (5) participating Utilities
  – Only one (1) participating utility also provides gas

• Initial concern for Free Ridership: The perception that properties are getting free work for work they would have done themselves anyway
MEEHA II

• Continued to develop “Best Practices”
  – DHCD’s Multi-Family Energy Audit Guide
    • Developed with the Newport Partners
  – Introduced requirement to follow BPI standards modified for Maryland’s needs
  – Created an Auditor Qualification Form
  – Hired qualified in-house technical staff

• Reduced number of accepted Audit building simulation tools to four (4)
  – RemRate
  – Treat
  – EAQquip
  – e-Quest

• DHCD pre-application project review
  – Pre-Qualify the buildings
  – Identify potential strengths and challenges in the buildings
  – Provide guidance to building owners, architects and auditors
  – Familiarize DHCD staff to the project
MEEHA II – PROGRAM IN REVIEW

• Improve communication with stakeholders

• Be involved with the process
  – Attend meetings
  – Ask questions
  – Drive the program or be driven

• Provide flexibility but get what you need

• Develop clear guidance

• Create consistency
  – Deliver consistent guidance
  – Deliver consistent messages
MEEHA II
2012 - 2014 RESULTS

• Projects: 41
• Units: 3,543
• Benefits: $7,772,466
• Savings kWh: 6,807,543
• Savings Therm: 134,096
MEEHA II – CONTINUED 2015

- Public Service Commission approved DHCD’s three (3) year continuation application and approving access to Commercial and Industrial (C&I) surcharge funds for non-master metered buildings.
  - $15.0 million Residential benefits
  - $5.0 million Commercial benefits
MEEHA II
2015 – 2017 PROJECTED RESULTS

• Projects: 73
• Units: 6,606
• Benefits: $20,000,000
• Savings kWh: 15,872,000
CUSTOMER INVESTMENT FUND

– Focus on master metered buildings

– All fuel sources including water

– Two components
  • Portfolio Retrofit
    » Energy efficiency at refinance or as retrofit
  • One-Stop-Shop
    » Retrofit only
    » Property owners have a single point of contact to help manage the retrofit

– Building Operator Training
FOR MORE INFORMATION

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