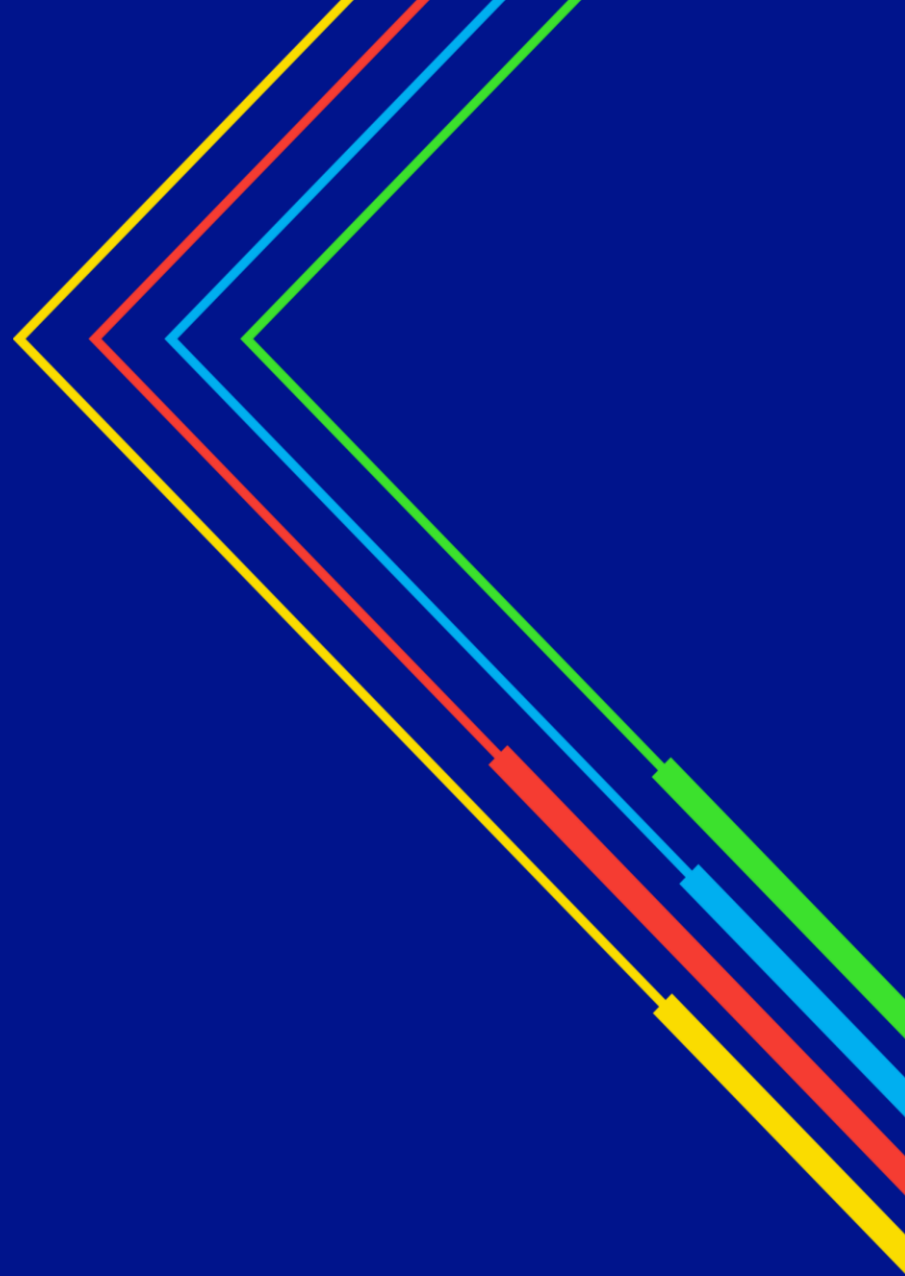


Energy Efficiency Targets

2021 – 2023

March 19, 2020 (Revised March 31, 2020)

national**grid**



Explanation of Revisions from March 19 version

This version of the March 2020 presentation updates the following on slide 7, indicated with yellow highlight. The changes are:

