Guidehouse

Xcel Energy Colorado Stakeholder Meeting

February 9, 2022

On the call today

Jordan Mann
Project Manager

Scott Robinson
Quality Assurance

Robin Maslowski
Project Director

Stuart Schare
Executive Oversight

Jack Cullen
Modeling

Chris Wassmer
Modeling

Agenda

01 Project Progress

02 All-Sector Potential

03 C&I Potential

04 Residential Potential

05 Next Steps

Project Progress

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Project Progress

Completed

Guidehouse has completed the following for Xcel Energy's Colorado territory:

1. Residential and C&I data collection
2. Draft technical, economic, and achievable potential results for Residential and C&I Energy Efficiency (EE)
3. Technical potential results for Beneficial Electrification (BE) measures

In Progress

Guidehouse is in the process of:

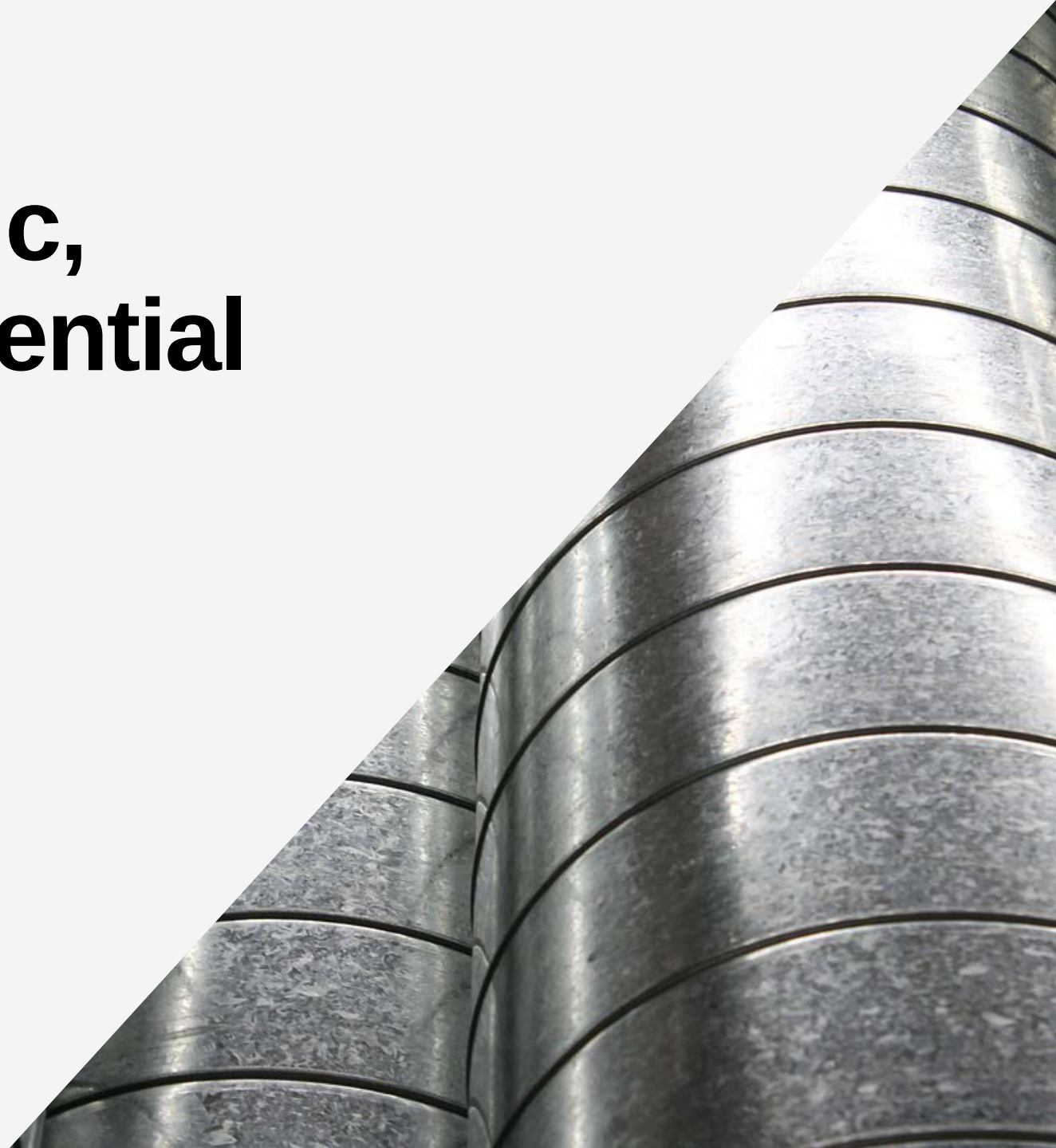
1. Gathering feedback from stakeholders
2. Finalizing technical, economic, and achievable results for EE
3. Sharing BE draft potential
4. Producing draft Demand Response (DR) opportunities for Residential and C&I

Project Progress

Project Timeline

- Q2 2021 **1st stakeholder meeting**
- Q2 2021 Complete research plan and Residential primary data collection
- Q3 2021 **2nd stakeholder meeting**
- Q3 2021 Complete C&I data collection. Draft Residential (EE & BE) technical and economic potential
- Q4 2021 **3rd stakeholder meeting**
- Q1 2022 Draft EE results for all sectors
- ★ Q1 2022 **4th stakeholder meeting**
- Q1 2022 Final EE, BE & DR results for all sectors
- Q2 2022 Reporting

Draft All-Sector Technical, Economic, and Achievable Potential



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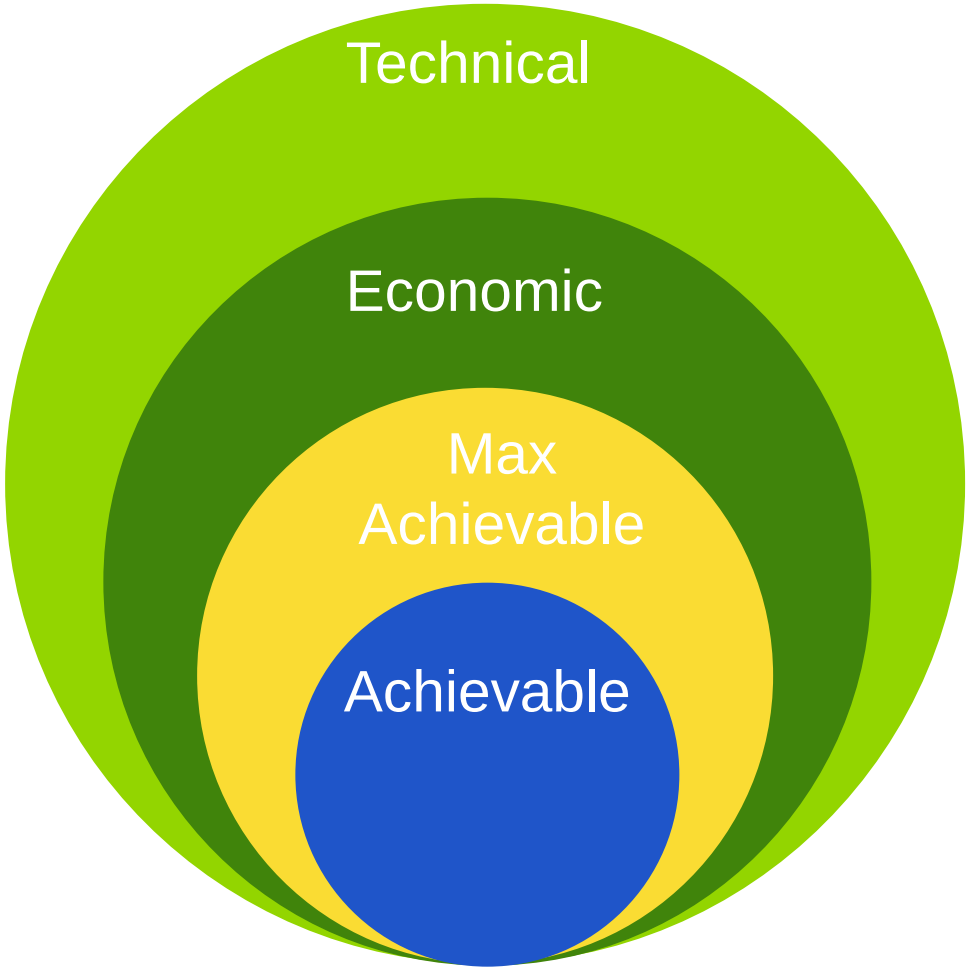
Potential Definitions

Each level of potential has defining characteristics



Technical Potential

- Immediate replacement
- No economic considerations
- No waiting for baseline burnout

Economic Potential

- Immediate replacement
- Measures screened for cost-effectiveness
- Avoided costs / Incremental costs

Maximum Achievable Potential

- Market acceptance
- Stock turnover and technology lifetimes
- Diffusion of technology/program awareness

