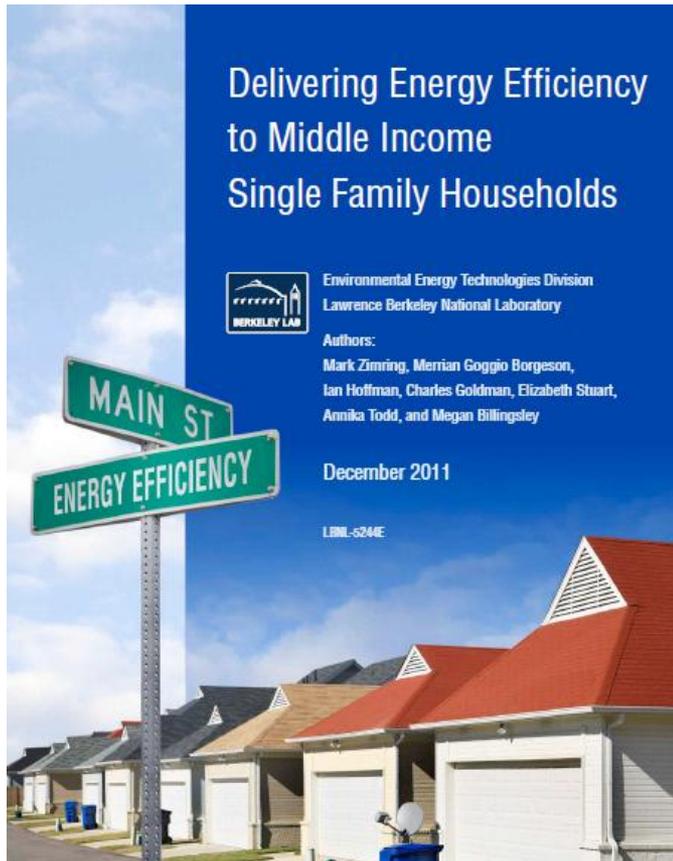


# **Driving Middle Income Demand:** ***Taking Smaller, More Manageable Steps***

Gavin Hastings  
Arizona Public Service



# ***What's the opportunity?***

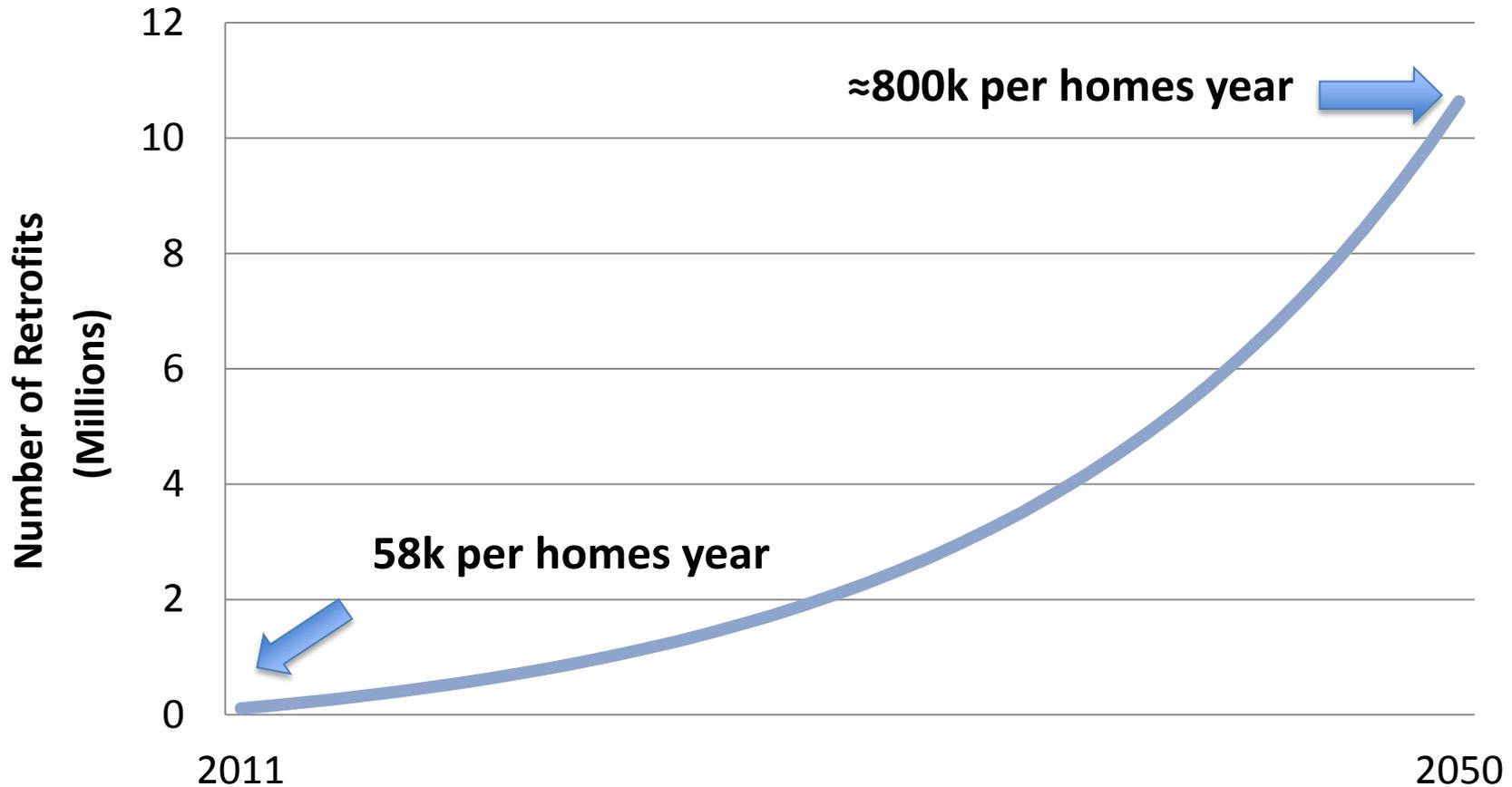


- **32 million** middle income single family homes
- Retrofitting 1/3 of these homes would save enough energy to power Austin, Phoenix, and San Francisco  
**(10.6 million homes)**

# Completing 10.6 Million Homes by 2050

**7.5%**

Annual Production Growth



# Challenges for middle income home owners

- Hesitant to make large investments
  - Average HPwES Projects \$5,000 to \$15,000
  - Reluctant to Finance
- Unsure of the energy savings potential
  - Lots of market confusion

**Summary: Expensive and Confusing**

# How do we reach the middle income household?



# Make HPwES More Consumable

- Manageable transactions
  - Financially
  - Easy to use
- Home Performance is a **Process**, not a project
- Stay engaged and avoid the crisis decisions





## *The Arizona Program*



# Summary: Arizona HPwES

- Launched March, 2010
- **Contractor Centric Program**
- QA without impairing transactions
- Prescriptive Rebates
- Low-Interest Financing



