

CONSERVATION POTENTIAL ASSESSMENT RESULTS

SEPTEMBER 16, 2021



CADMUS



Agenda

Project Overview

Overall CPA Results

Sector-Level CPA Results

Next Steps

Questions



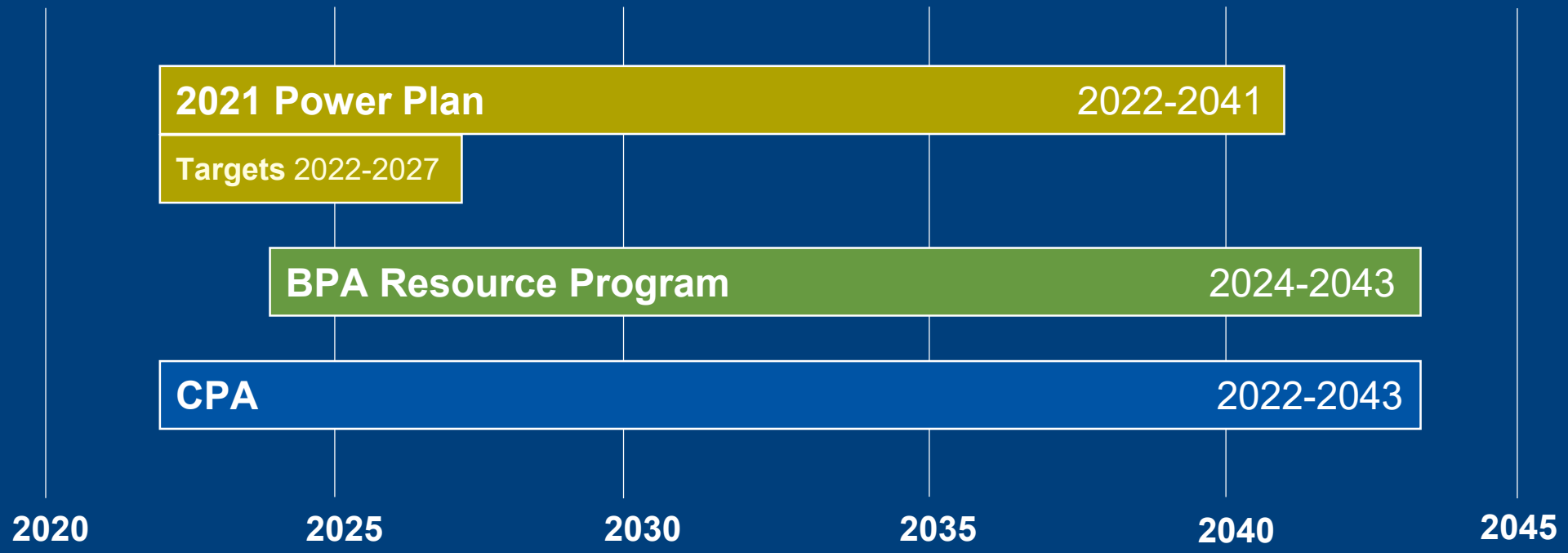
PROJECT OVERVIEW

CPA Project Goals

Develop **22-year estimates** of technical and achievable conservation potential in BPA's service territory
(2022 – 2043)

Produce conservation **supply curves** for use in BPA's **Resource Program modeling**

CPA Timeframe



2021 CPA and Types of Potential

CPA

Not
Technically
Feasible

Technical Potential

Not
Technically
Feasible

Market
Barriers

Achievable Technical Potential

**Resource
Program**

Not
Technically
Feasible

Market
Barriers

Not
Cost-
Effective

**Achievable Economic
Potential**

Methodology Overview

Customizations for BPA Supply Curves



Overall Goal: Used the best available data to customize Council supply curve files for use in BPA's Resource Program process



OVERALL CPA RESULTS

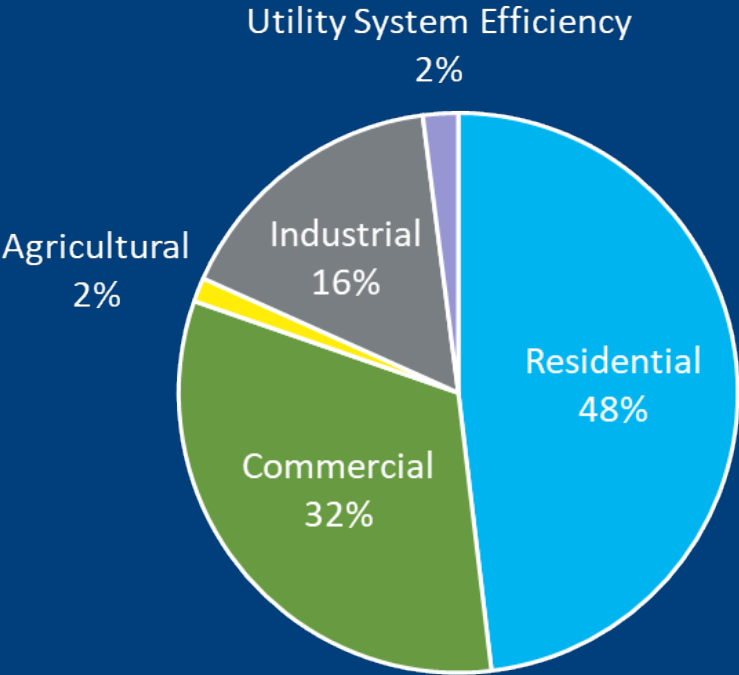
Cumulative Potential

BPA Sector	Cumulative Achievable Technical Potential (aMW)	
	6-Year (2024 to 2029)	20-Year (2024 to 2043)
Residential	345	1,155
Commercial	231	654
Agricultural	10	30
Industrial	117	288
Utility System Efficiency	15	80
Total	717	2,207

20-Year potential is approximately 20% more than BPA's 2019 CPA, but there are important differences in the cost and timing