- **Updated the smart strip values to include Tier 2 in 2020 planned numbers to be comparable to the Dunsky results that include both Tier 1 and Tier 2 smart strips**
 - Resulted in an increase in the 2020 plan savings shown in the table.
- **Updated the residential and income eligible electric heat pumps**
 - Corrected the savings for 2020 to match the final benefit-cost analysis conducted for the 2020 plan. Resulted in an increase in the 2020 plan savings shown in the table.
 - Added several additional heat pump measures from the Dunsky results that should be included to be comparable to the set of measures from the 2020 plan. Resulted in an increase in the Dunsky savings shown in the table.
- **Commercial heat pumps**
 - Changed the label in the summary table to more accurately reflect that these aren't just electric resistance conversions

Least Cost Procurement and Prudence and Reliability

LCP Law:

RI Gen L § 39-1-27.7 (a)(2) *“Least-cost procurement, which shall include procurement of energy efficiency and energy conservation measures that are prudent and reliable and when such measures are lower cost than acquisition of additional supply, including supply for periods of high demand.”* ([Link](#))

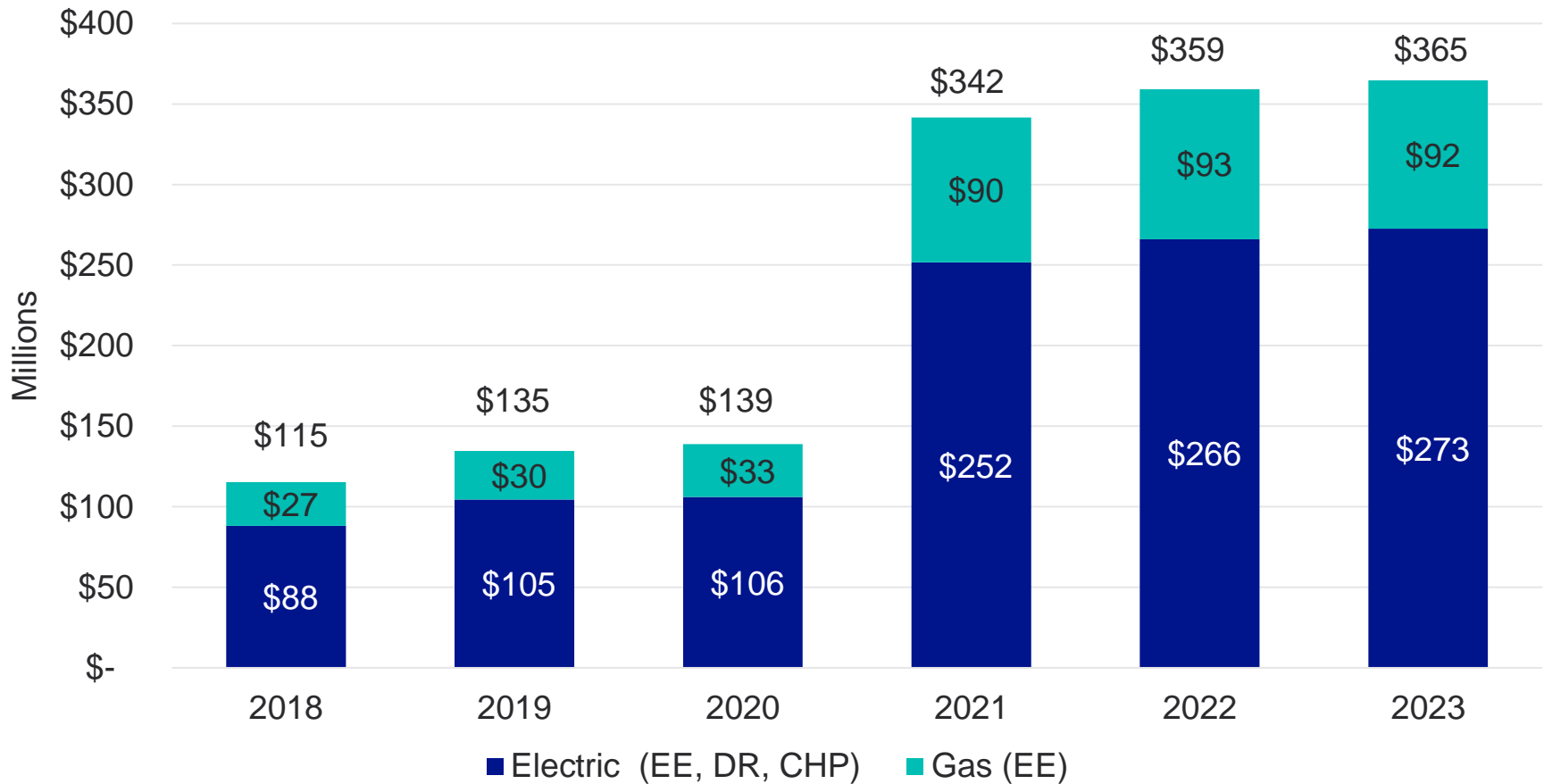
Current LCP Standards:

