GDS Associates, Inc.
ENGINEERS & CONSULTANTS

MSMM ENGINEERING, LLC

THE VILLAVASO GROUP, LLC

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PRESENTED BY GDS ASSOCIATES, INC.

STAKEHOLDER MEETING

2021 New Orleans DSM Potential Study

July 16, 2021

PRESENTATION AGENDA

1	Time Allotted: **10** mins	**PURPOSE OF MEETING** Introductions and Discussion Goals
2	Time Allotted: **30** mins	**Top-Line Results** Comparison to prior studies and areas for additional alignment
3	Time Allotted: **30** mins	**Review Initial Results** HCAP and RAP results for EE and DR
4	Time Allotted: **45** mins	**2% CASE** Discuss GDS approach and get Stakeholder input

Outcome Goal:

Develop key factors for considering a stakeholder case

ACHIEVABLE CASE OVERVIEW

Reference Achievable Case (RAP)

The Reference Achievable case is informed by historical incentive levels and associated estimates of participant adoption (informed by the Delphi panel research conducted by the GDS Team). On average, incentive levels in the commercial sector are approximately 50% of the modeled measure cost and residential incentives were roughly 65% of the modeled measure cost. Incentives levels are assumed to be relative to the incremental measure cost (IMC) for replace-on-burnout (ROB) measures and full measure cost (FMC) for retrofit/early replacement measures.

High Case Achievable Case (HCAP)

The maximum achievable case assumes that incentives are offered at 100 percent of the incremental or full measure cost. This case utilizes adoption curves that lead to more aggressive adoption rates, with greater savings in the near-term than the Reference Achievable Case. Behavior program rollout for the residential sector increased compared to the Reference Achievable Case. Administrative costs on a dollar per kWh saved basis are aligned with recent historical and/or planned projections and increase over time by the rate of inflation.

ACHIEVABLE CASE OVERVIEW

Council 2% Policy Case

Based on input from stakeholders and in alignment with ENO's potential study, GDS is modeling a case in which two percent of electricity loads are saved each year. This requirement adjusts incentives and other modeling parameters to lead to an outcome, rather than letting incentives drive the outcome. GDS will develop the model parameter adjustments to create an initial 2% planning case.

Alternative Stakeholder Planning Case

GDS will develop a fourth case based on input from stakeholders using the Council 2% Policy Case to guide considerations for an alternative case. GDS will coordinate with advisors and stakeholders on whether there are any modeling parameters to consider adjusting from the Council 2% Policy Case. The modeling and outcome will be informed by the input from advisors and stakeholders.

What key factors might differentiate a stakeholder planning case?

COMPARISON TO 2018 STUDIES

Navigant (Guidehouse) -achievable only-

Year	Base	Low	High	2%
2018	0.8%	0.7%	0.9%	0.8%
2022	0.9%	0.8%	1.0%	1.6%
2027	1.0%	0.9%	1.1%	1.9%
2032	0.9%	0.8%	1.0%	0.8%
2037	0.6%	0.6%	0.6%	0.3%
Total	17.3%	15.3%	19.5%	24.0%

Source: Table ES-3, Navigant 2018 Study

Total is sum of incremental annual

Optimal

Year	Economic	Max	Program
2018	5.7%	0.7%	0.5%
2022	4.2%	2.8%	2.0%
2027	4.7%	3.4%	2.3%
2032	3.4%	2.3%	1.7%
2037	3.7%	2.6%	1.9%
Total (2037)	46%	30%	21%

Source: Tables 1 and 2, Optimal 2018 Study

Total is cumulative annual

GDS Initial

Year	Economic	HCAP	RAP
2021	4.1%	1.7%	1.1%
2025	3.2%	1.7%	1.2%
2030	2.4%	1.5%	1.3%
2035	2.2%	1.4%	1.2%
2040	3.6%	2.0%	1.5%
Total (2040)	30%	20%	14%

Total is cumulative annual

COMPARISON TO 2018 STUDY

Reasons for Potential Differences

- Avoided costs are lower than in prior study – reduces economic potential
- Currently have measure threshold set at C-E of 1.0
- Rapidly changing market for LEDs.
- Currently not including TCU *(transportation, communications, and utilities)* load in savings analysis (is included in the overall sales forecast)
- Currently not including streetlights

AREAS FOR ADDITIONAL ALIGNMENT

Coordination with Entergy New Orleans on Key Inputs

- Understand key differences by sector / end-use
- Understanding load disaggregation assumptions
- Confirm avoided costs
- Confirm assumptions about “measure re-upping” and 2nd life savings opportunities