Realistic Achievable Potential

- All MAP considerations
- Calibrated awareness and incentive levels

Potentials levels are **not a true exclusive subset of the higher levels*

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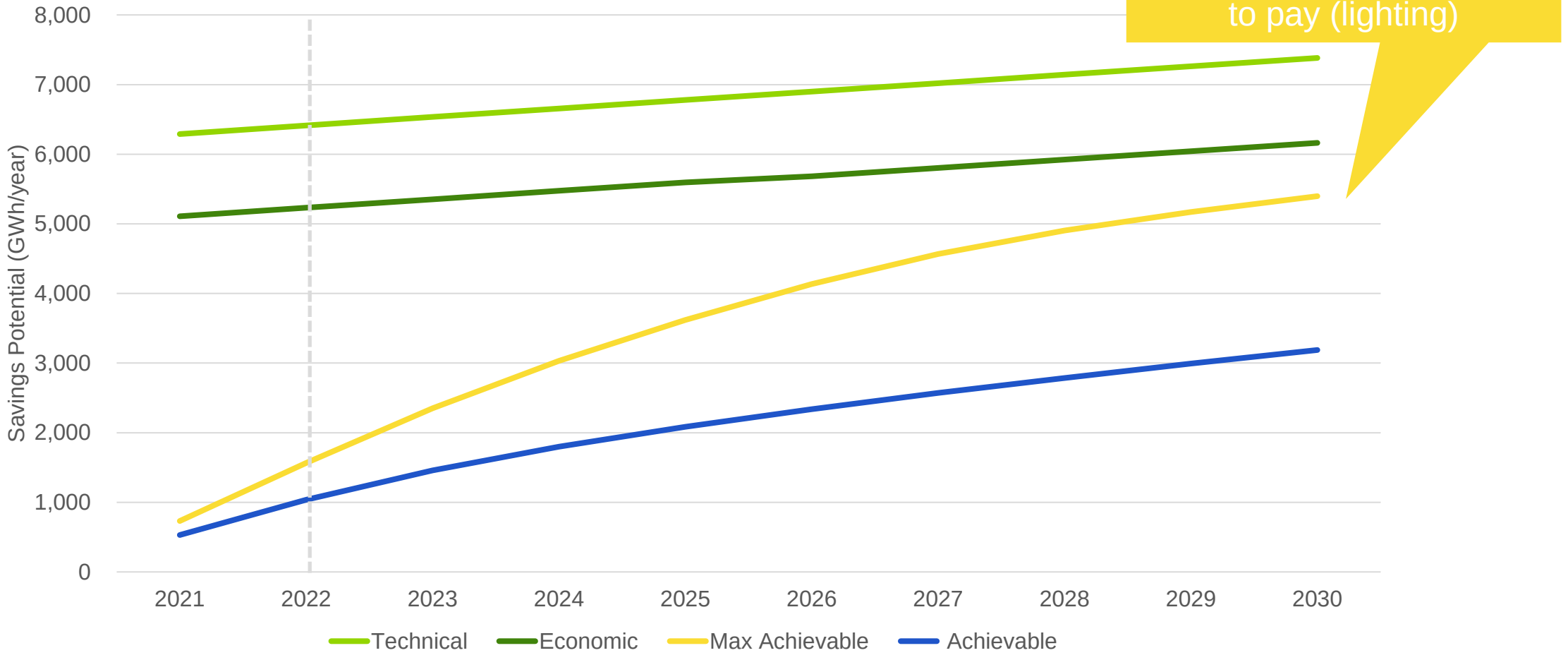
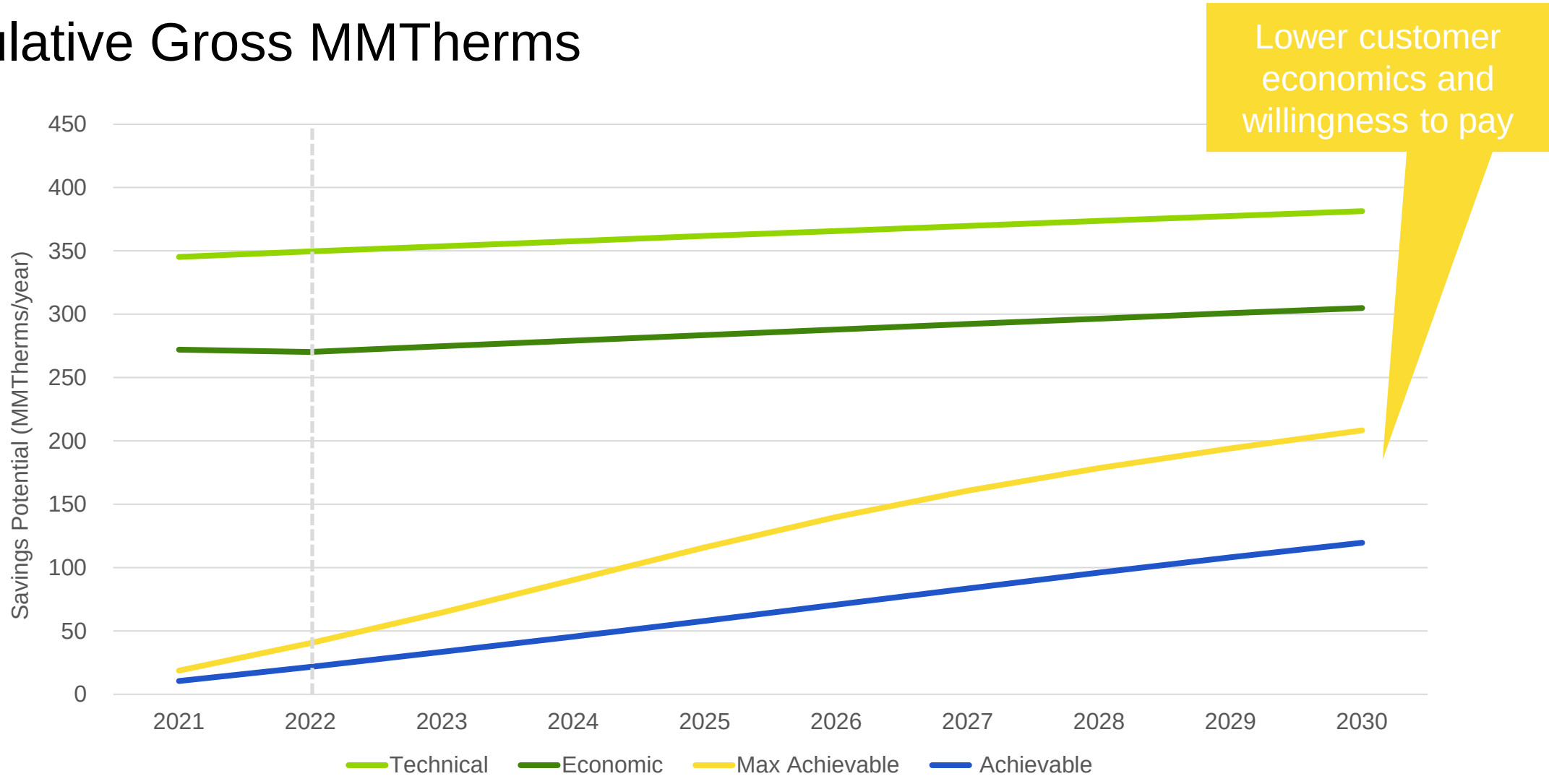
All-Sector Electric Energy Potential

Cumulative Gross GWh



All-Sector Gas Potential

Cumulative Gross MMTherms



Draft C&I Technical, Economic, and Achievable Potential

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C&I Total Budgets by Scenario

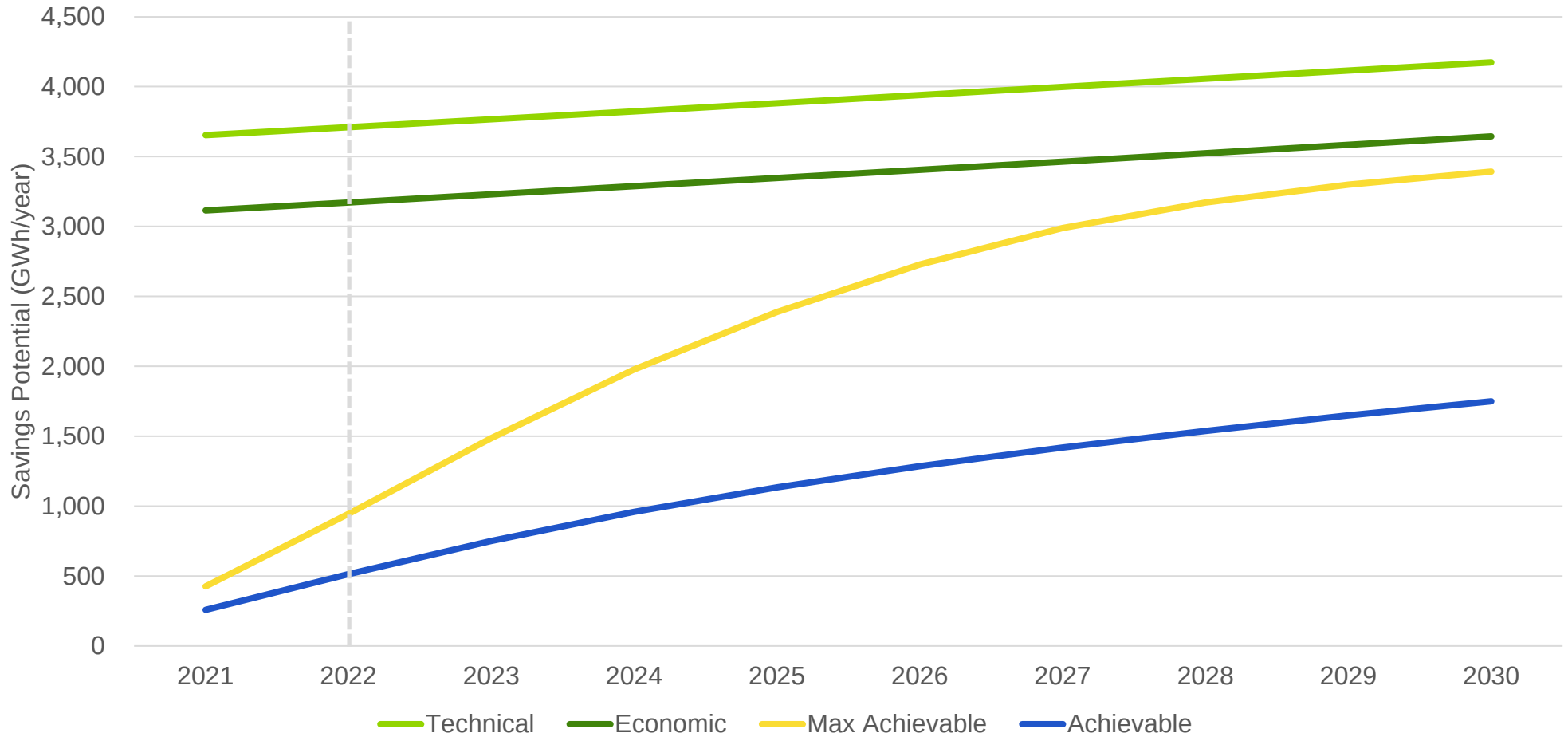
Millions of Dollars

	2016	2017	2018	2019	2020
C&I - Historical Spend	$40.3	$43.5	$47.3	$50.8	$46.6

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
C&I - Achievable	$45.3	$48.3	$48.9	$46.8	$44.3	$42.4	$41.2	$40.5	$39.9	$39.4
C&I - Max Ach. Scenario	$230.4	$291.2	$334.6	$353.3	$350.7	$322.2	$262.9	$190.9	$131.8	$95.4
C&I - Smoothed Lighting Rollout Scenario	$203.4	$254.8	$305.9	$348.9	$368.2	$346.2	$283.8	$206.2	$142.3	$102.3

