



WHEN TRUST MATTERS

# Unlock Savings Based on Performance

The Promise of Population NMEC Approaches

Lullit Getachew (DNV)  
Peng Gong (CPUC)  
Ken Agnew (DNV)  
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# Why this presentation?

1

Introduce population normalized metered energy consumption (NEMC)—a new performance-based energy efficiency program framework

2

Share insights from its real-world application and experience

3

Highlight the promise of transparent, outcome-based programs

# What is normalized metered energy consumption is (NMEC)?

**Metered Energy Consumption** = AMI or other empirical interval data represent actual usage.

**Normalized** = Pre- to post-installation consumption put on apples-to-apples basis

- Pre-post difference represents estimate of savings
- Existing conditions baseline

# What are NMEC programs?

01

Performance-based alternative to the standard deemed or custom program approaches

02

Embedded M&V based on energy consumption metered-based approaches

03

Two NMEC program types: site and population level

04

NMEC Rulebook provides the regulatory framework

# The real-world context



Lessons from 2019 – 2021 CA Programs



Residential Programs

HomeIntel (*Virtual Audit/Behavioral Insights*)

Comfortable Home Rebate (*Direct Install/Retrofit*)

Home Energy Rewards (*Kits & Marketplace*)



Non-Residential

On-Bill Financing (*Upgrades with utility bill financing*)

# Findings: what worked well



Verified performance reduces ratepayer risk



Encourages transparency through replicable methods



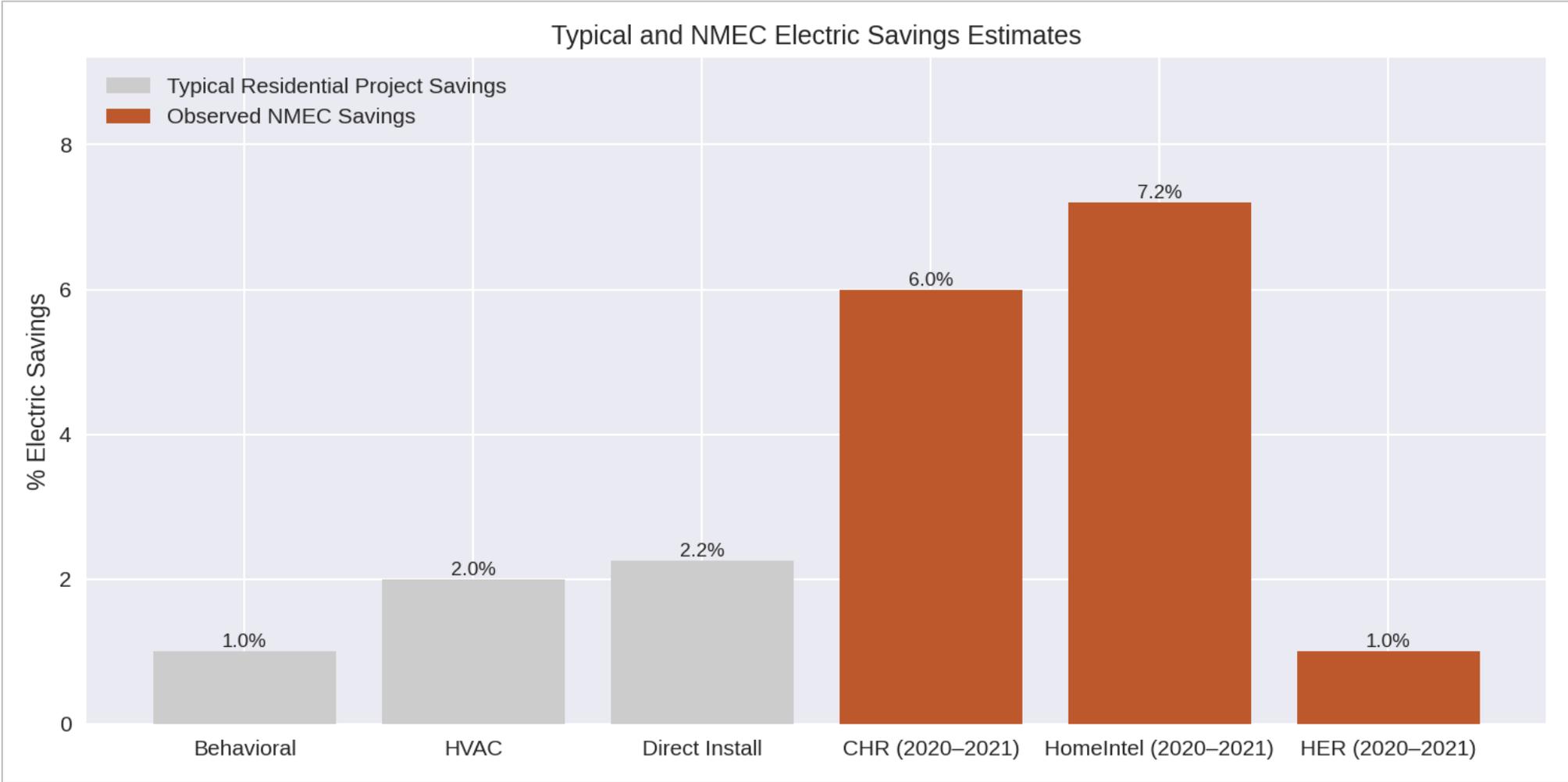
Supports varied program models



Enabled program effectiveness



# Findings: notable savings



Sources: CPUC evaluations of HER, HVAC, and Direct Install programs; DNV (2023) for NMEC