AREAS FOR ADDITIONAL ALIGNMENT

Calibration of Near-Term Potential to Historical Achievements

- PY9 indicates savings of 1.2% of load
  - Commercial savings are weighted heavily towards lighting

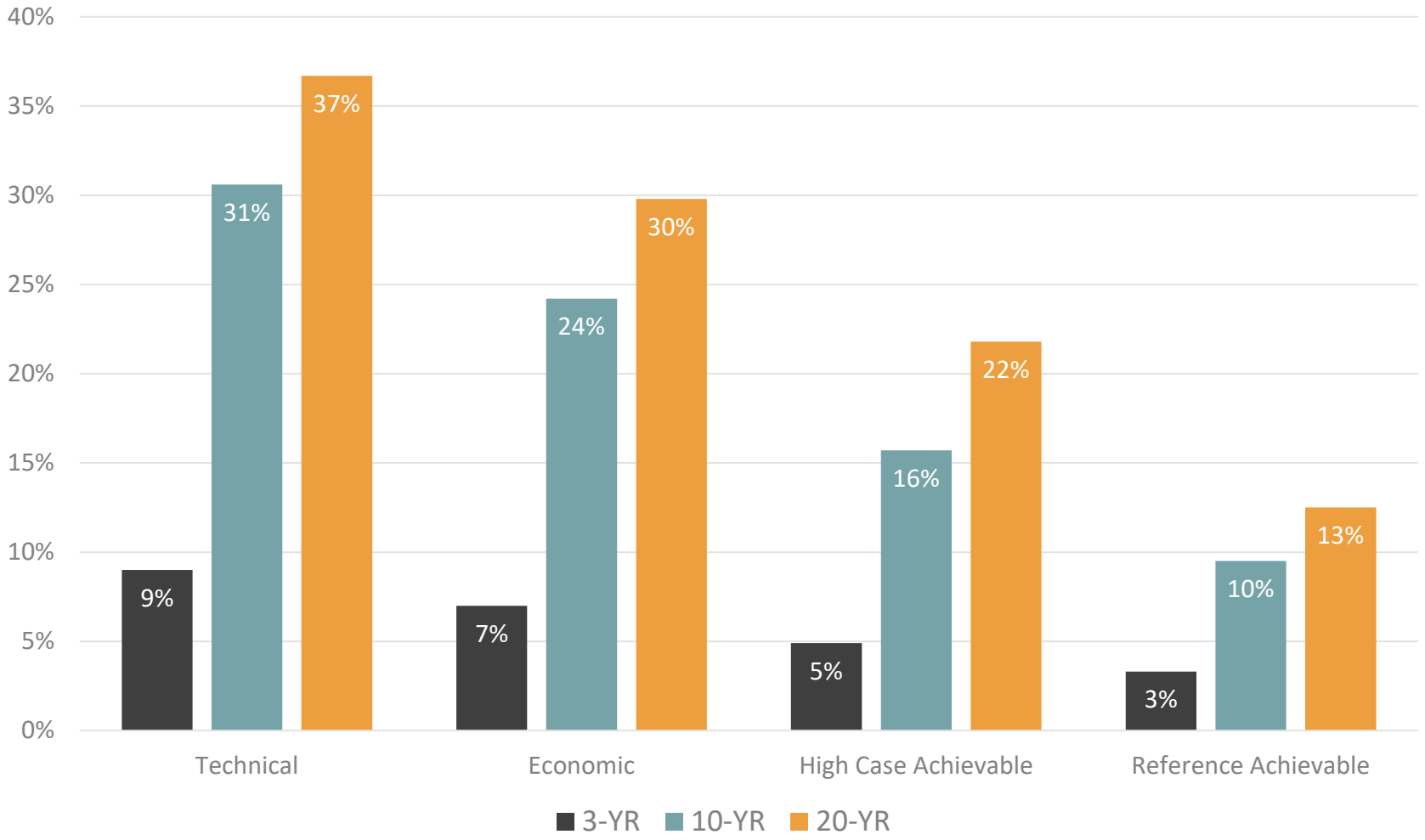
- Calibrating to current savings percent and path to 2%
  - Pace of increase
  - Planned sector contributions in near-term plans