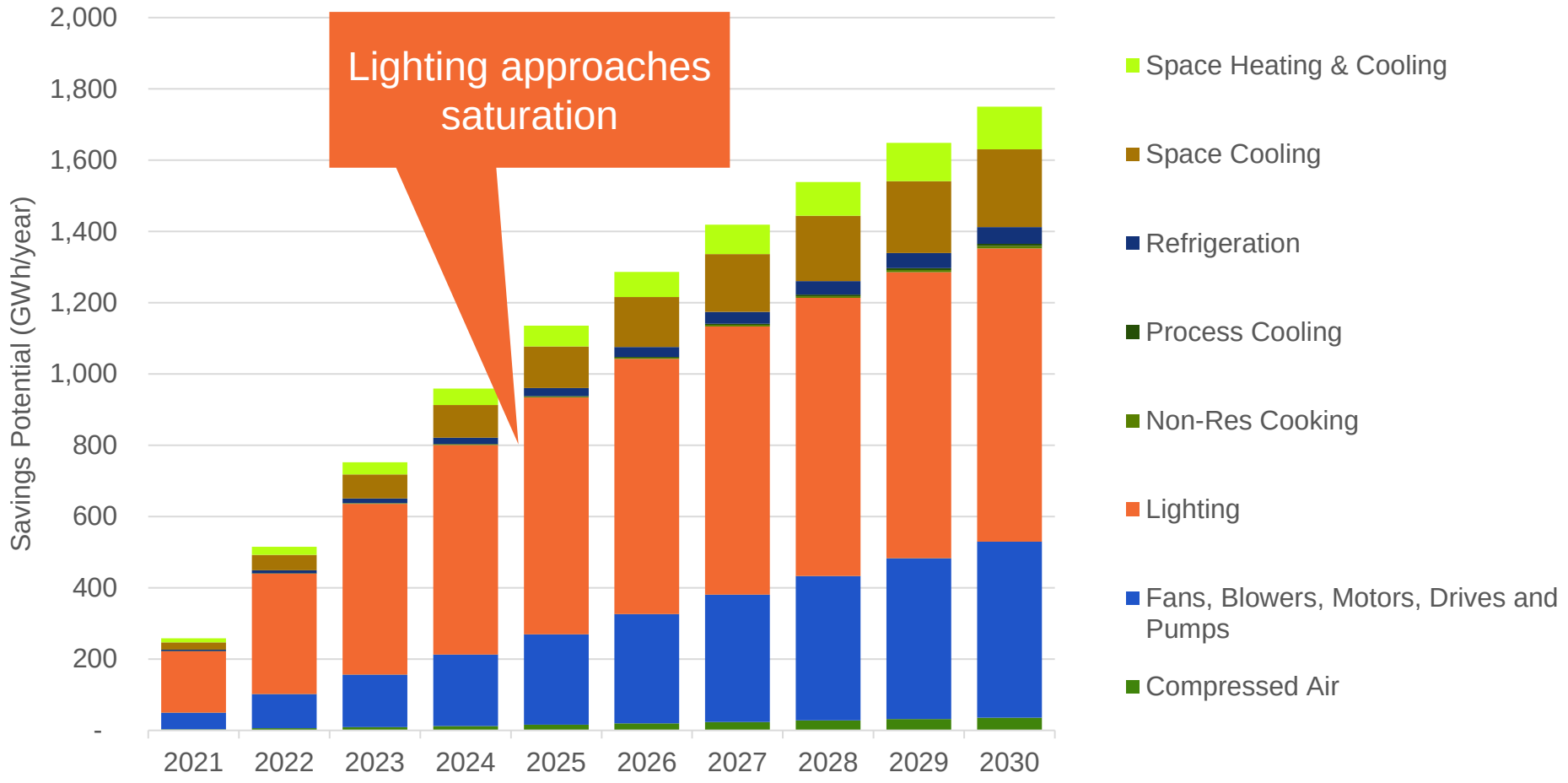
C&I Electric Energy Potential

Cumulative Gross GWh



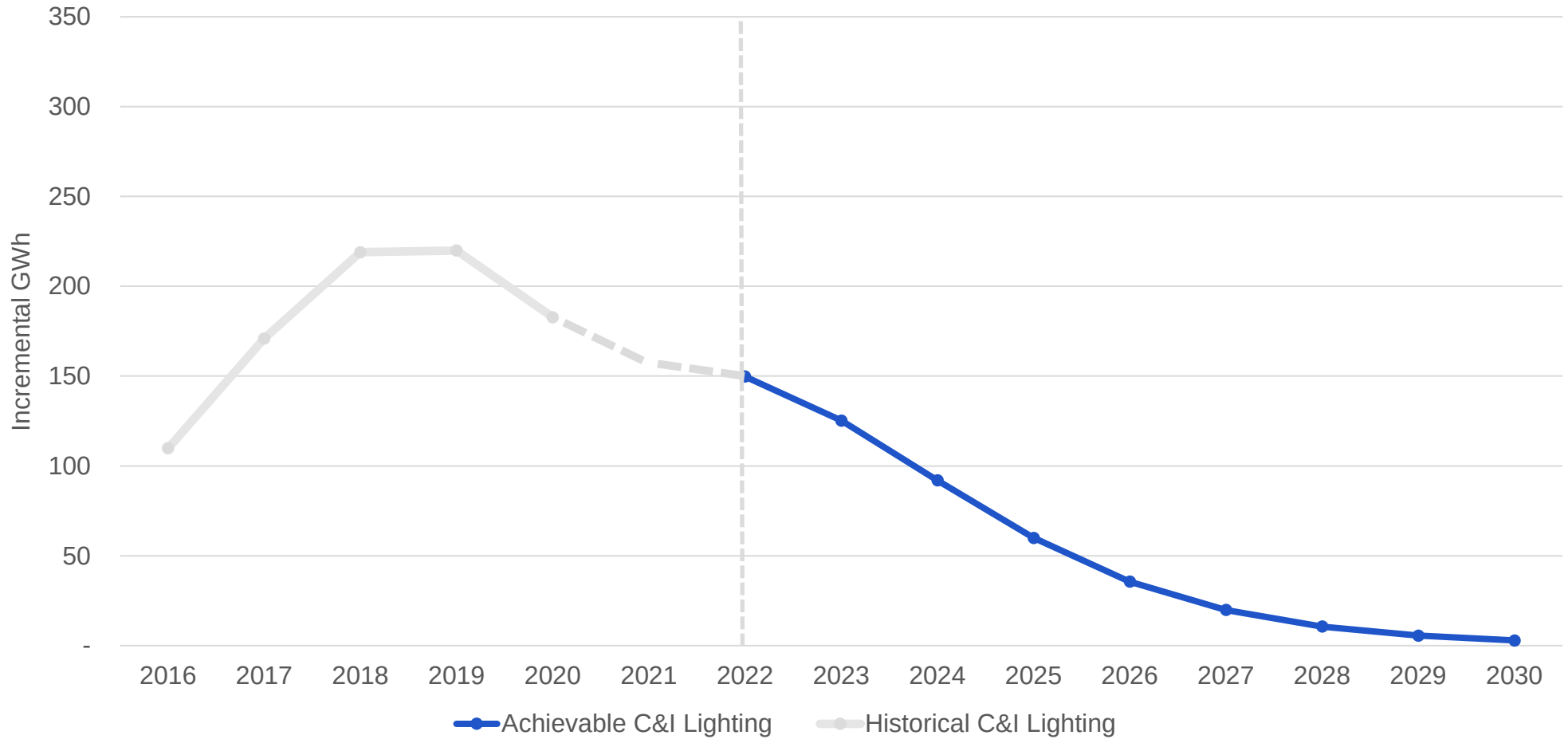
C&I Electric Energy Achievable End Use Potential