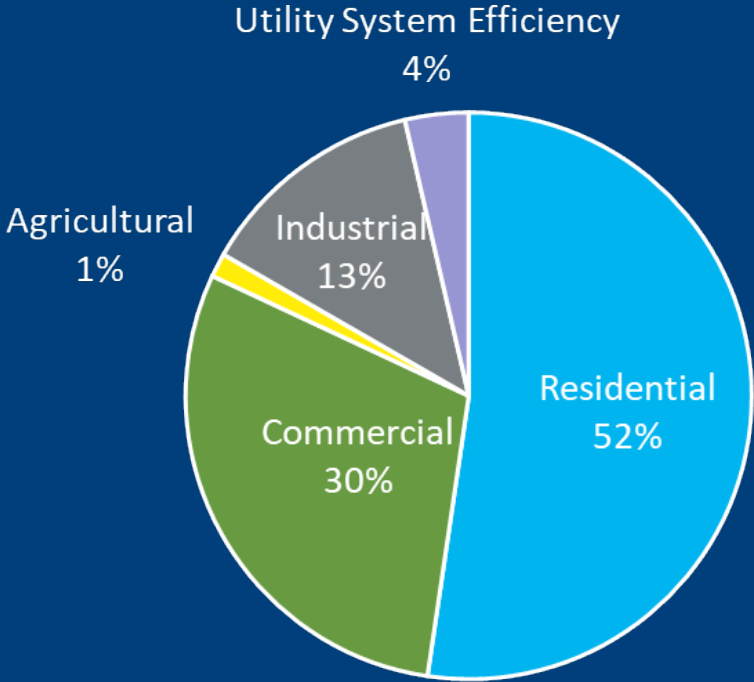
Share of Potential by Sector

6-Year



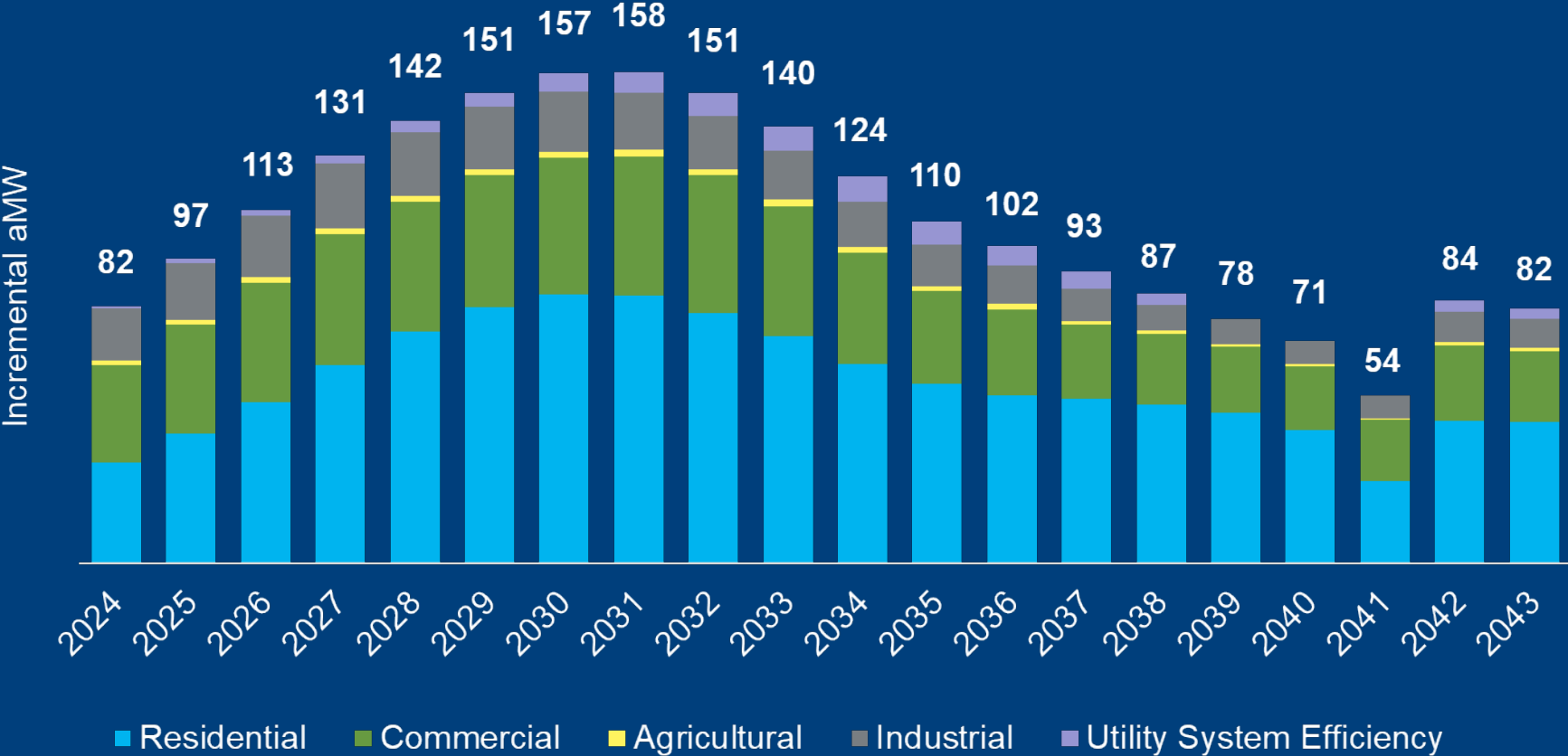
Total = 717 aMW

20-Year

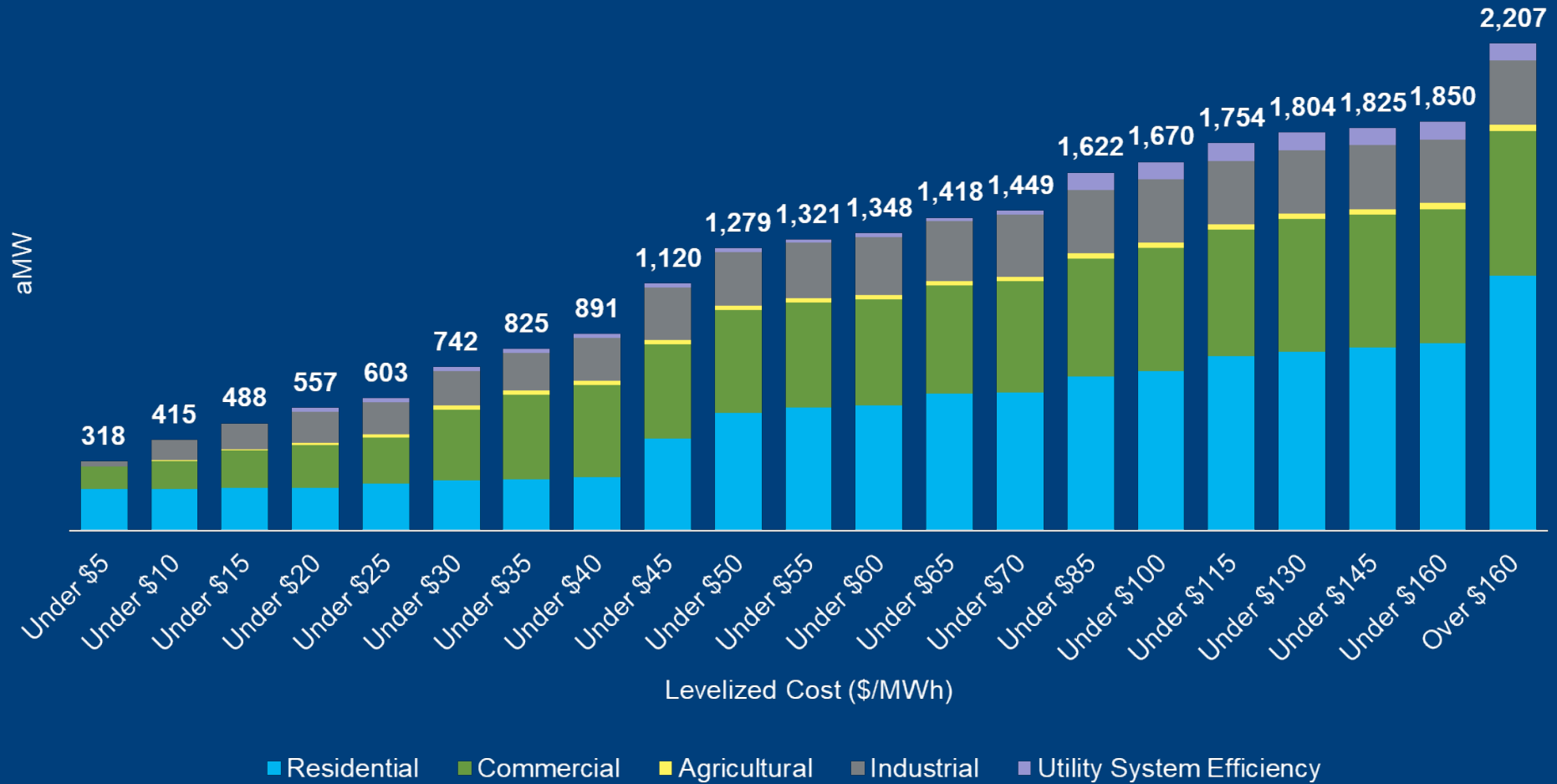


Total = 2,207 aMW

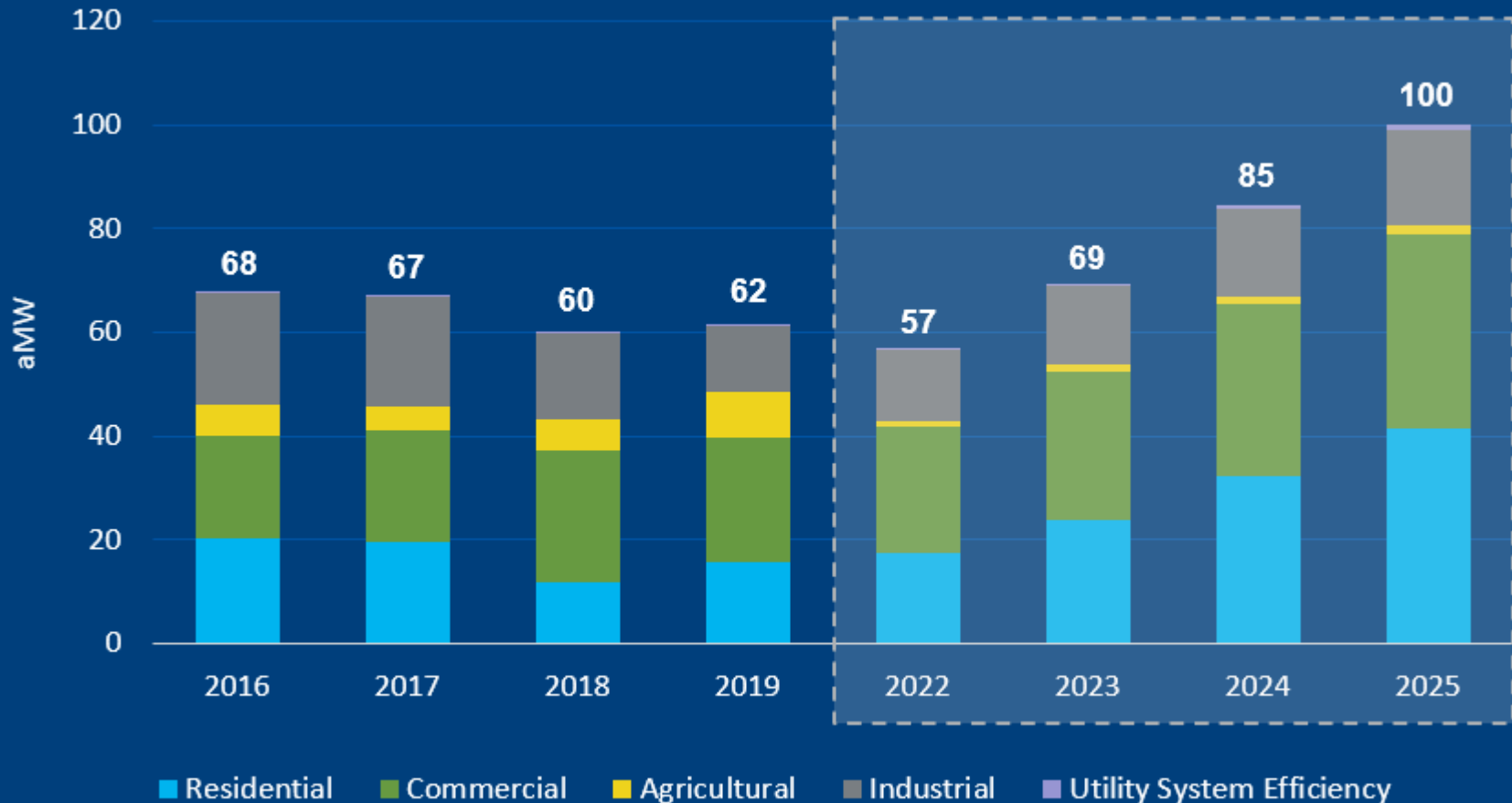
Incremental Technical Achievable Potential