HCAP AND RAP PRELIMINARY RESULTS

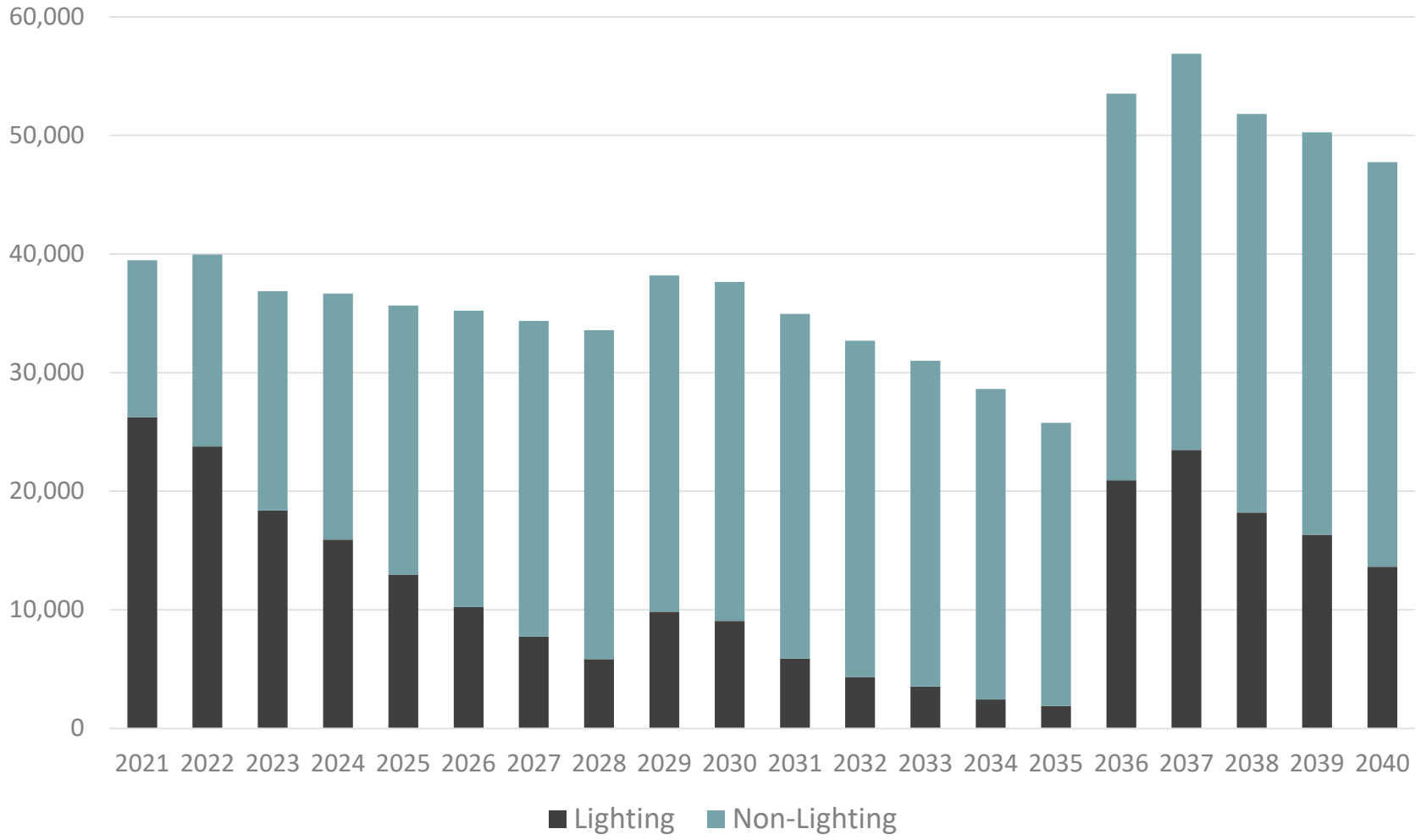
2021 New Orleans DSM Potential Study

NON-RESIDENTIAL ENERGY EFFICIENCY

Commercial savings as a percent of commercial sales



NON-RESIDENTIAL ENERGY EFFICIENCY



- Need to coordinate on 2nd lifetime of measures and appropriate assumptions
- Market transformation and policy consideration can impact accounting of savings in later years