Cumulative Gross GWh



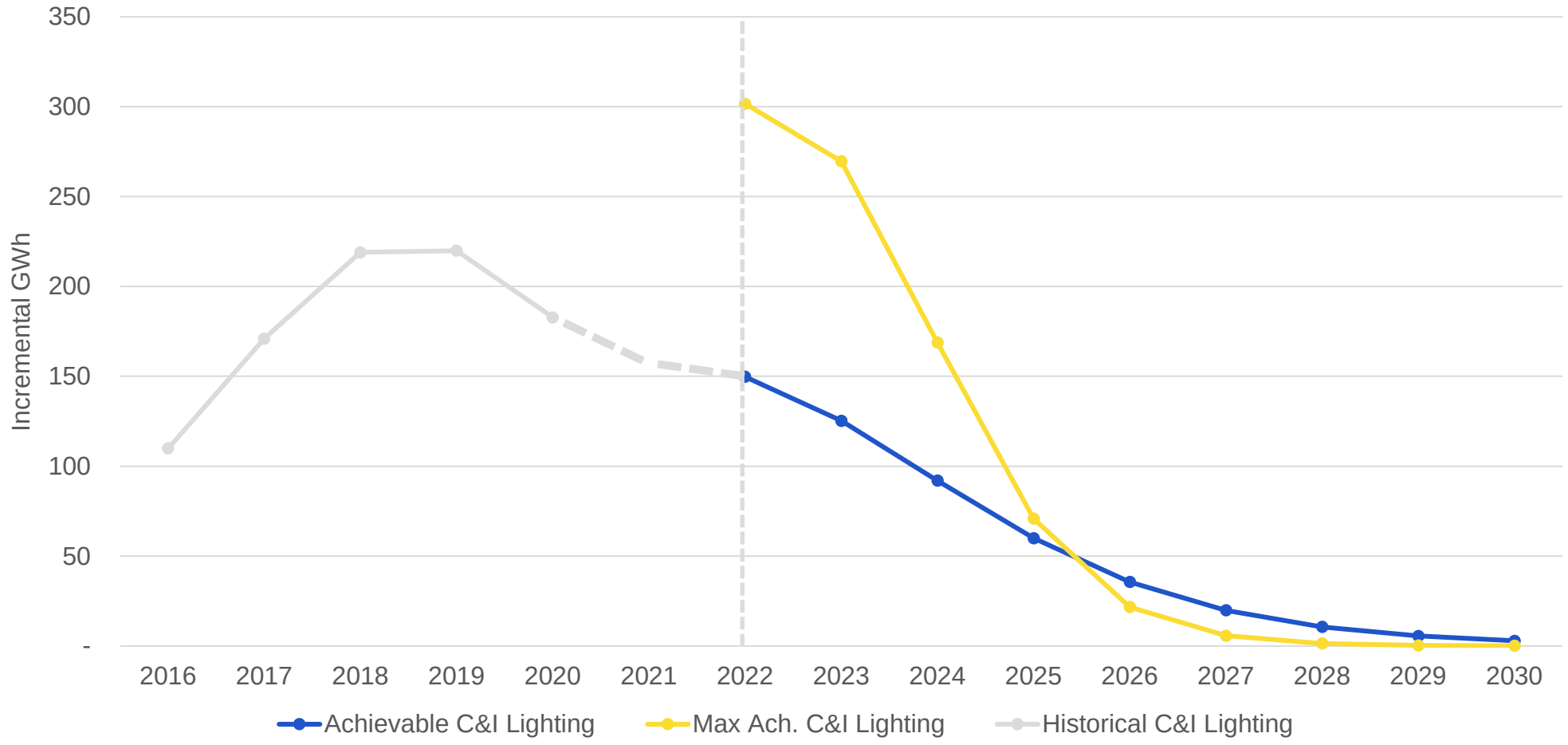
Alternative Achievable C&I Scenarios

Incremental Gross Lighting: Budget Constrained + Savings Calibrated



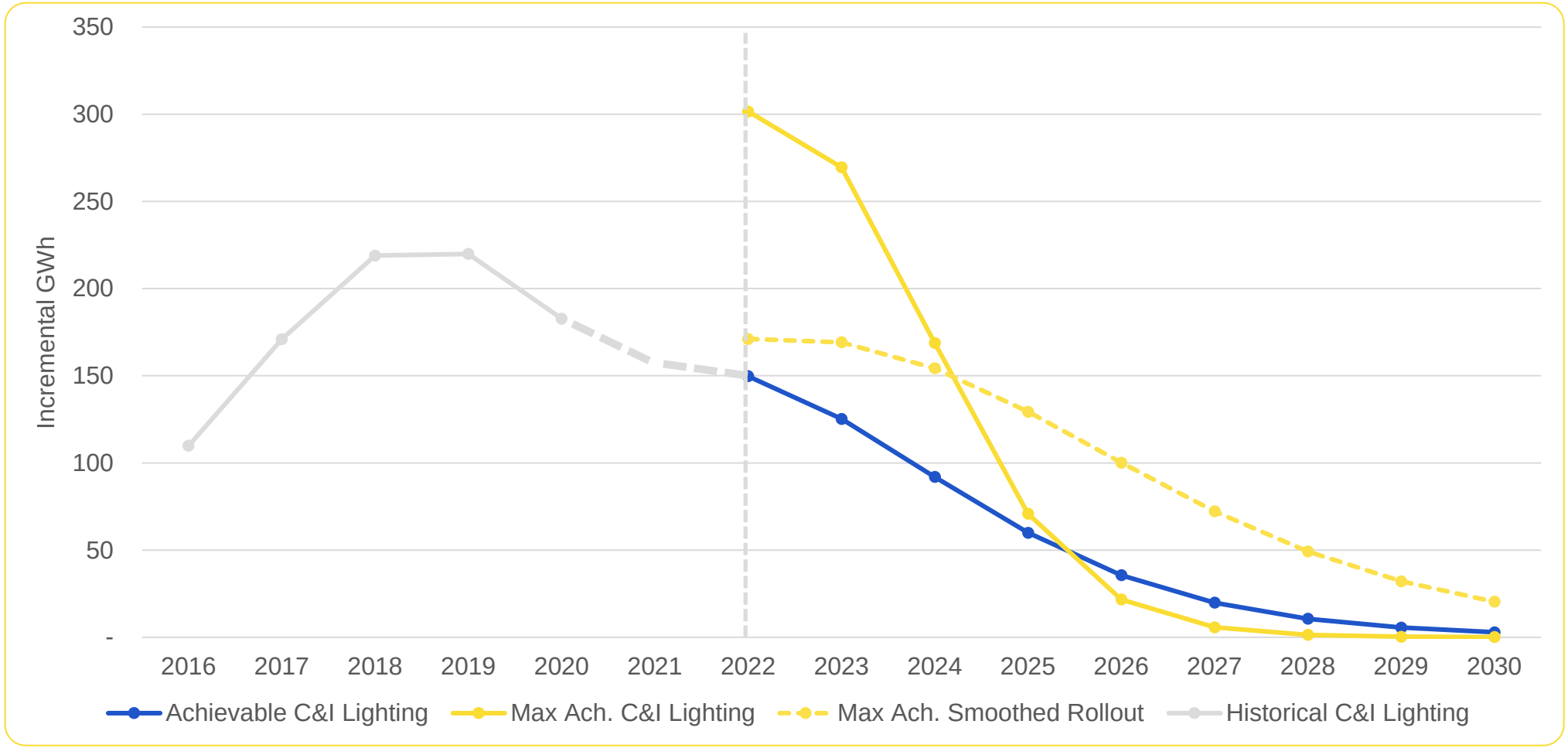
Alternative Achievable C&I Scenarios

Incremental Gross Lighting: Maximum Achievable



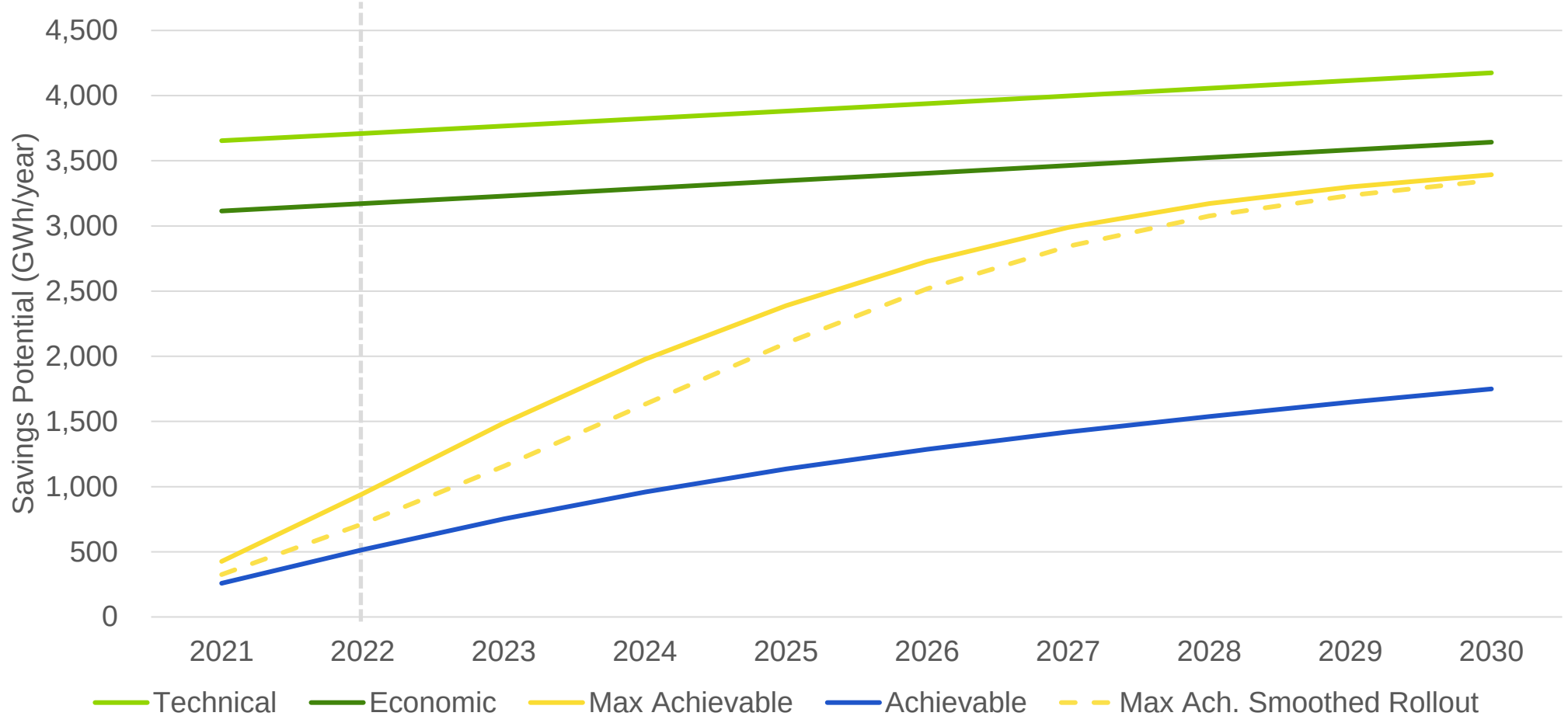
Alternative Achievable C&I Scenarios

Incremental Gross Lighting: Smoothed Rollout



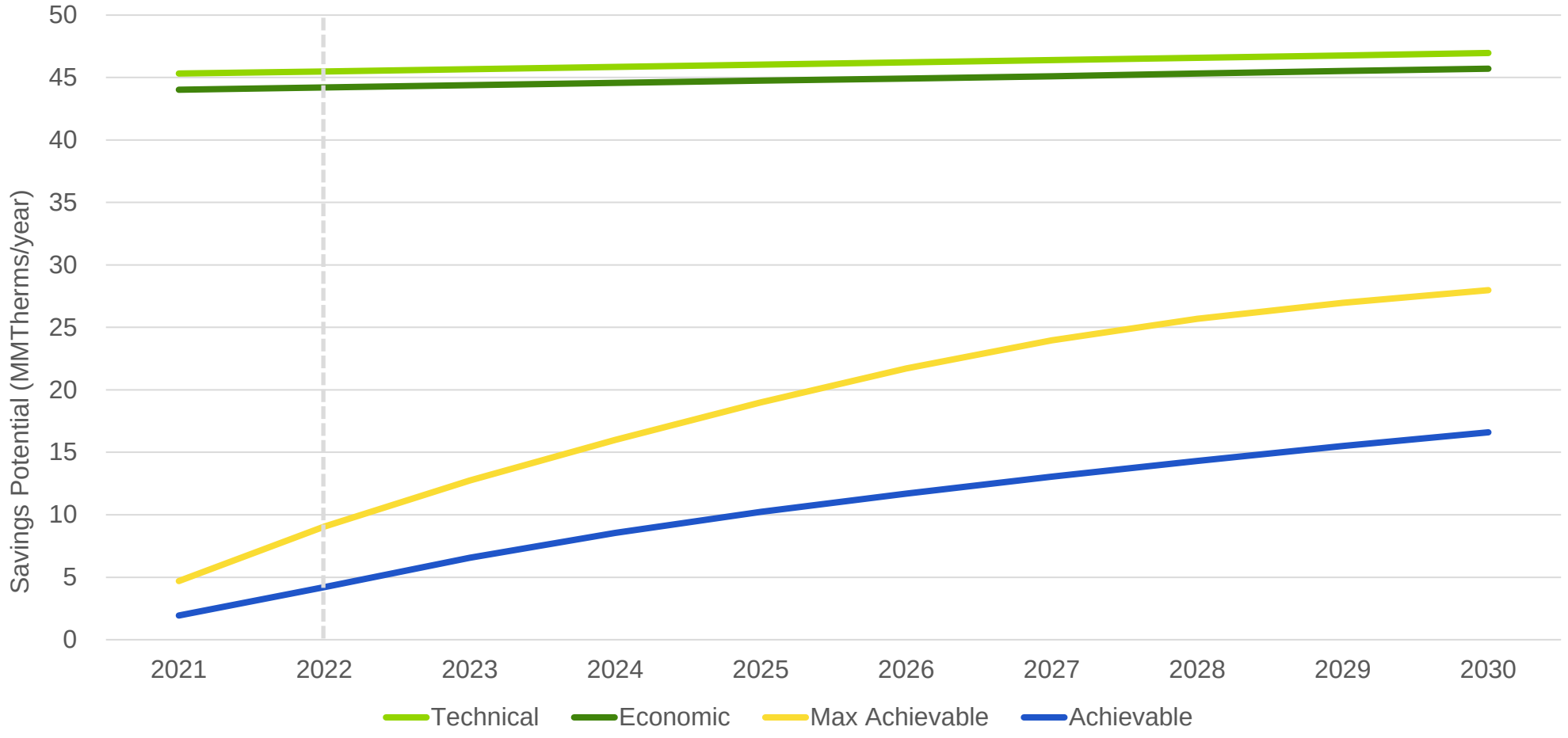
C&I Electric Energy Potential with Scenarios