Supply Curve



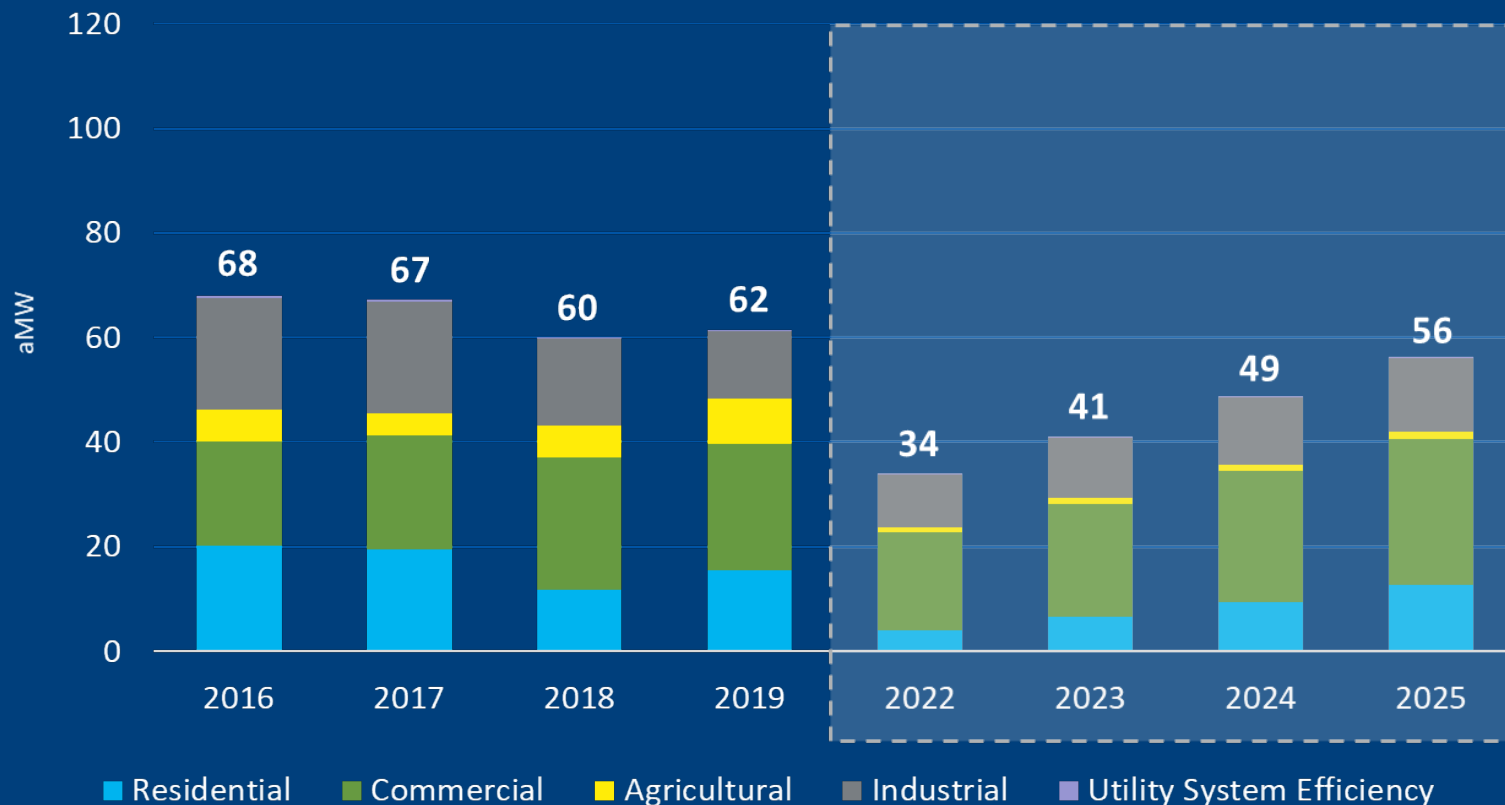
Past Achievement vs. All Potential



Note: Historical savings are based on the NW Power Council's 2019 Regional Conservation Progress Report and includes BPA-funded and utility self-funded program savings only.

Past Achievement vs. Screened Potential

Potential Screened for < \$50 per MWh



Note: Historical savings are based on the NW Power Council's 2019 Regional Conservation Progress Report and includes BPA-funded and utility self-funded program savings only.

Comparison of 6-Year (2022-2027) Potential

Sector	6-Year Cumulative Achievable Technical Potential - aMW		
	BPA CPA	Council BPA 2021P	Council 2021 Power Plan
Residential	230	200	475
Commercial	199	197	520
Agricultural	9	7	18
Industrial	105	97	302
Utility System Efficiency	7	7	20
Total	550	508	1,336

Comparison of 20-Year (2022-2041) Potential

Sector	20-Year Cumulative Achievable Technical Potential - aMW		
	BPA CPA	Council BPA 2021P	Council 2021 Power Plan
Residential	1,106	955	2,271
Commercial	659	660	1,707
Agricultural	30	27	73
Industrial	299	261	791
Utility System Efficiency	74	69	186
Total	2,167	1,971	5,028