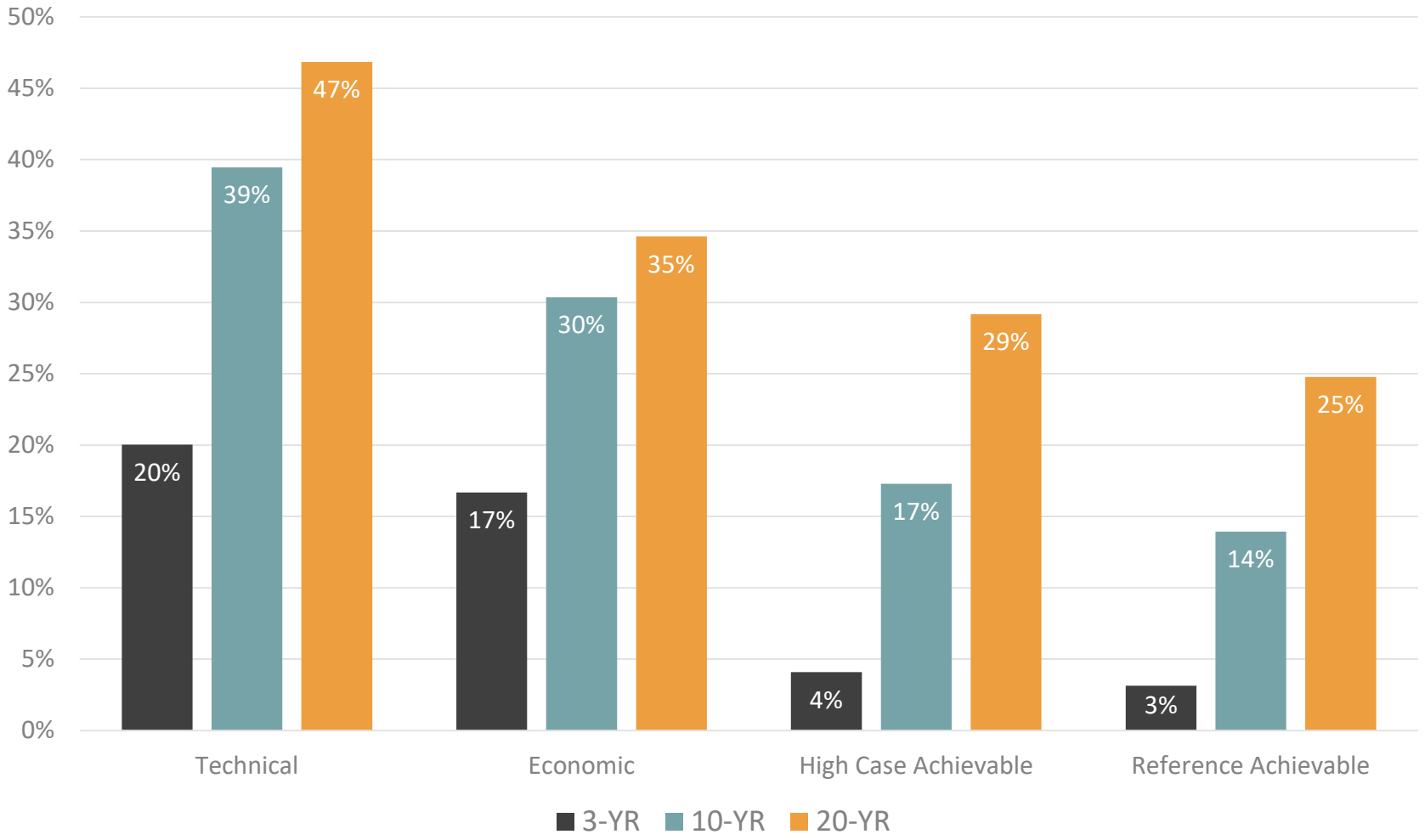
NON-RESIDENTIAL ENERGY EFFICIENCY

- RAP averages 1.1 % of nonresidential sector sales
- HCAP averages 1.8% but C&I alone does not currently achieve 2% *(except for second life savings)*