Cumulative Gross Savings with Lighting Smoothed Rollout Scenario Results



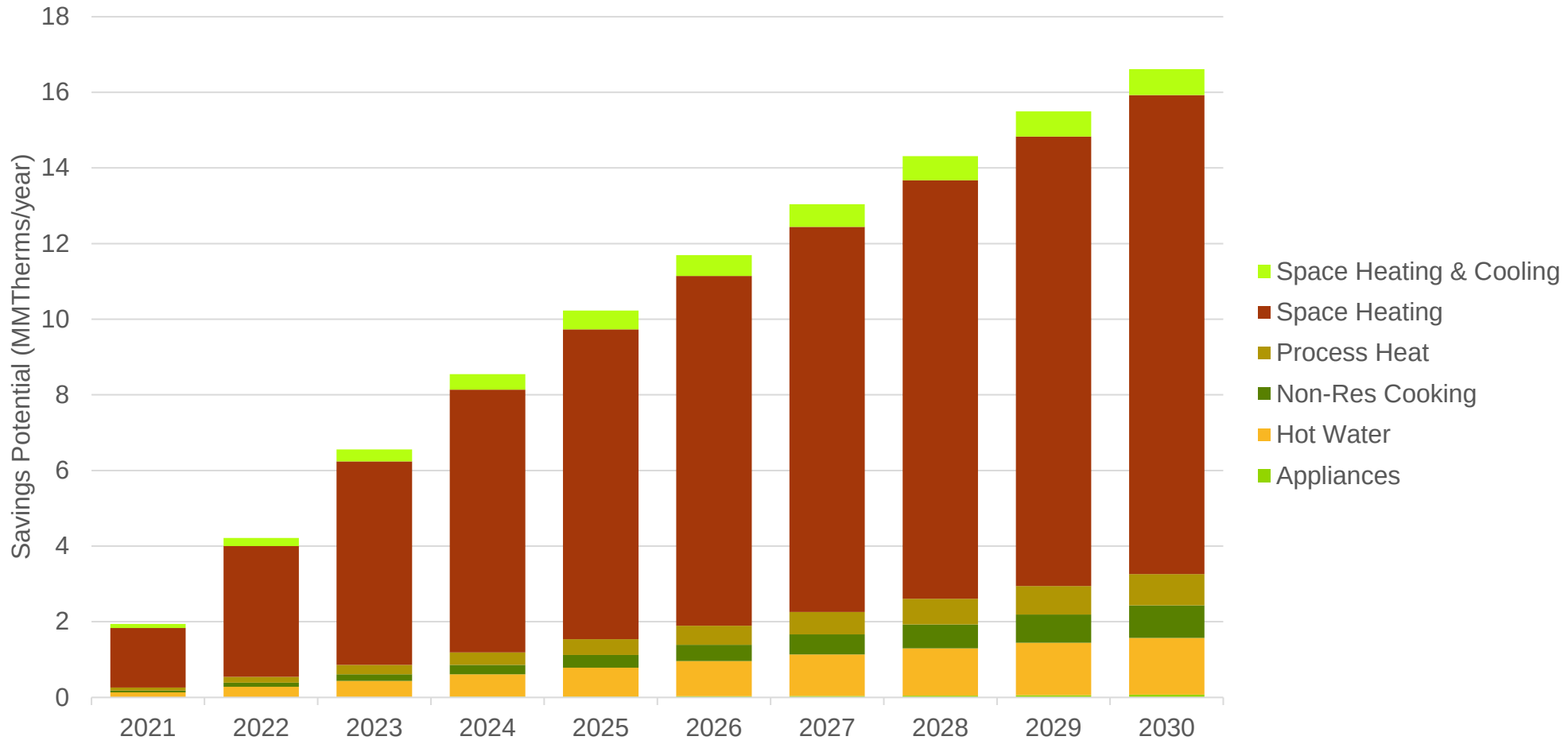
C&I Gas Potential

Cumulative Gross MMTherms

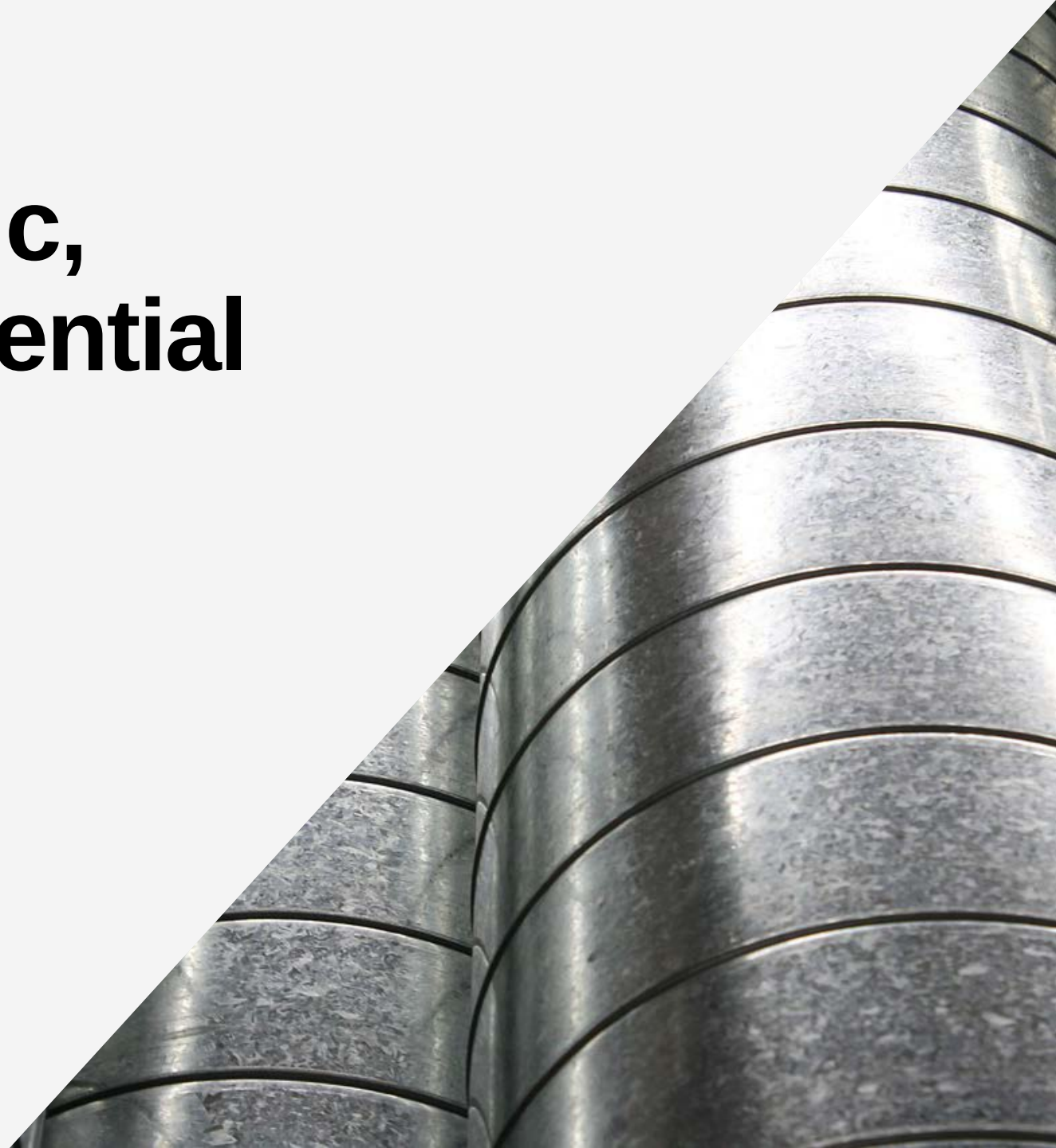


C&I Gas Achievable End Use Potential

Cumulative Gross MMTherms



Draft Residential Technical, Economic, and Achievable Potential



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Res Total Budgets by Scenario