Does not clearly address how the Council’s Targets should incorporate prudence and reliability, however past targets have been built from bottom up and implicitly taken into account cost and other factors. National Grid’s plans must include prudence and reliability. ([Link](#))

PUC Staff Proposed Revision to the LCP Standards:

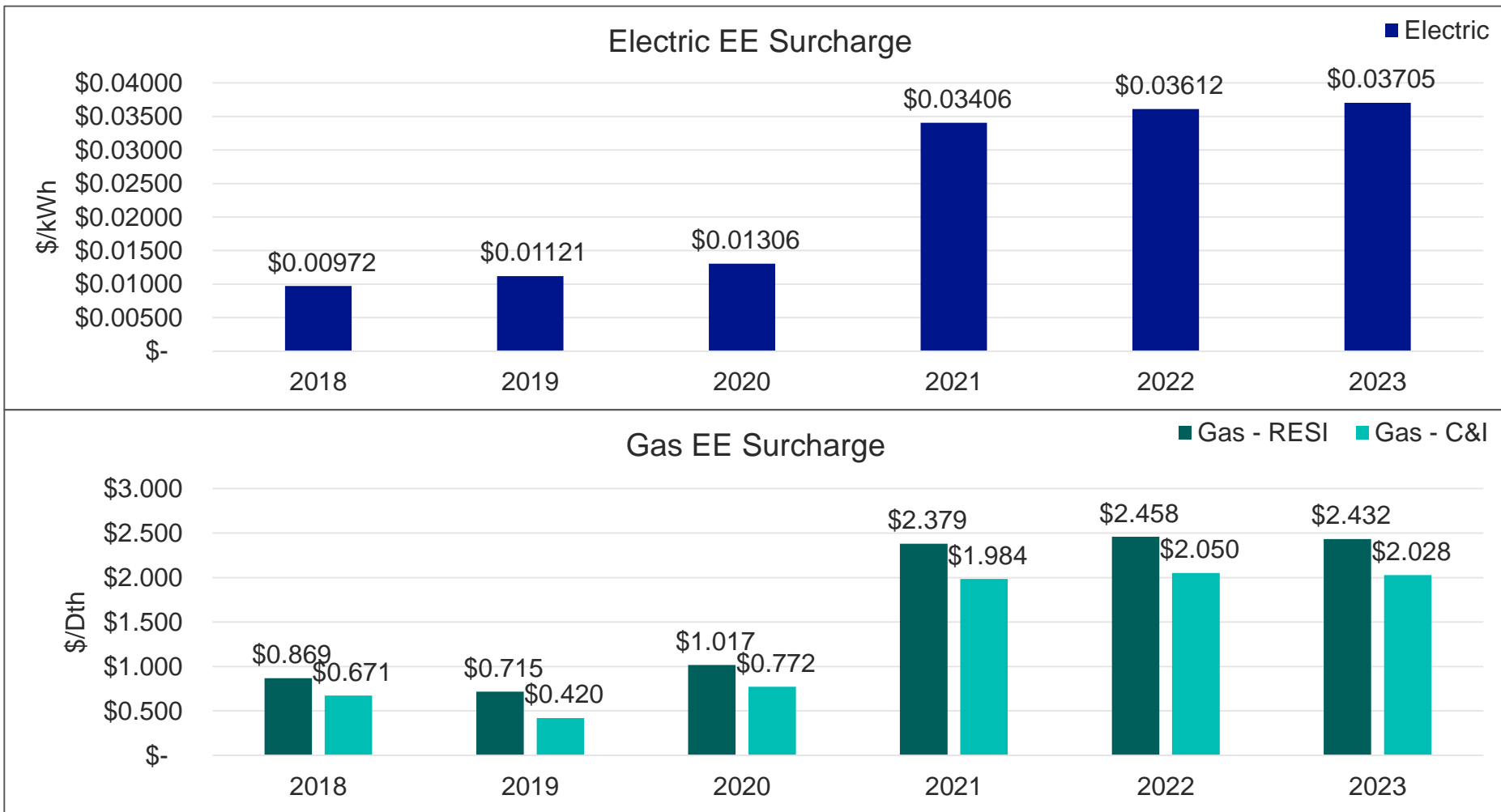
Chapter 2 Three-Year Least-Cost Procurement Report, Energy Efficiency and Conservation Procurement Targets (2.3 A. i.): *“The Report shall provide discussion of how the savings targets are cost-effective, reliable, prudent, environmentally responsible and less than the cost of supply.”* ([Link](#))