# Findings: what didn't work well

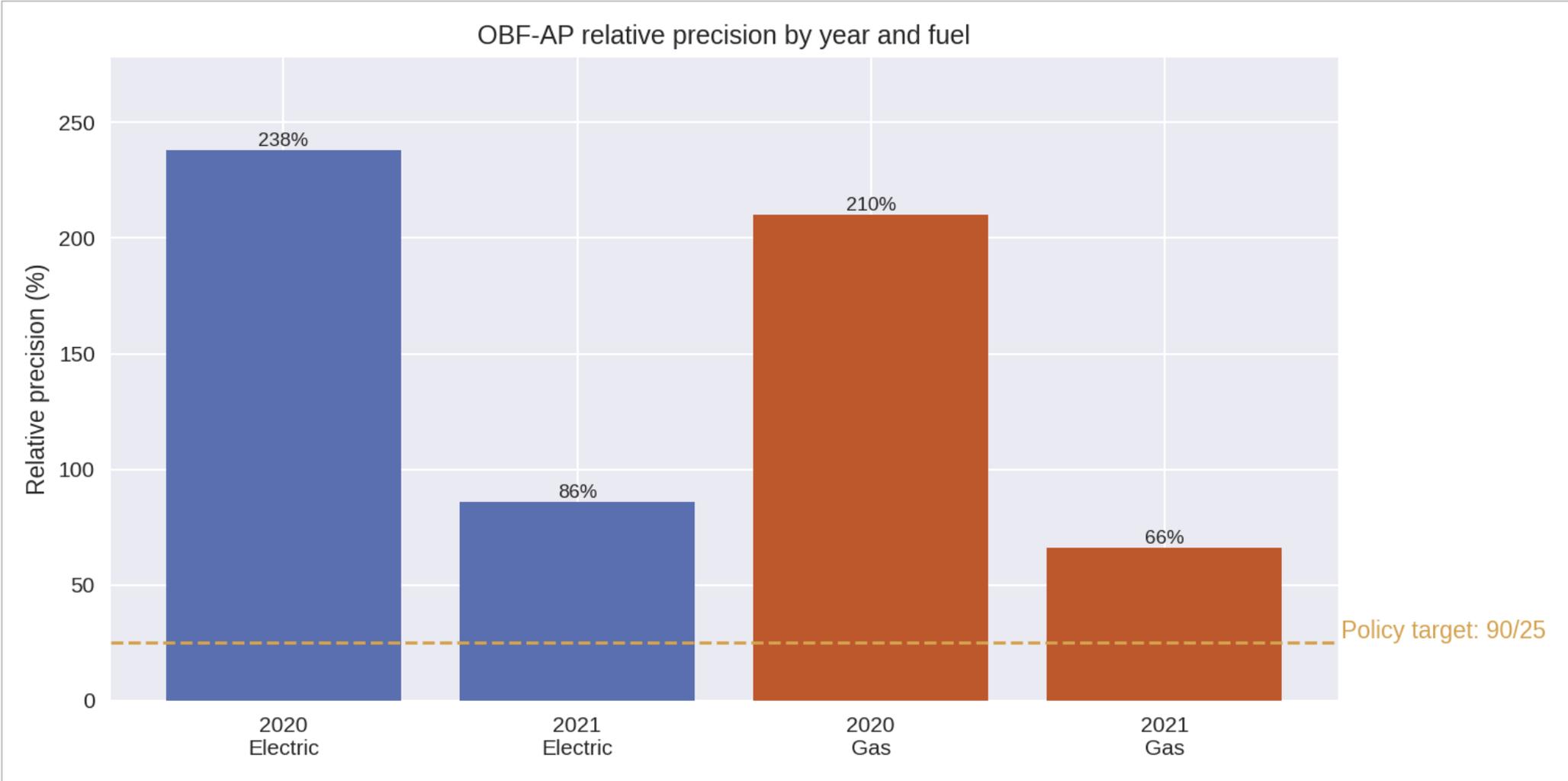
**Replication difficult, insufficient documentation**

**Novel modeling methods**

**Governance and policy gaps**

**Customer heterogeneity (OBF-AP)**

# Findings: heterogeneous population challenges



# Findings: conditions for success

<b>NMEC Success Factors</b>	<b>Why They Matter</b>
Independent evaluation	Ensures credibility beyond embedded M&V
Standardized documentation	Improves replicability and transparency
Homogeneous populations	Critical for meeting 90/25 precision
Ongoing Rulebook refinement	Aligns policy with evolving practices

# Broader relevance: implications for broader adoption of performance-based EE models



Demonstrates a scalable model for meter-based, performance-driven EE



Illustrates role of embedded M&V for timely and credible incentive payments



Reinforces independent evaluation needed to maintain trust and accountability



Underscores the necessity of adaptive governance frameworks



Highlights challenges in scaling to heterogeneous and non-residential markets

# Questions?

Thank you.

[Lullit.Getachew@dnv.com](mailto:Lullit.Getachew@dnv.com)

[www.dnv.com](http://www.dnv.com)