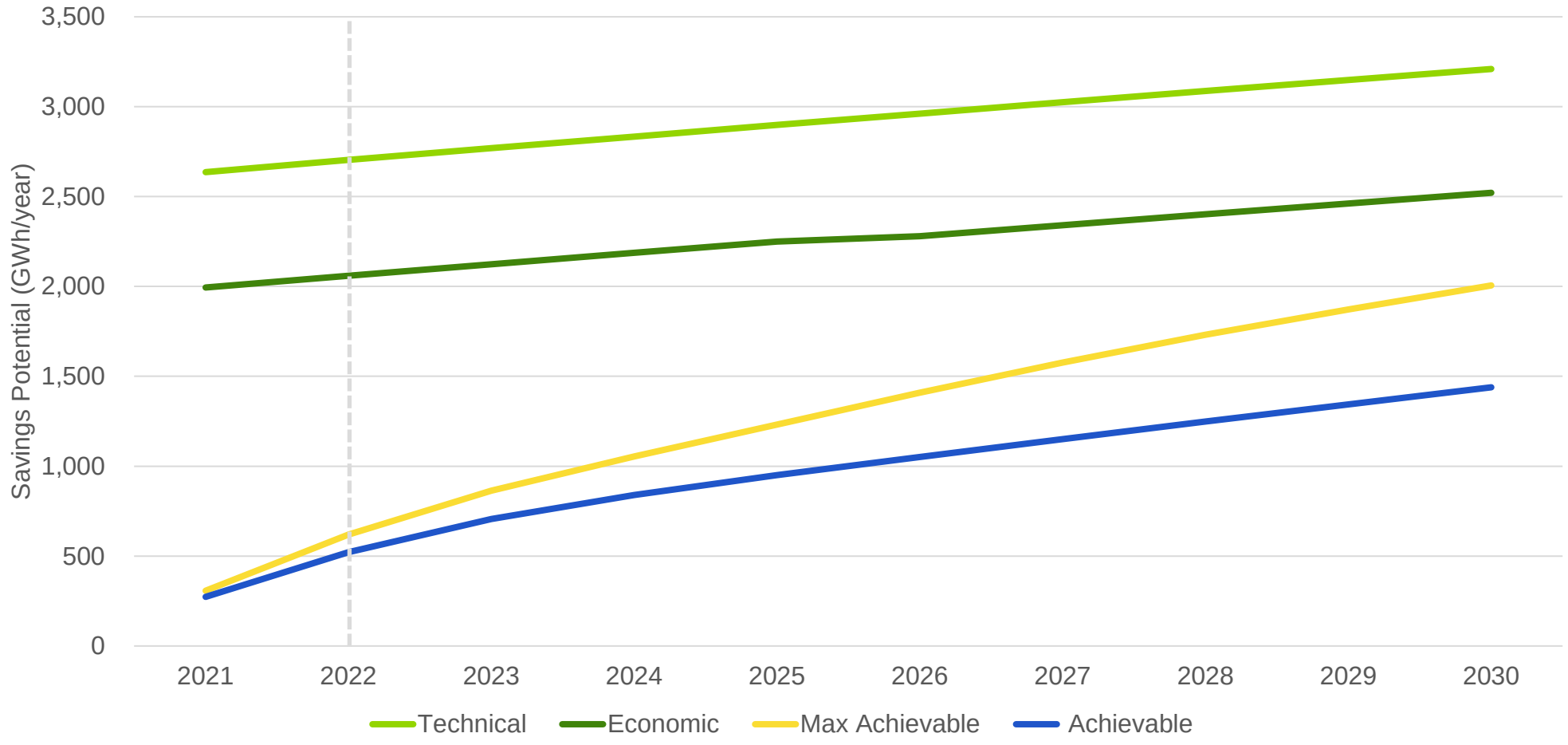
Millions of Dollars

	2016	2017	2018	2019	2020
Res - Historical Spend	$36.2	$33.9	$35.7	$36.9	$33.3

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Res - Achievable	$33.4	$34.7	$33.8	$33.4	$35.3	$37.1	$38.3	$38.5	$38.6	$39.1
Res - Max Ach. Scenario	$152.9	$209.8	$273.6	$339.8	$389.8	$395.9	$348.1	$271.3	$204.0	$163.1
Res – Incent. Optimized Scenario	$35.0	$38.8	$39.7	$42.0	$44.0	$45.7	$47.6	$47.6	$46.9	$48.0

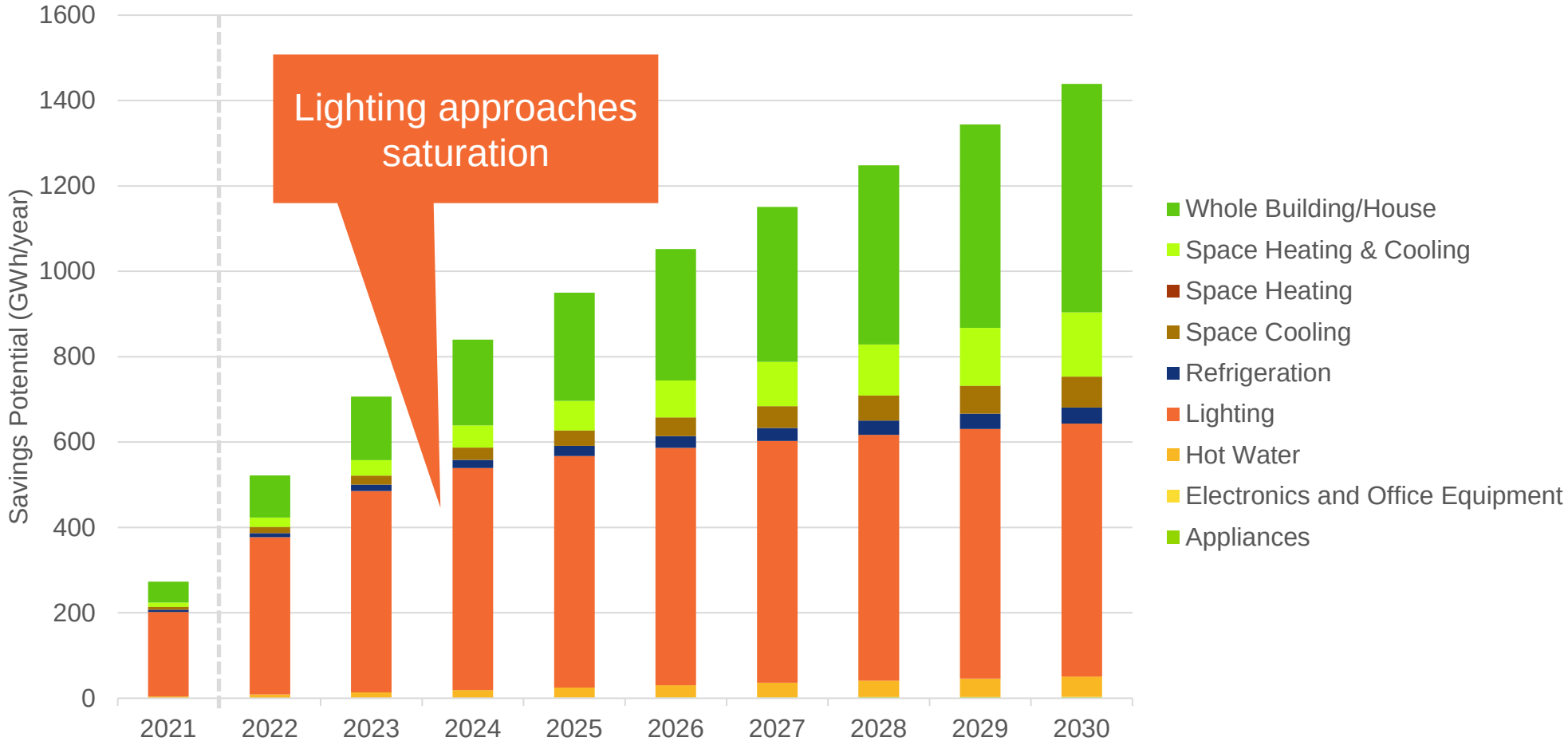
Residential Electric Energy Potential

Cumulative Gross GWh



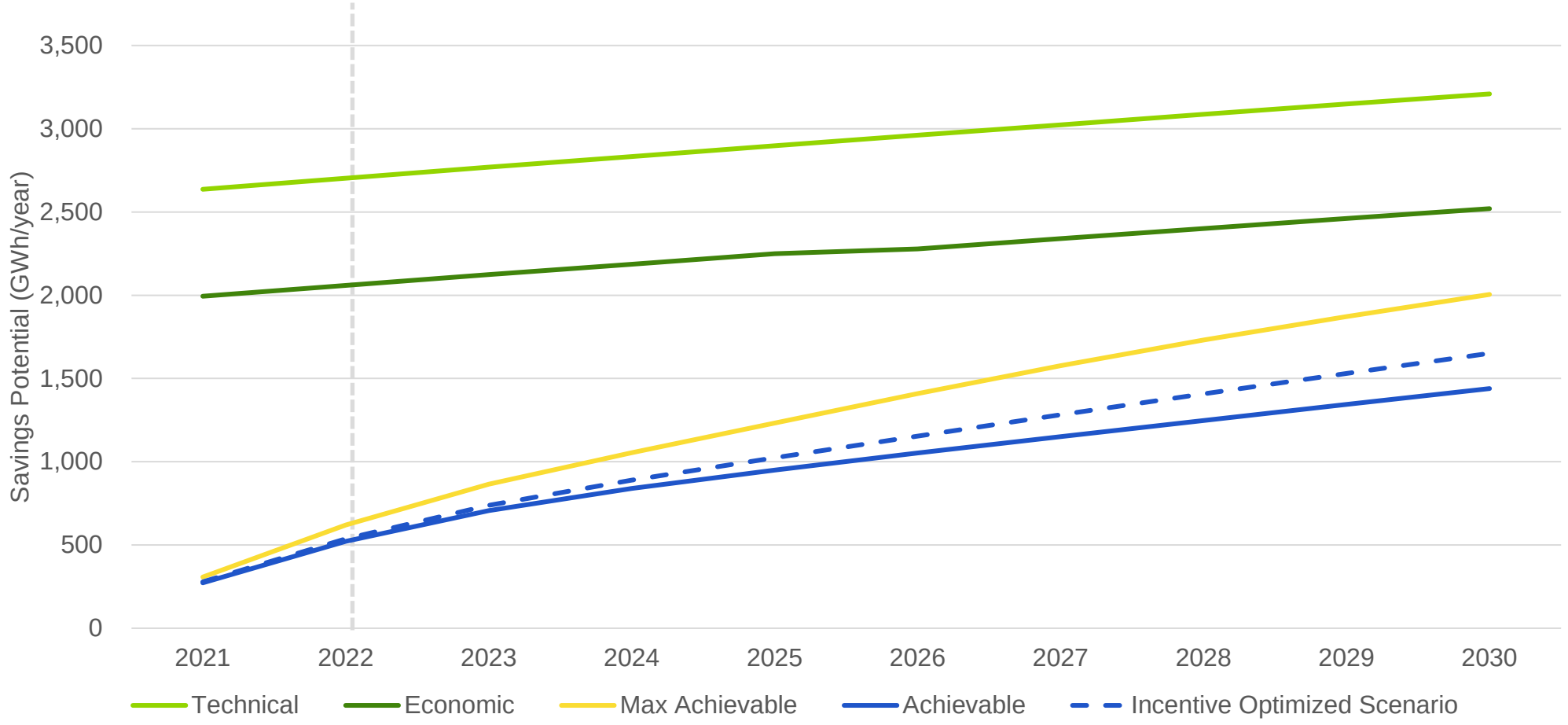
Residential Electric Energy Achievable End Use Potential