Key Findings



Less lighting potential

Lighting is key resource

Less irrigation potential

Motor-driven systems add potential

New methodology: higher potential

No showerheads

Motor-driven systems add potential

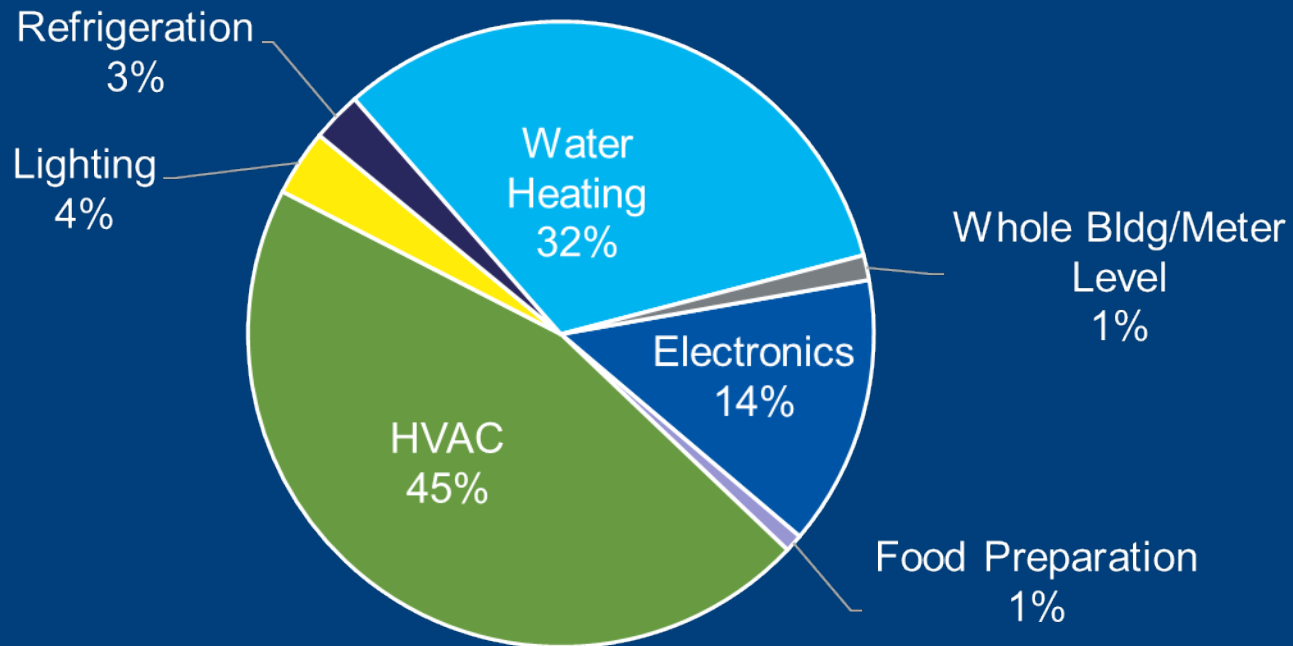
TMY/FMY differences



SECTOR-LEVEL CPA RESULTS

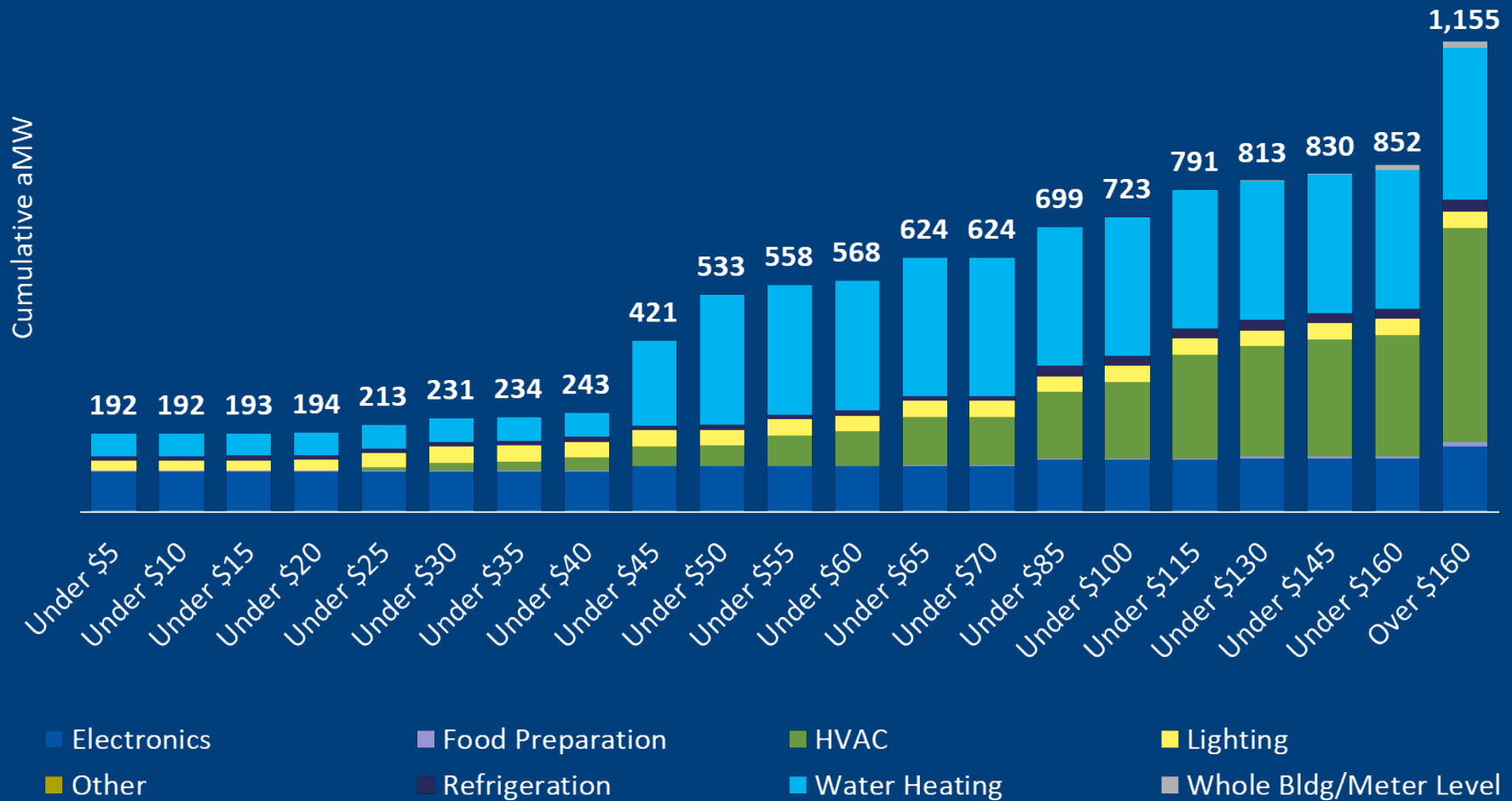
RESIDENTIAL SECTOR

Residential Technical Achievable Potential by End Use

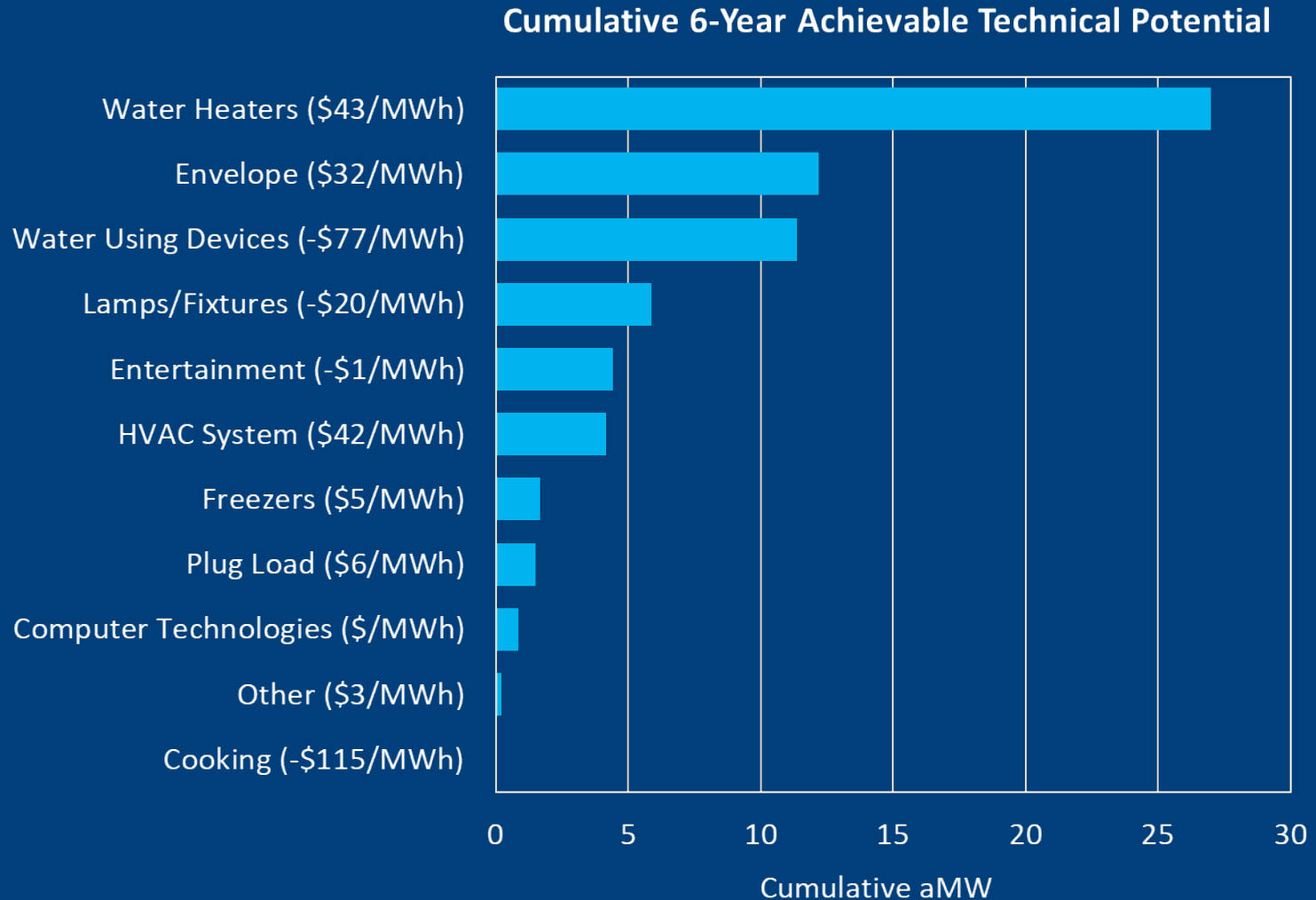


Total = 1,155 aMW