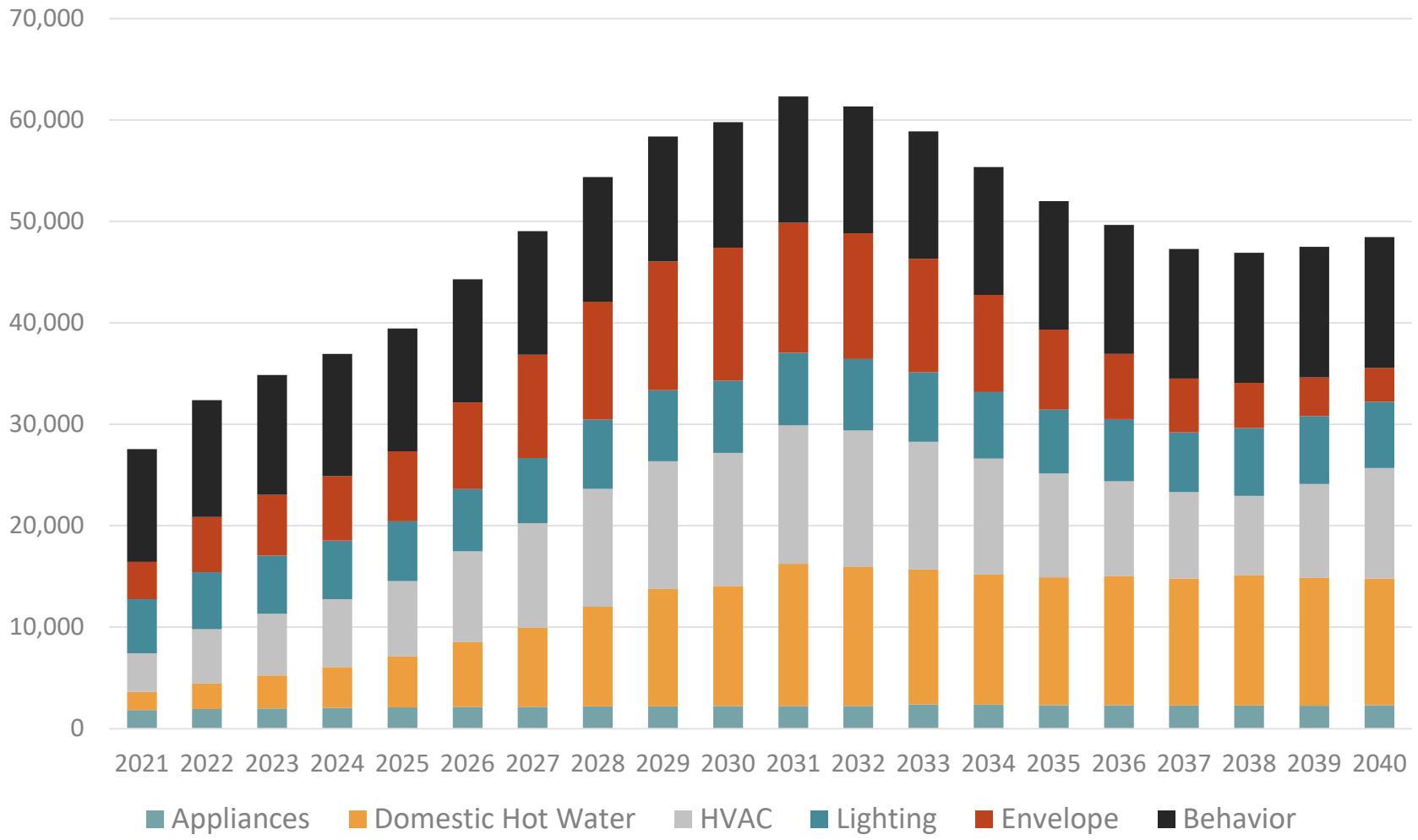
Year	RAP	HCAP
2021	1.1%	1.6%
2022	1.2%	1.6%
2023	1.1%	1.7%
2024	1.1%	1.7%
2025	1.0%	1.7%
2026	1.0%	1.7%
2027	1.0%	1.7%
2028	1.0%	1.7%
2029	1.1%	1.9%
2030	1.1%	1.9%
2031	1.0%	1.8%
2032	0.9%	1.6%
2033	0.9%	1.5%
2034	0.8%	1.4%
2035	0.7%	1.3%
2036	1.5%	2.4%
2037	1.6%	2.4%
2038	1.4%	2.3%
2039	1.4%	2.2%
2040	1.3%	2.1%