Cumulative Gross GWh



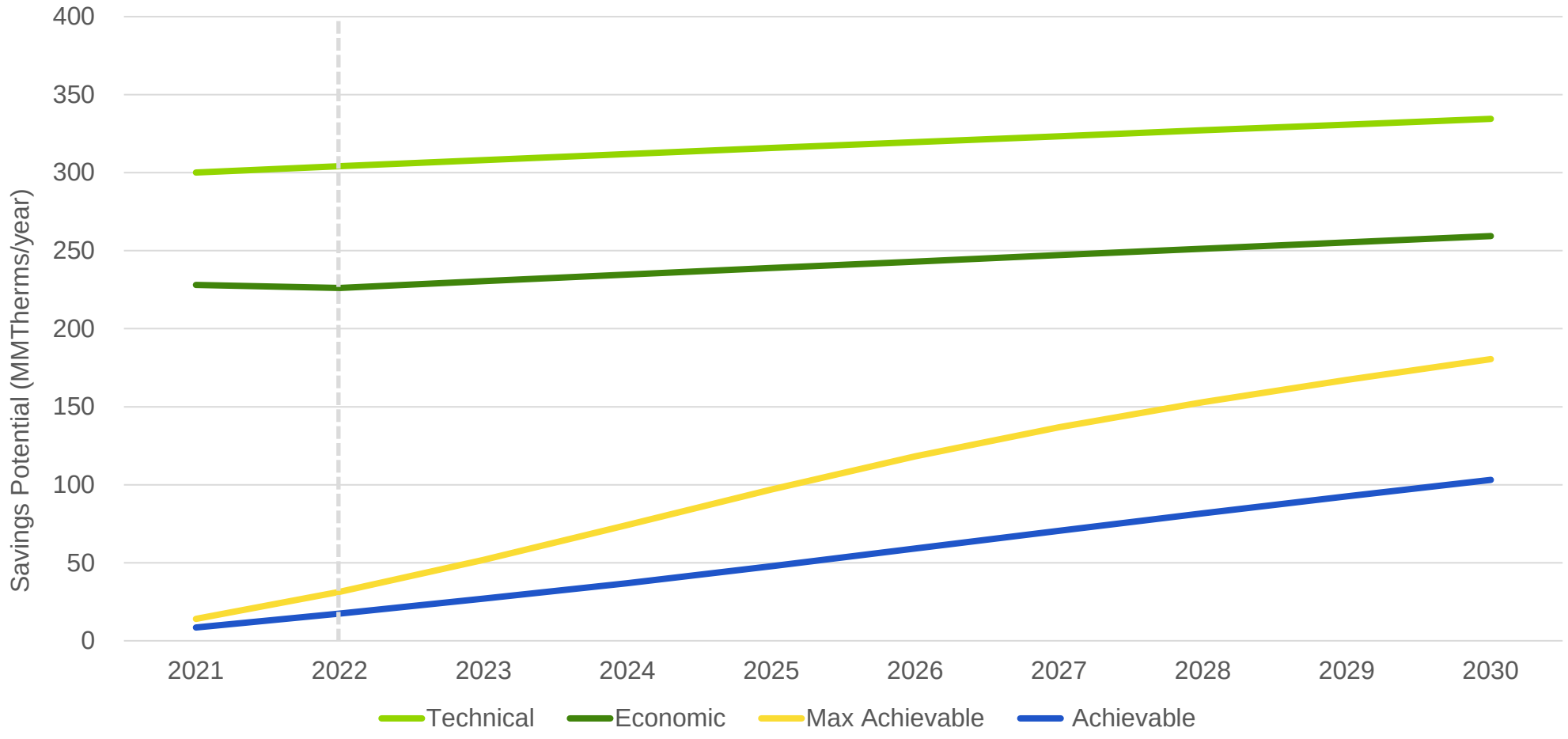
Residential Electric Energy Potential with Scenarios

Cumulative Gross Savings with Incentive Optimized Scenario Results



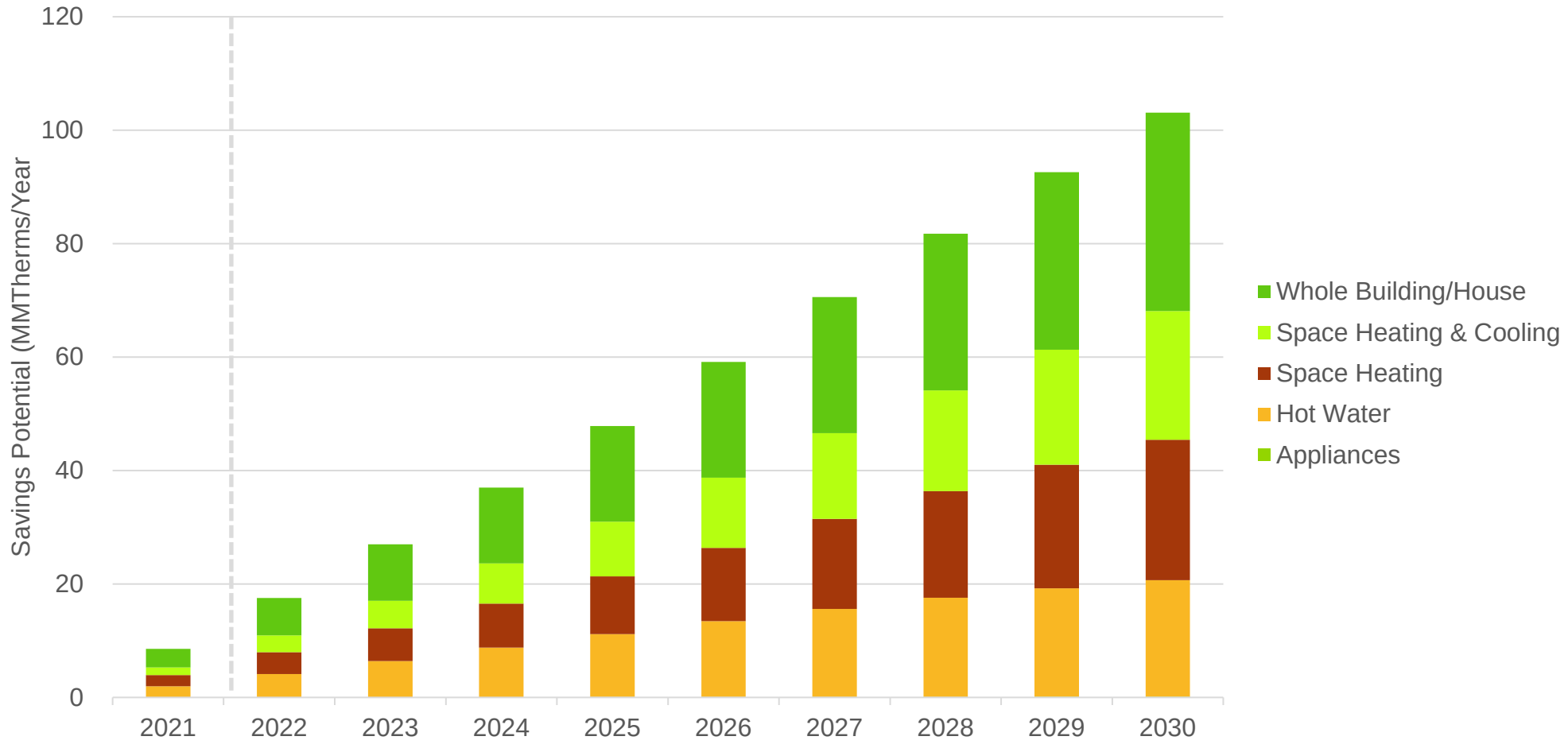
Residential Gas Potential

Cumulative Gross MMTherms



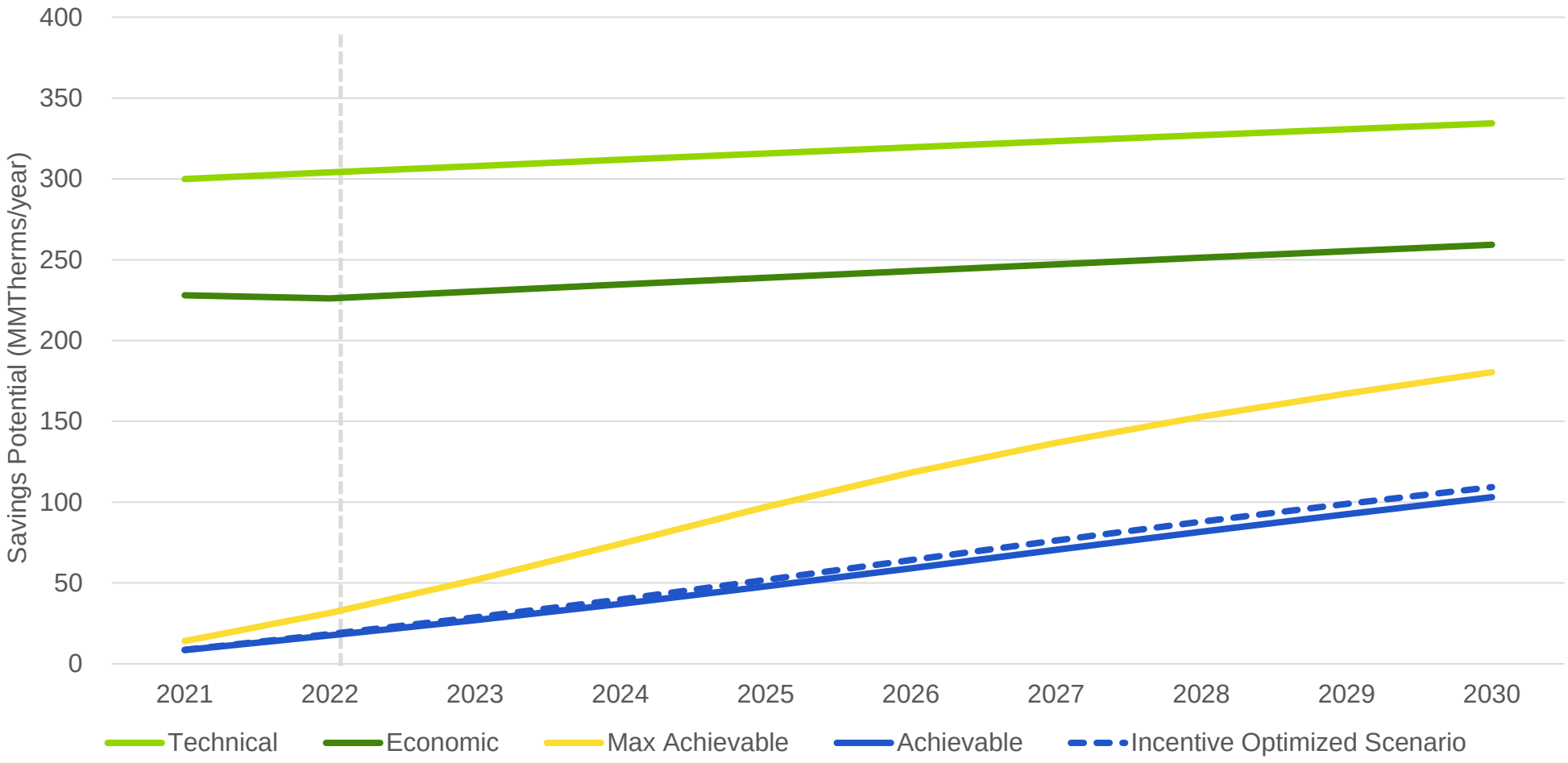
Residential Gas Achievable End Use Potential

Cumulative Gross MMTherms



Residential Gas Potential with Scenarios

Cumulative Gross Savings with Incentive Optimized Scenario Results



Questions?