Residential 20-Year Supply Curve

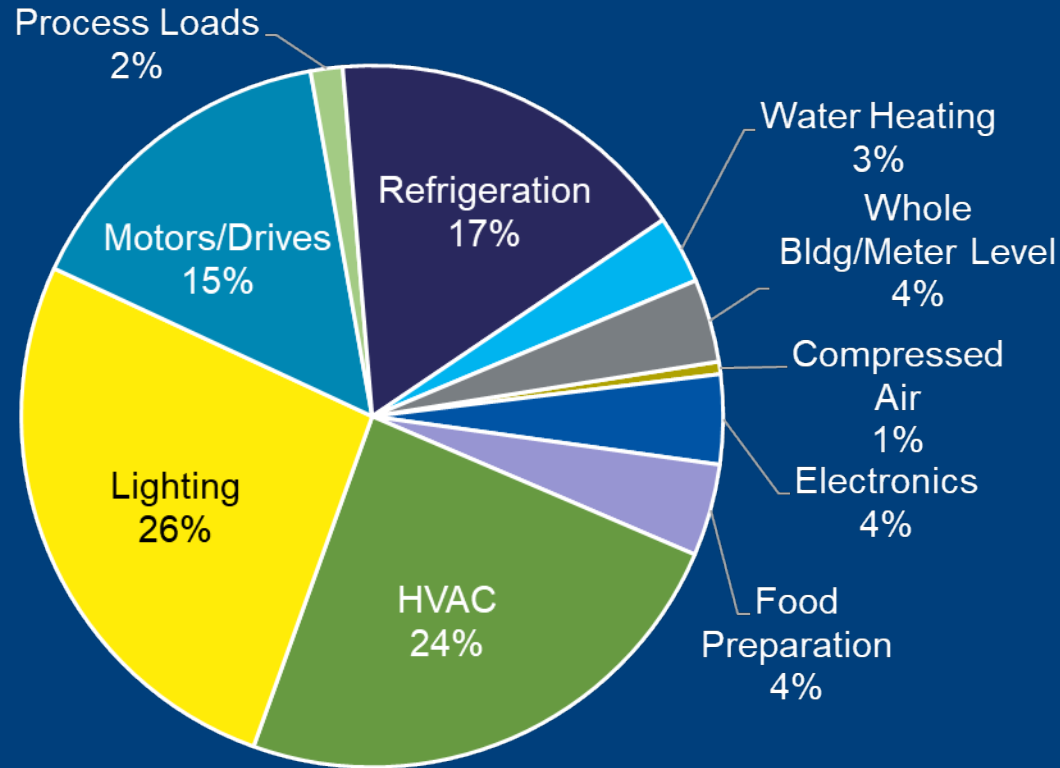


Top Residential Measures Under \$50/MWh



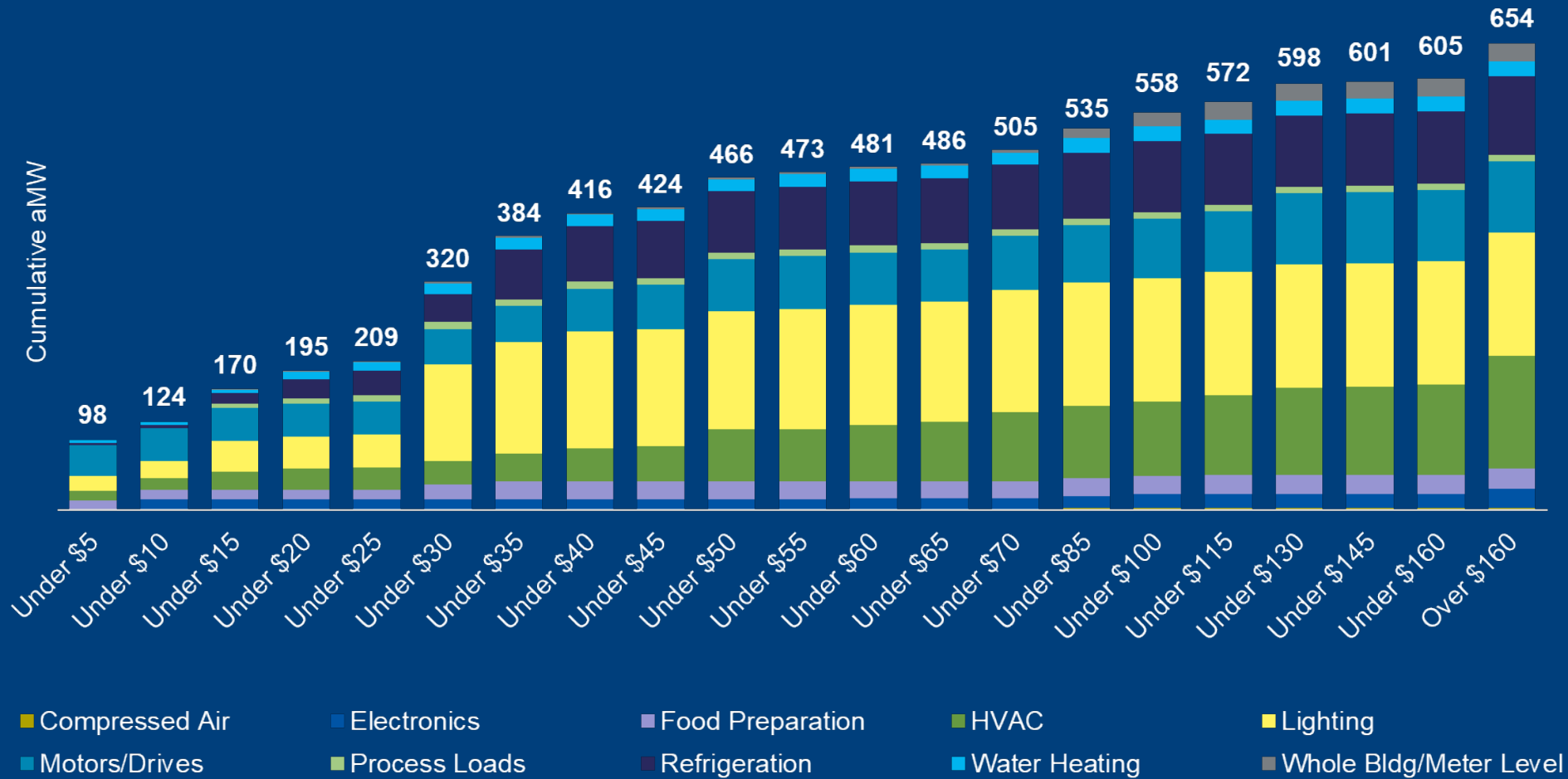
COMMERCIAL SECTOR

Commercial Technical Achievable Potential by End Use



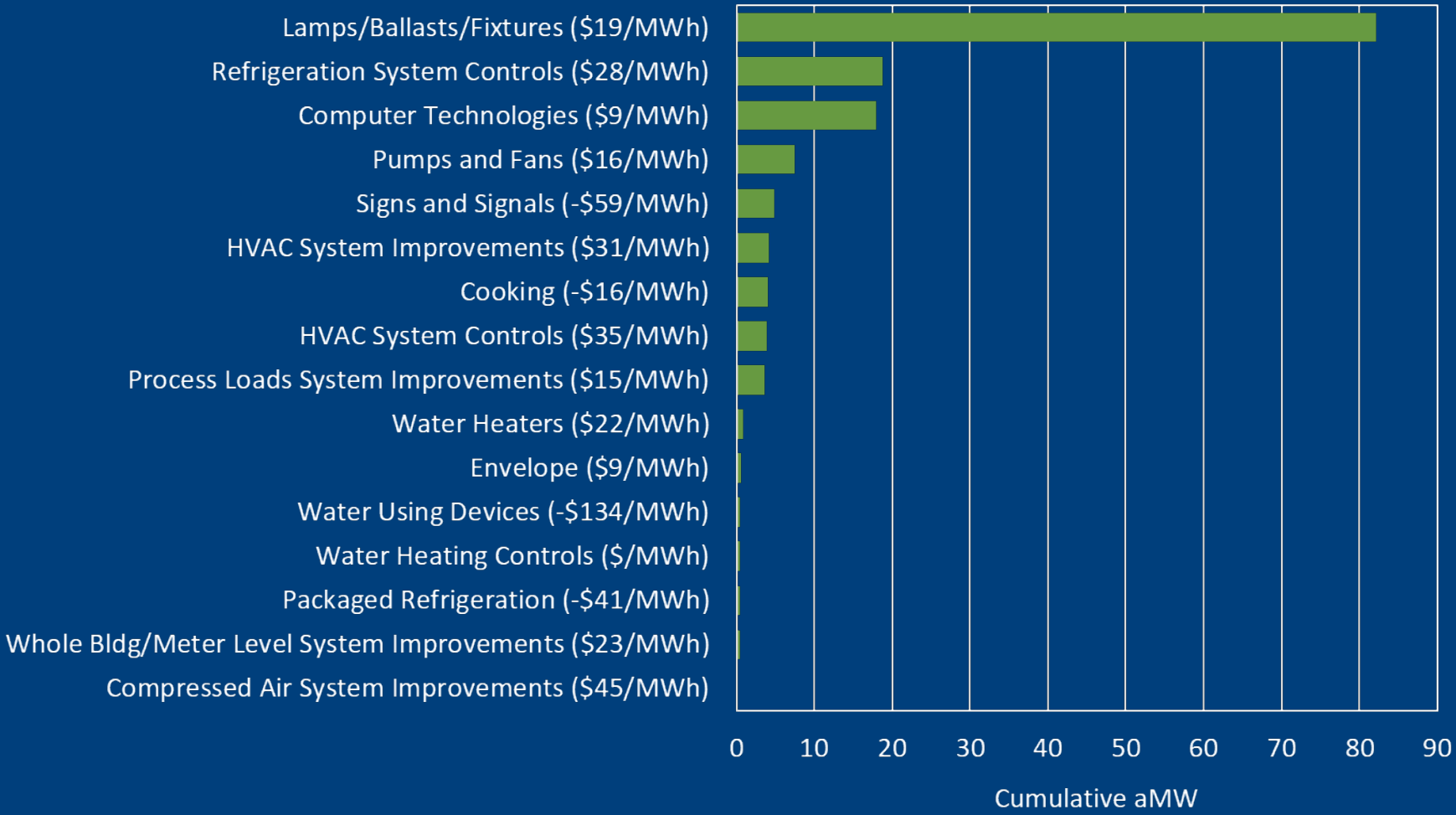
Total = 654 aMW

Commercial 20-Year Supply Curve



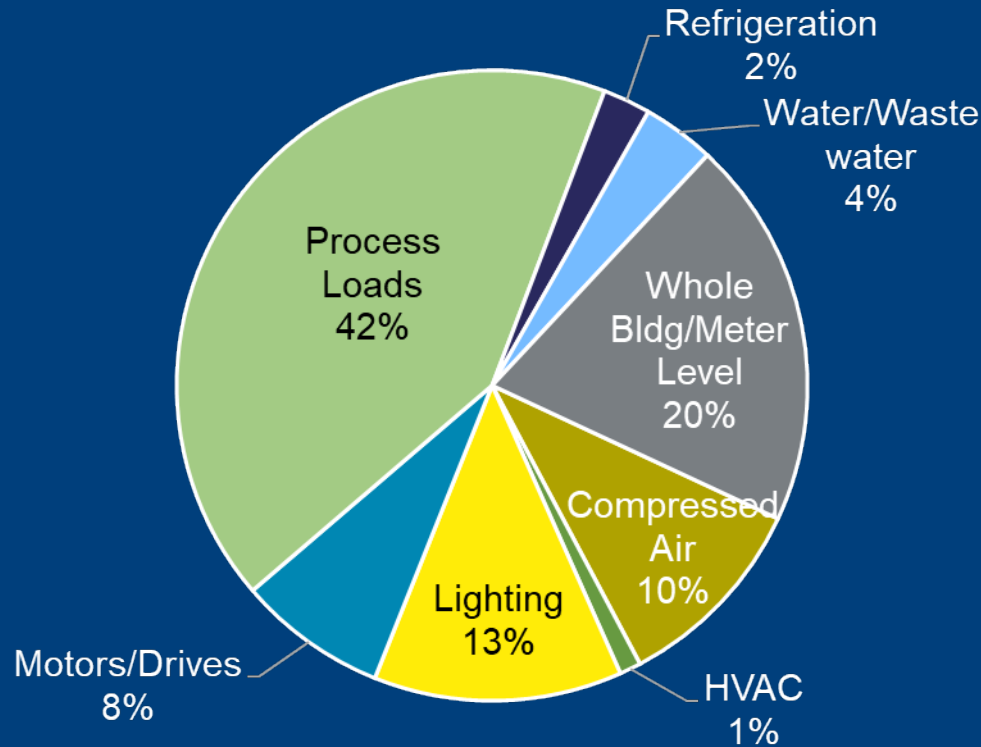
Top Commercial Measures Under \$50/MWh

Cumulative 6-Year Achievable Technical Potential