RESIDENTIAL ENERGY EFFICIENCY

Residential savings as a percent of residential sales



RESIDENTIAL ENERGY EFFICIENCY



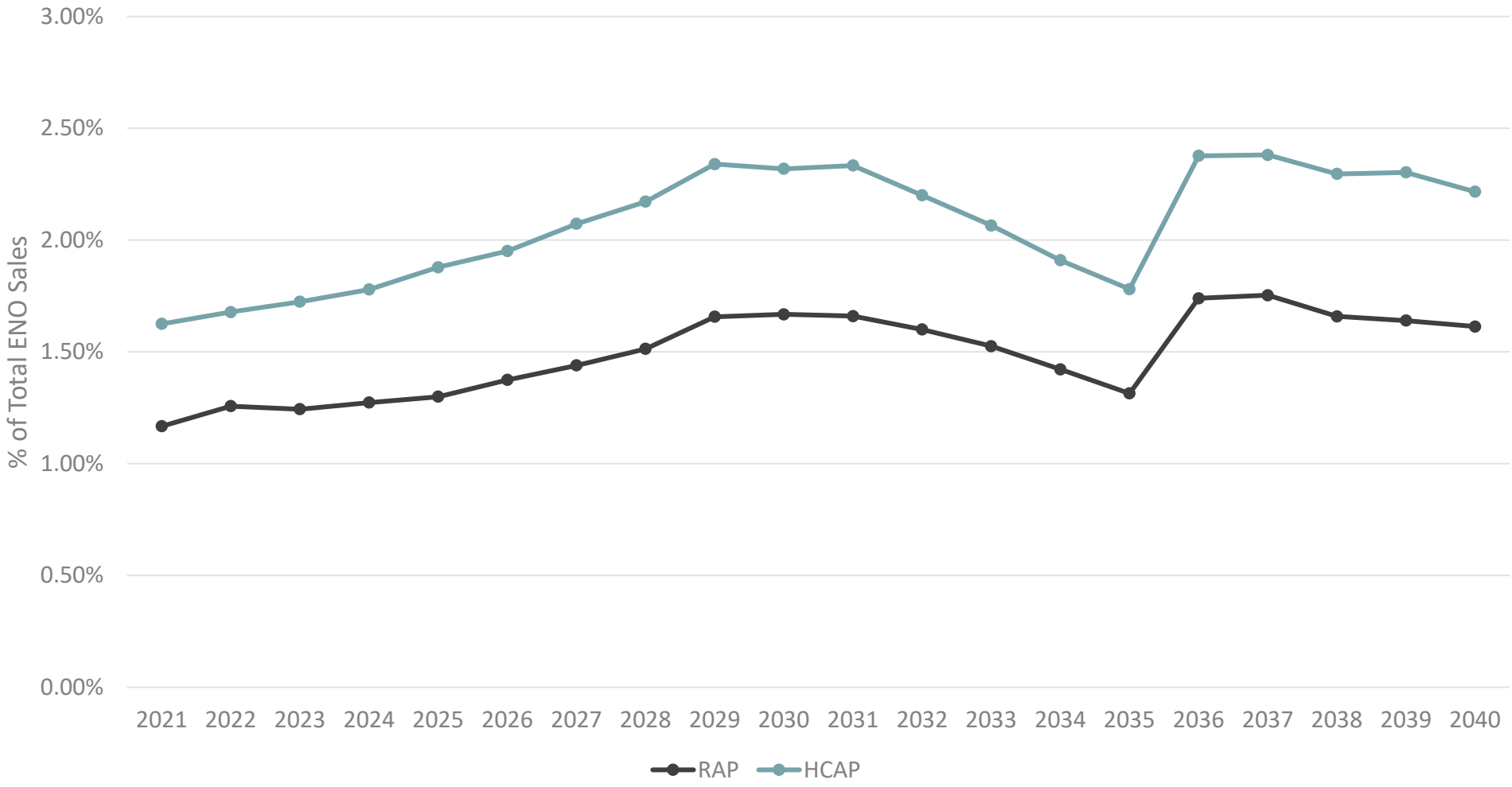
- Growth potential in RAP over the next decade
- Steady contribution from behavior savings
- Growing contribution of domestic hot water and HVAC end-uses

RESIDENTIAL ENERGY EFFICIENCY

- RAP averages 2.1 % of residential sector sales and reaches 2.0% in 2027
- HCAP averages 2.4% of residential sector sales and reaches 2.0% in 2025

Year	RAP	HCAP
2021	1.2%	1.7%
2022	1.4%	1.7%
2023	1.5%	1.8%
2024	1.6%	1.9%
2025	1.7%	2.1%
2026	1.9%	2.3%
2027	2.1%	2.6%
2028	2.3%	2.8%
2029	2.5%	3.0%
2030	2.6%	2.9%
2031	2.7%	3.2%
2032	2.6%	3.0%
2033	2.5%	2.9%
2034	2.4%	2.7%
2035	2.2%	2.5%
2036	2.1%	2.4%
2037	2.0%	2.3%
2038	2.0%	2.3%
2039	2.0%	2.4%
2040	2.1%	2.3%