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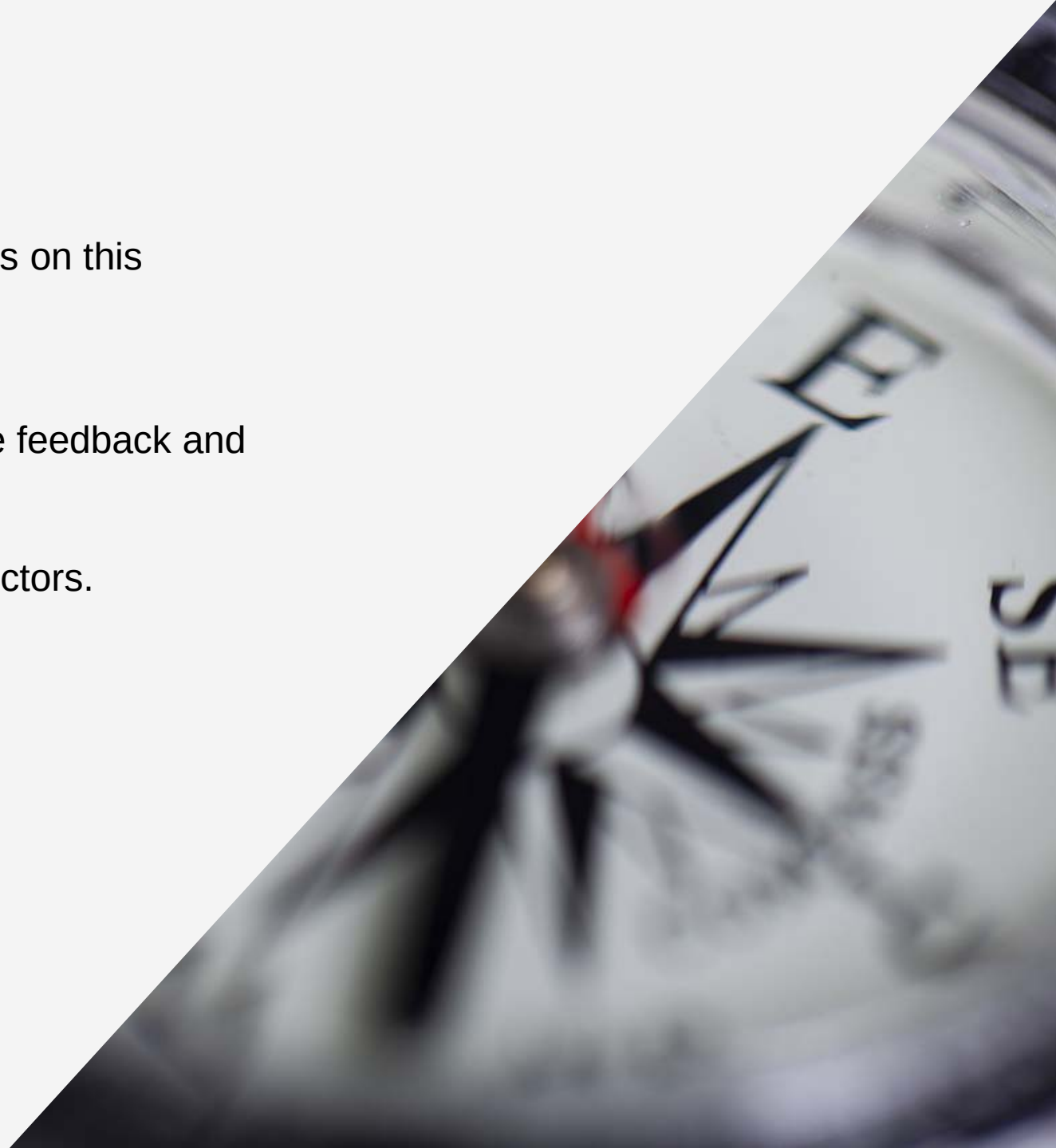
Next Steps

- Please provide any feedback, comments, or questions on this presentation by February 23, 2022.

- Guidehouse will:
  - Gather stakeholder feedback. We will include the feedback and responses in the final report.
  - Finalize all EE and BE results.
  - Create Demand Response (DR) results for all sectors.
  - Write report on EE,BE, and DR potential.



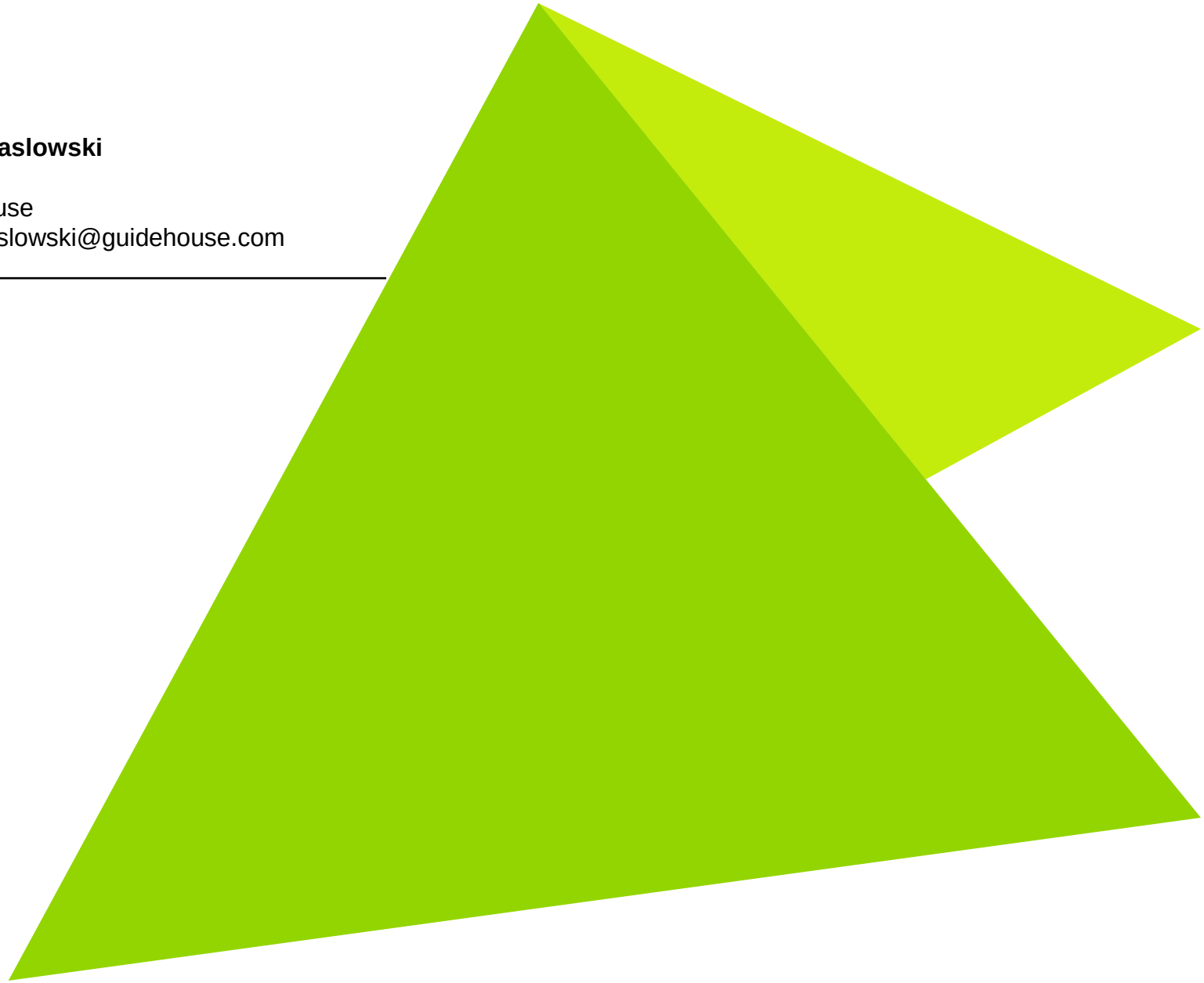
Contact

Jordan Mann
Associate Director
Guidehouse
jordan.mann@guidehouse.com

Robin Maslowski
Director
Guidehouse
robin.maslowski@guidehouse.com

Scott Robinson
Director
Guidehouse
scott.robinson@guidehouse.com

George McGuirk
Xcel Energy
george.b.mcguirk@xcelenergy.com



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Appendix

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Electric Energy Top Measures

Achievable Cumulative Gross Savings in 2030 (GWh)

Rank	Sector	Measure	Achievable Potential
1	Residential	LED Lamps (General Service Lamps including A Lamps, Specialty Lamps)	473.3
2	Residential	Home Energy Reports	457.1*
3	Commercial	Custom Lighting	403.1
4	Commercial	Custom motors	209.3
5	Commercial	New Construction - Lighting Power Density	163.0
6	Commercial	NC - Custom motors	156.3
7	Commercial	Custom cooling	120.4
8	Commercial	Com NC Other - (Envelope/PlugLoads/Refrig)	112.2
9	Industrial	LED Lighting for Industrial Applications	91.3
10	Commercial	Interior LED Lamp - PAR/BR/MR/A	82.9
11	Residential	LED Outdoor Fixture	79.6
12	Commercial	NC - Custom cooling	77.7
13	Residential	Evaporative Cooling	72.4
14	Residential	Smart Thermostat	70.4
15	Residential	ENERGY STAR Home (Large and Small)/Energy Design Assessment	68.8
16	Commercial	Interior LED Fixture - Other	46.9
17	Residential	Refrigerator Recycling	32.6
18	Industrial	Ag Pumps VFDs	31.4
19	Industrial	Low Flow Irrigation Systems	31.0
20	Industrial	Air Compressor Optimization	29.7

*Xcel Energy only claims 1/3 of Home Energy Report Savings

Gas Energy Top Measures

Achievable Cumulative Gross Savings in 2030 (MMTherms)

Rank	Sector	Measure	Achievable Potential
1	Residential	Home Energy Reports	24.6*
2	Residential	Gas Furnace Replacement	24.4
3	Residential	Smart Thermostat	18.0
4	Residential	Low-flow Showerheads	15.1
5	Residential	ENERGY STAR Home (Large and Small)/Energy Design Assessment	9.9
6	Commercial	HVAC Heat Recovery / Energy Recovery Ventilator	5.8
7	Commercial	Gas Furnace - High Efficiency	5.6
8	Residential	Interior operable storm windows	4.6
9	Residential	Low-flow Faucet Aerator	4.2
10	Commercial	Gas Condensing Boiler	1.3
11	Residential	Water Heater Tank Insulation	1.3
12	Commercial	Gas Storage and Tankless Water Heaters	0.8
13	Commercial	Guest Room Energy Management	0.7
14	Commercial	Boiler - SHW	0.7
15	Residential	Energy Efficient Building	0.5
16	Commercial	ENERGY STAR Commercial Dishwasher	0.4
17	Industrial	Condensing Boiler	0.3
18	Industrial	Steam Trap Replacement	0.3
19	Residential	Gas Furnace Tune Up	0.3
20	Commercial	Fryer	0.3

*Xcel Energy only claims 1/3 of Home Energy Report Savings

Results as a Percent of Sales

Achievable Cumulative Gross Savings

	Electric Achievable % of Sales	Gas Achievable % of Sales
2021	1.9%	0.7%
2022	3.6%	1.5%
2023	5.1%	2.3%
2024	6.2%	3.1%
2025	7.1%	3.9%
2026	7.9%	4.7%
2027	8.6%	5.6%
2028	9.2%	6.3%
2029	9.8%	7.1%
2030	10.3%	7.8%