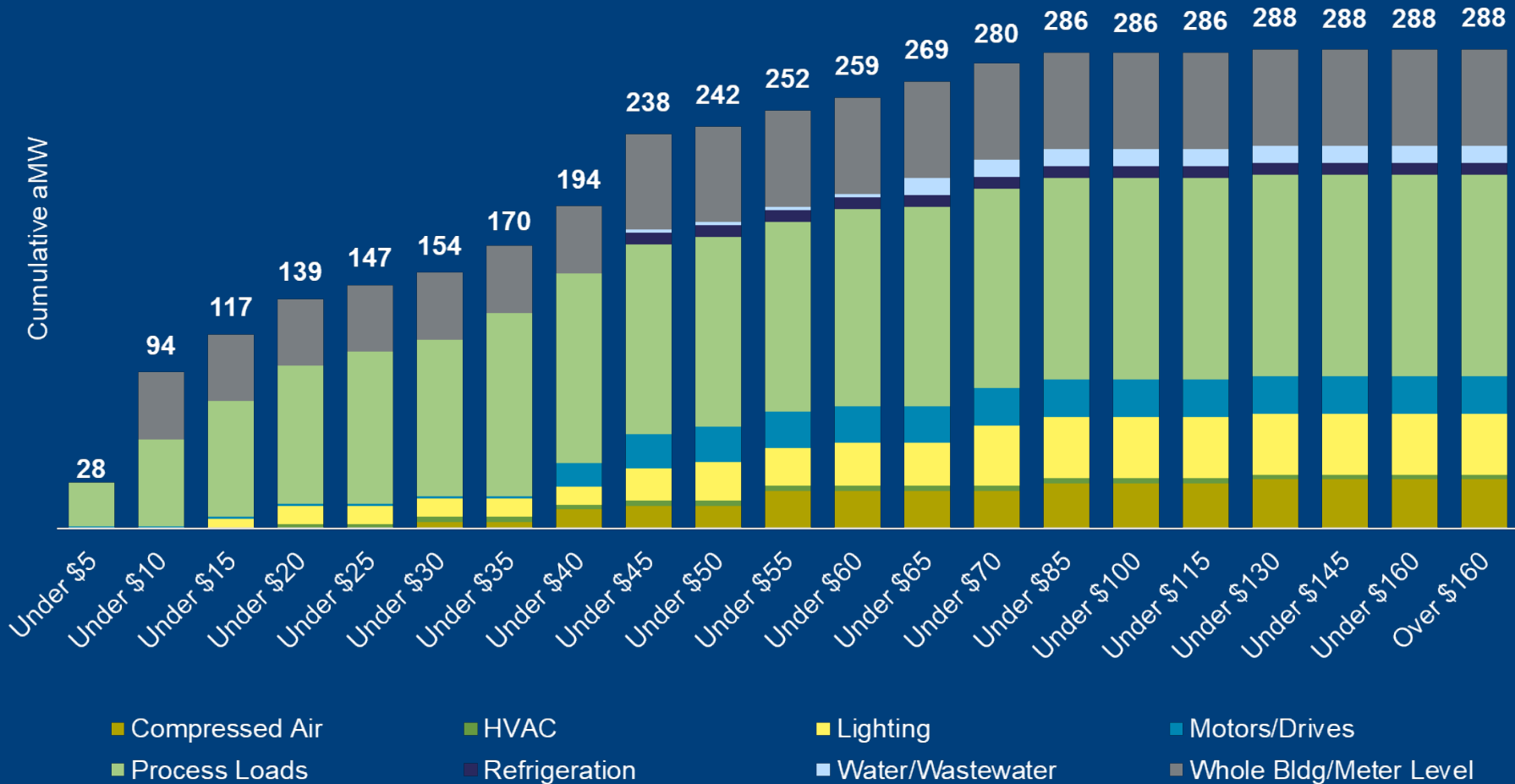
INDUSTRIAL SECTOR

Industrial Technical Achievable Potential by End Use

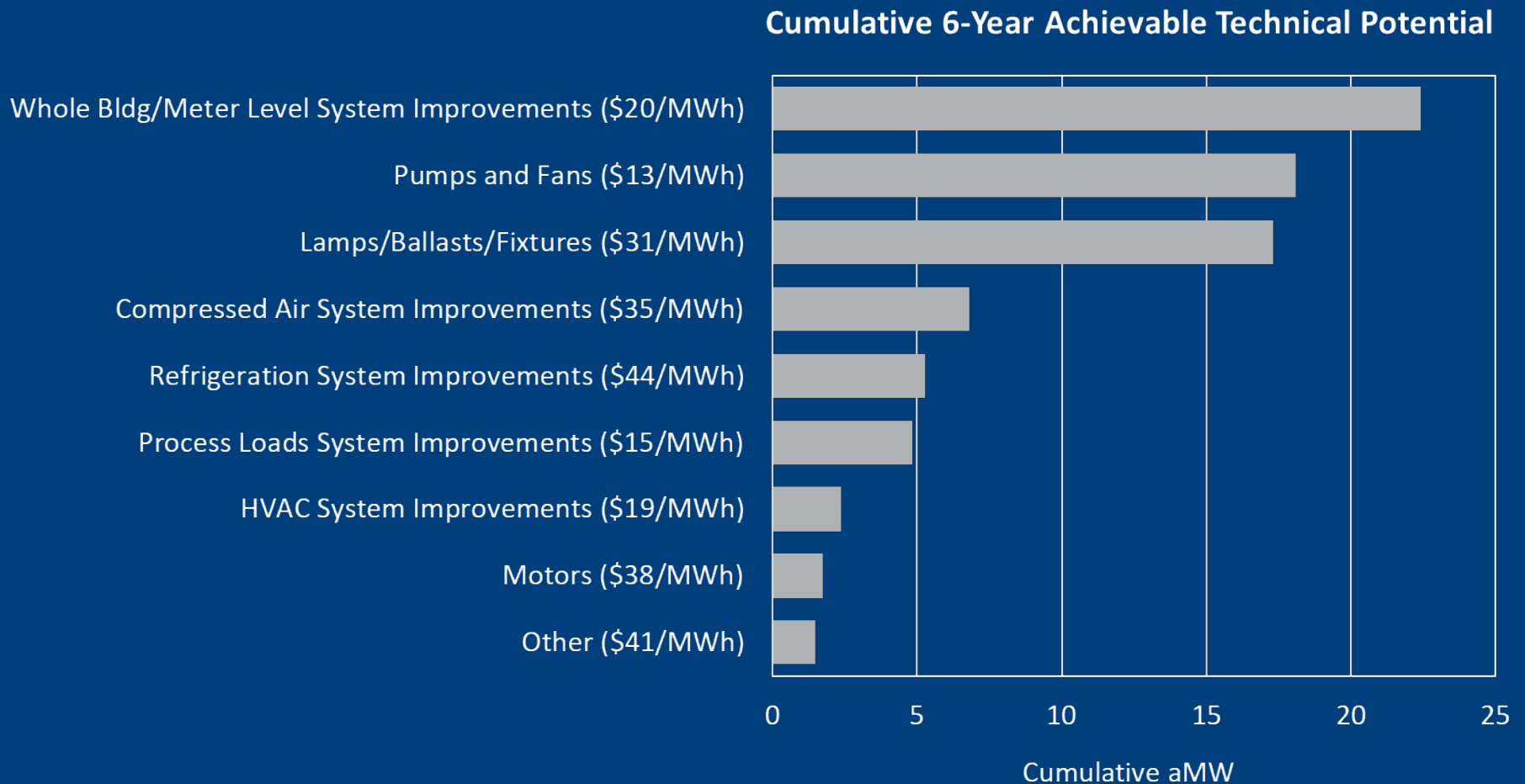


Total = 288 aMW

Industrial 20-Year Supply Curve

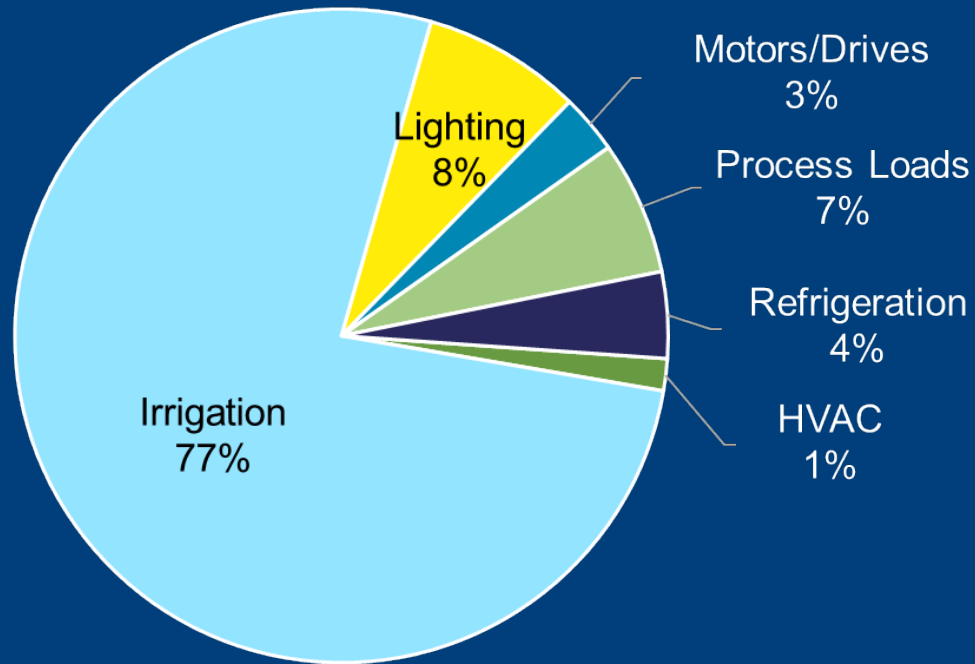


Top Industrial Measures Under \$50/MWh



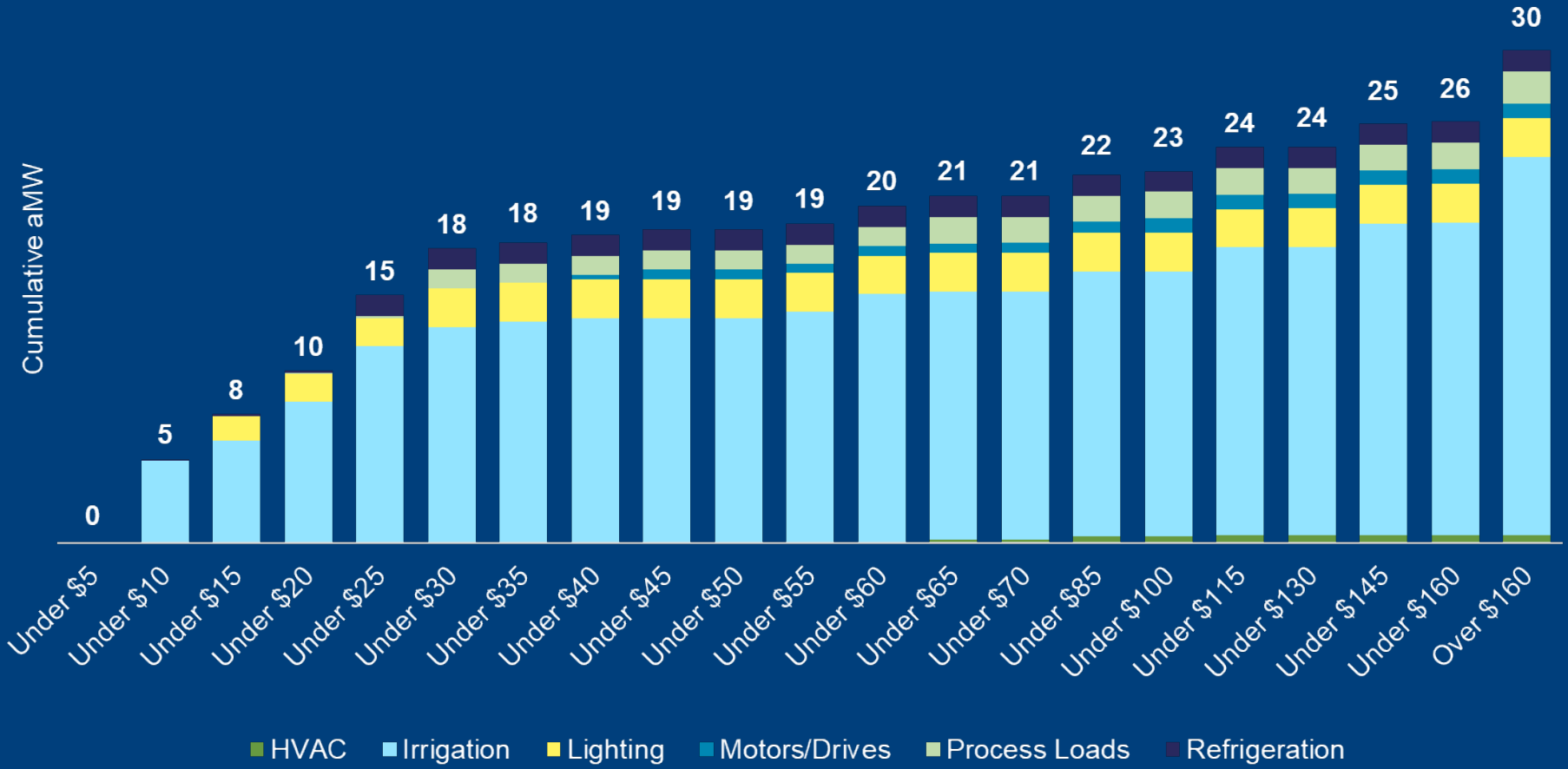
AGRICULTURAL SECTOR

Agricultural Technical Achievable Potential by End Use



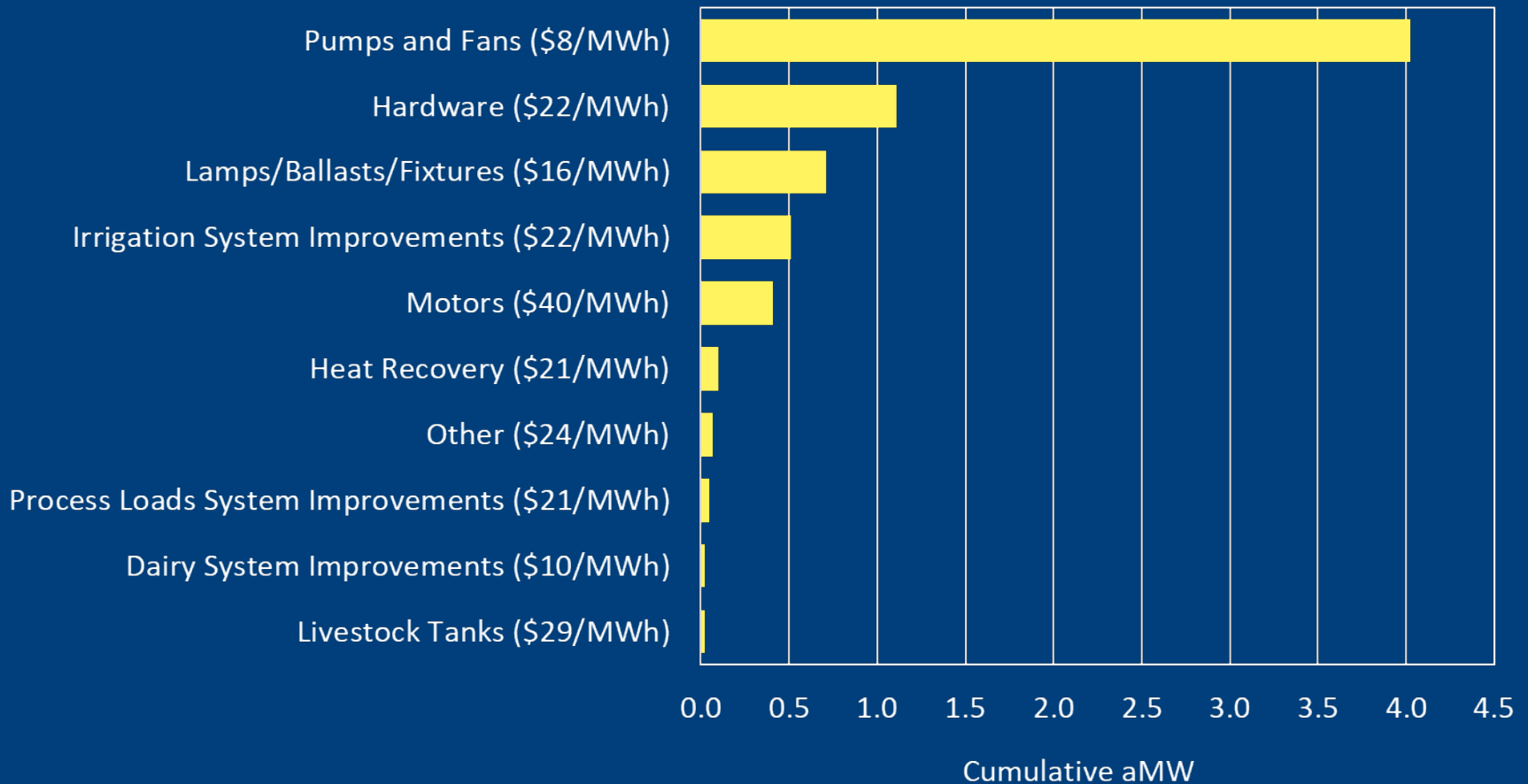
Total = 30 aMW

Agricultural 20-Year Supply Curve