EE – ALL SECTORS COMBINED



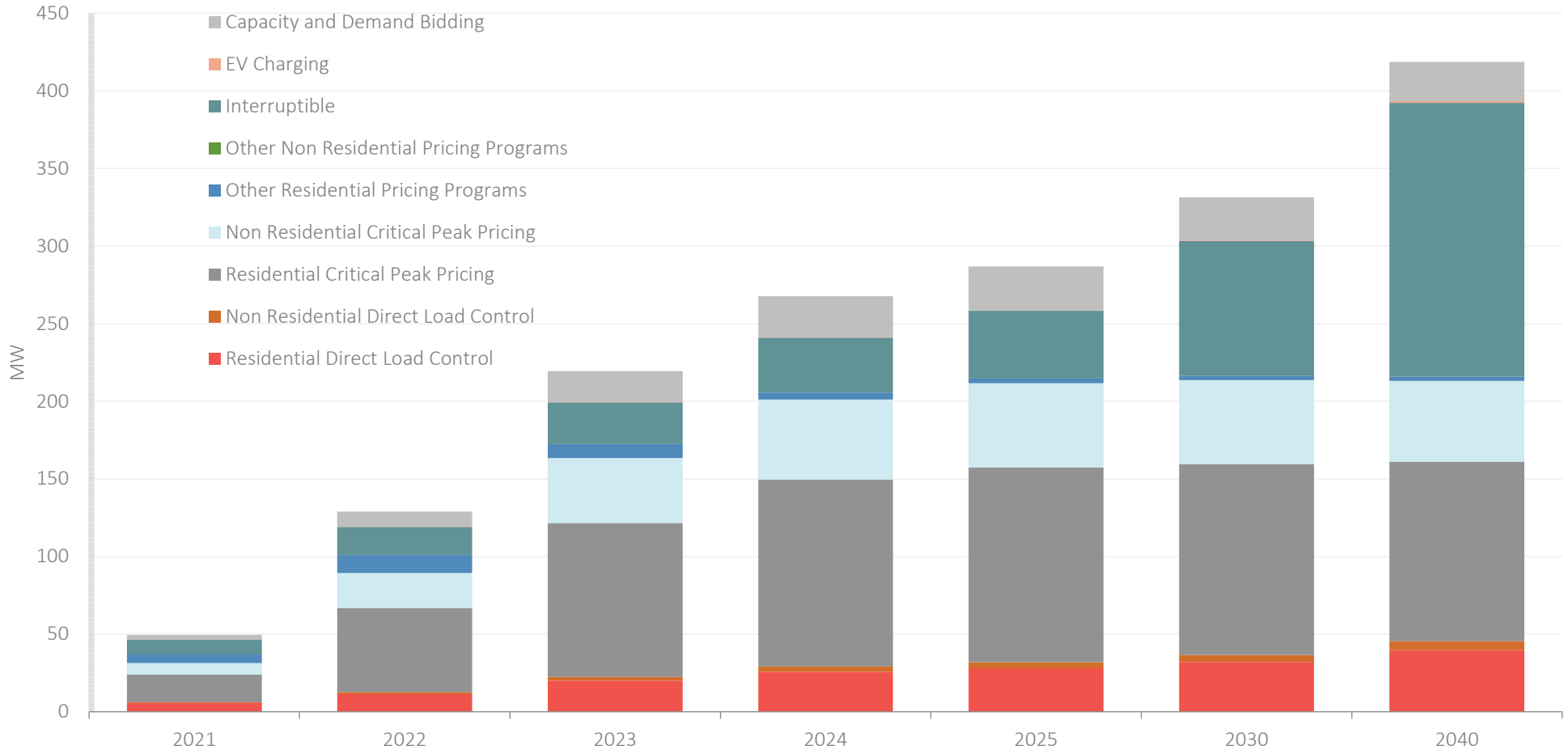
DEMAND RESPONSE

Summary of DR Technologies and Uses

Demand Response Type	Types of Control	Customer Classes	End Uses
Direct Load Control	Thermostats; Switches	Residential, Small C&I	A/C; Water Heaters; Pool Pumps; Lighting
Critical Peak Pricing	Retail rate price signal during critical peak	All	With enabling and without enabling technologies
Time of Use Rates	Retail rate price signal for defined blocks of time	Residential, Small C&I	With enabling and without enabling technologies
Interruptible Rate	Discount for customers agreeing to interrupt or curtail load	Large C&I	All
EV Charging	Rates design to shift charging to off-peak	Residential, Small C&I, golf courses	Electric vehicles
Electric Thermal Storage	Chilled water/ice produced during off-peak periods	Small C&I	A/C and other loads requiring cold temperatures
Capacity or Demand Bidding	Monthly nominations of capacity; flexible bidding year 'round	Large C&I; Small C&I	All