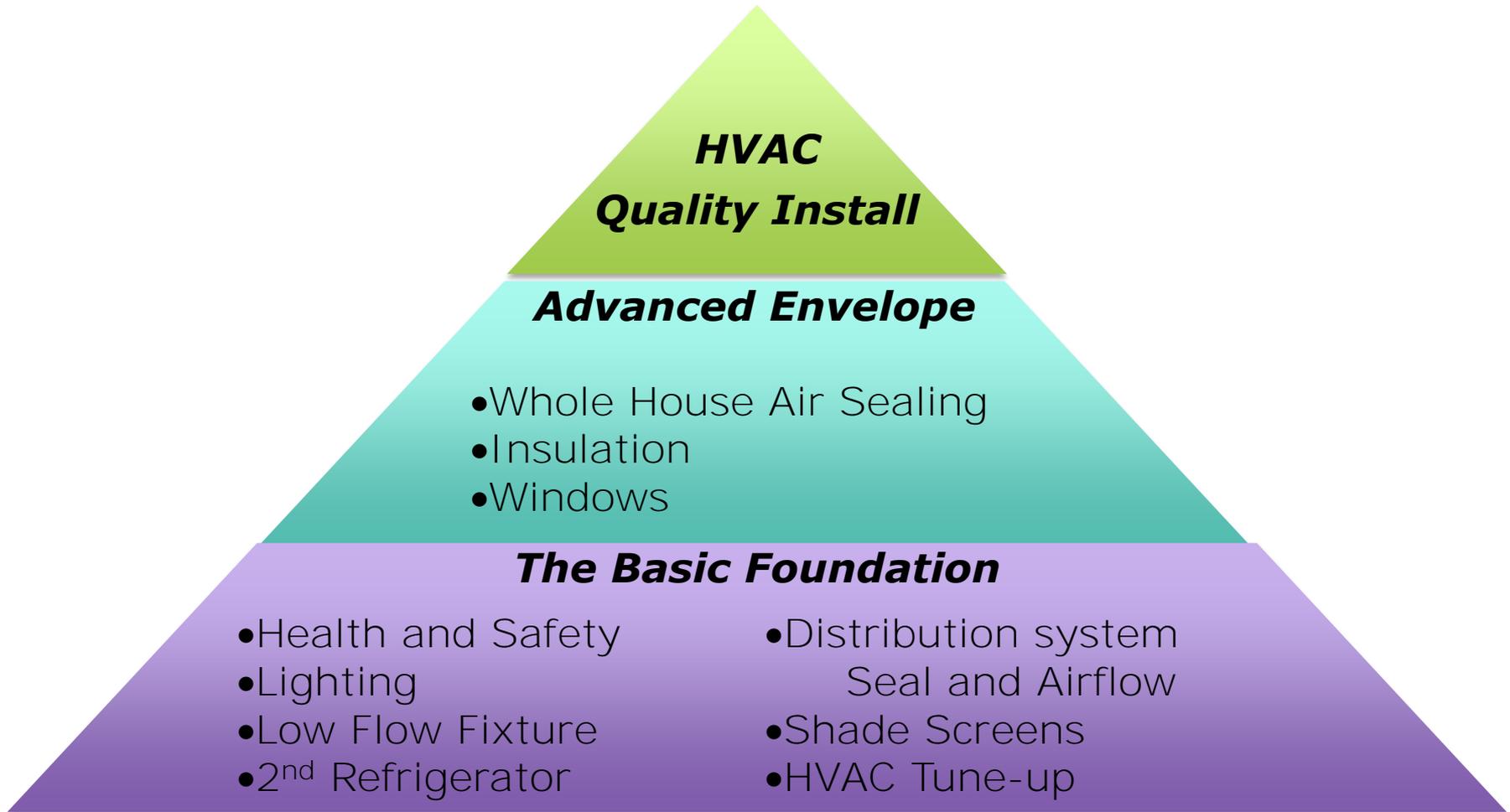
# Results Program

- In 2011, 9,000 energy audits and 3,600 retrofits
- 40% conversation rate from audit to measures
- Over 75 Participating Contractor
- \$3,000 to \$5,000 Average Project Size
- **Middle income nearly 40% of program**

# Middle Income Key Lessons

- Customers find the smaller projects more manageable
  - They will come back for more
- **If the HVAC is not broke, they won't fix it**
- **If the HVAC is broke, the customer is in crisis and won't do home performance**

# The Whole House Retrofit Stack



# The Middle Income Problem

**HVAC  
Quality Install**

**Advanced Envelope**

- Whole House Air Sealing
- Insulation
- Windows

## **The Basic Foundation**

- Health and Safety
- Lighting
- Low Flow Fixture
- 2<sup>nd</sup> Refrigerator
- Distribution system  
Seal and Airflow
- Shade Screens
- HVAC Tune-up
- Pool Pump

# The Consumable Approach



**The Basic  
Foundation**

**The Advanced  
Envelope**

**HVAC Quality  
Install**

# The Home Owner Cycle



# Keys to Customer Acquisition

- Start Simple
  - Engagement Tools to Identify Starting Point
  - Easy Actions
- Respond to needs
  - Affordability
  - Comfort



# Build to the HVAC “Event Horizon”



- Identify Burnout Window
- Design the system
- Deescalate crisis event
- Plan the investment

**HVAC Quality  
Install**

# Start with the Basics



## The Basic Foundation

- Make it affordable
- Address concerns
- Prove energy savings
- Build Trust

# Starting with the Basics

- Make it affordable
  - (\$1,500 to \$5,000)
  - Rebates/Financing
- Target High Payback
- Engage with HVAC Maintenance Plan



# Stay Engaged



## Contractor

- Maintenance
- Specials
- Communicate

## The Advanced Envelope

## Program

- Feedback Tools
- Behavioral
- Reengagement Incentives
- Targeted Comm.

# Build a HVAC Burnout Easy Button

- Ducts and Envelope Under Control
- System Design Complete
  - Manual J
- Keep it ready to roll
- Make it a easy transaction



# Potential Benefits

- Smaller incremental investments
- Much more manageable transactions
- Collect energy savings before reinvesting
- Additional Contractor and Program Benefits

# Greatest Challenges

- Highly Trained Contractor Base
- System Integration
  - Contractors
  - Utility
  - QA
  - Lenders
- Data Management
  - Standardization (HPXML)
  - Deployment



# Let's Make Energy Efficiency Easy



**The Basic  
Foundation**

**The Advanced  
Envelope**

**HVAC Quality  
Install**

# Thanks!

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