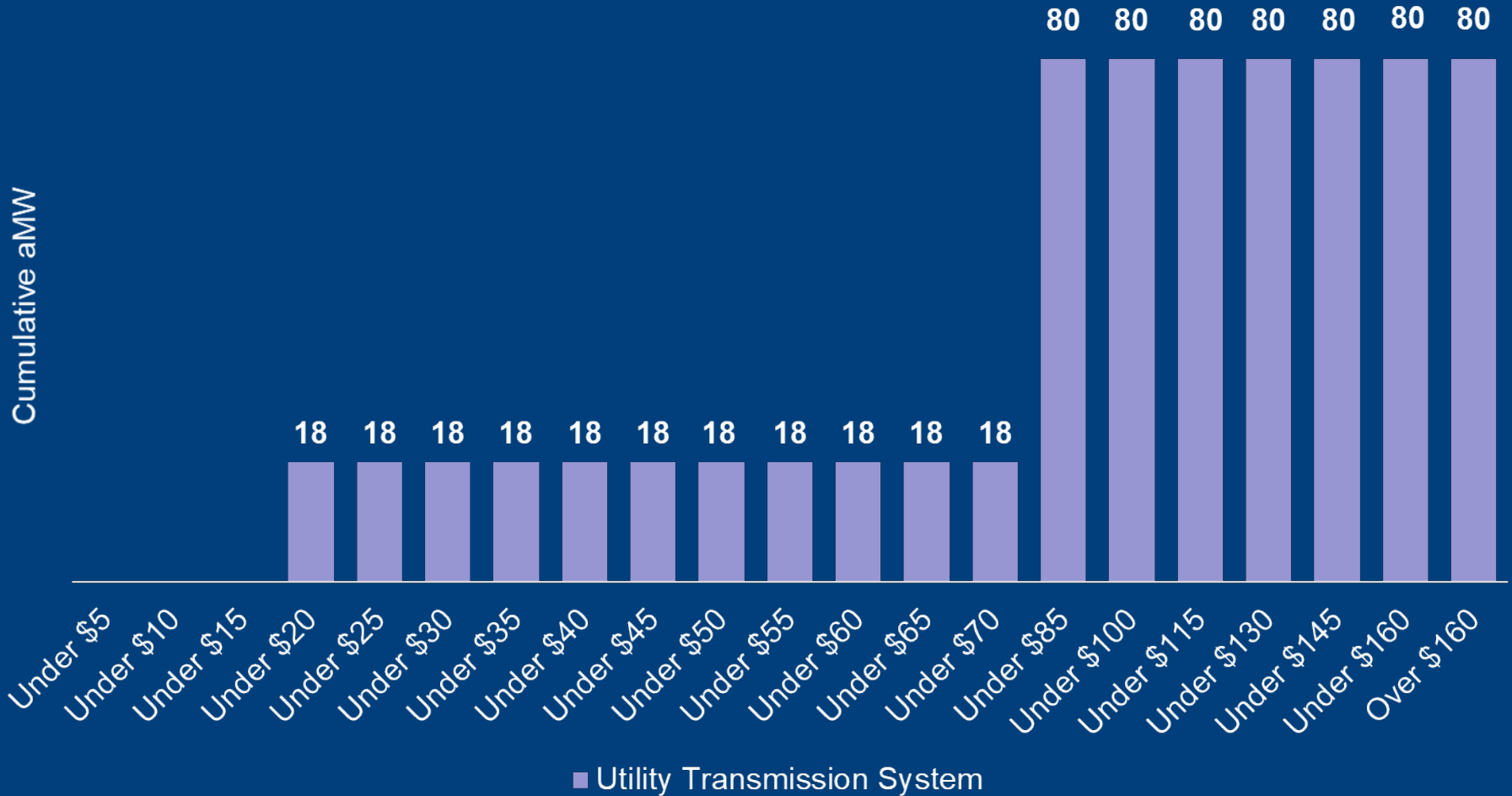
Top Agricultural Measures Under \$50/MWh

Cumulative 6-Year Achievable Technical Potential



UTILITY SECTOR

Utility Sector 20-Year Supply Curve





NEXT STEPS

Resource Program Modeling

The Council's Draft 2021
Power Plan to be released
in September 2021



Resource Program
Results in
January/February 2022

BPA-developed Power Plan resources, including this
presentation and the CPA workbooks will be made available.

Utility Potential Calculator

Cadmus/Lighthouse currently developing a Utility Potential Calculator for BPA based on the 2021 Plan.

This tool will enable utilities to determine potential in their territory.



BPA is looking for input on the features of the Utility Potential Calculator.

If you would like to provide feedback, please reach out to the BPA CPA team or your BPA Energy Efficiency Representative (EER).

CONTACTS

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