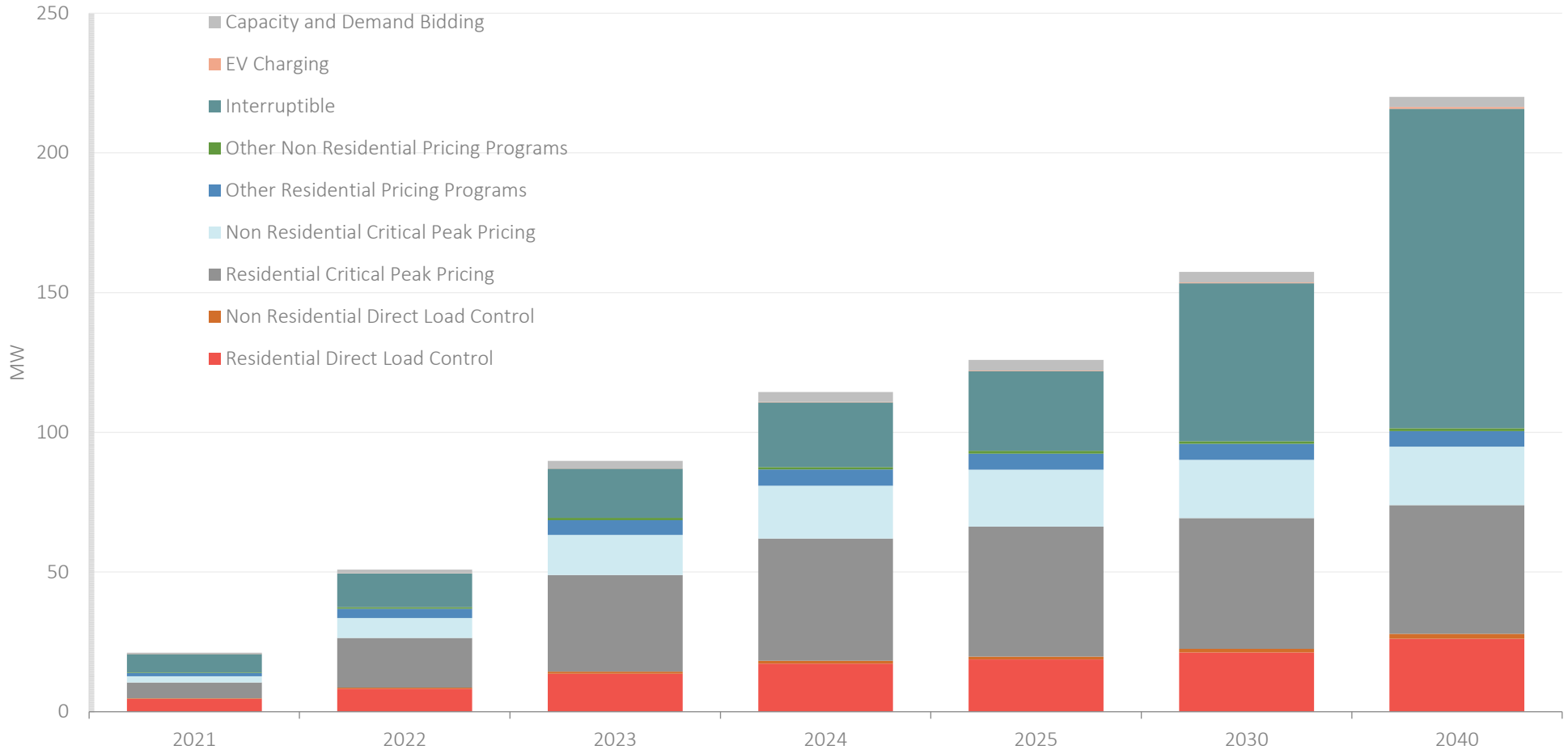
DEMAND RESPONSE

HCAP



DEMAND RESPONSE

RAP



2% CASE

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GDS 2% POLICY CASE

- Follows council 2% policy, increasing from current level by 0.2% per year to achieve 2%.
- Incentives increase towards 100% (similar to HCAP)
- Include measures w/ C-E less than 1.0
  - Expands measure options
  - Maintain sector-level C-E at 1.0 or higher
- Redistribution of retrofit savings to hit savings targets

Alternative Concepts

- *Adjust avoided costs*
  - **Apply savings hedge to allow for X% increase in avoided costs**
  - **Increase avoided costs directly (e.g. carbon tax)**
  - **Expands possible measure selection into HCAP and RAP**
- *Shorten the time frame for reaching maximum long-term adoption rate*

STAKEHOLDER VIEWS

- What consensus can be reached on a stakeholder case?
- Consider key outcome drivers
- Consider key input drivers
- Discussion

STAKEHOLDER MEETING #2

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