Historical Budgets and Dunsky Max Budgets



All-in budgets (EE, DR, CHP) projected to increase 246% from 2020 to 2021 in Max Scenario

Historical EE Surcharge and Dunsky Max

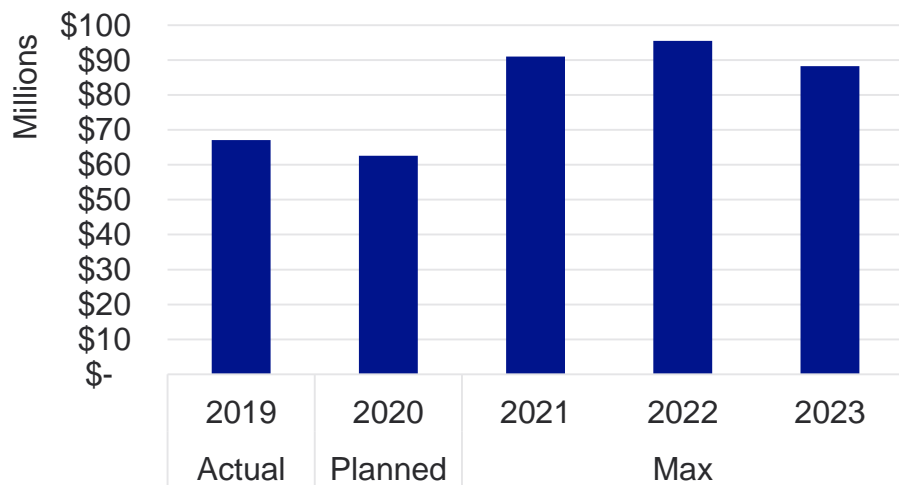


Max-level targets & budgets could lead to significant increases in EE surcharge from '20 to '21: 261% electric, 234% gas resi, 257% gas C&I

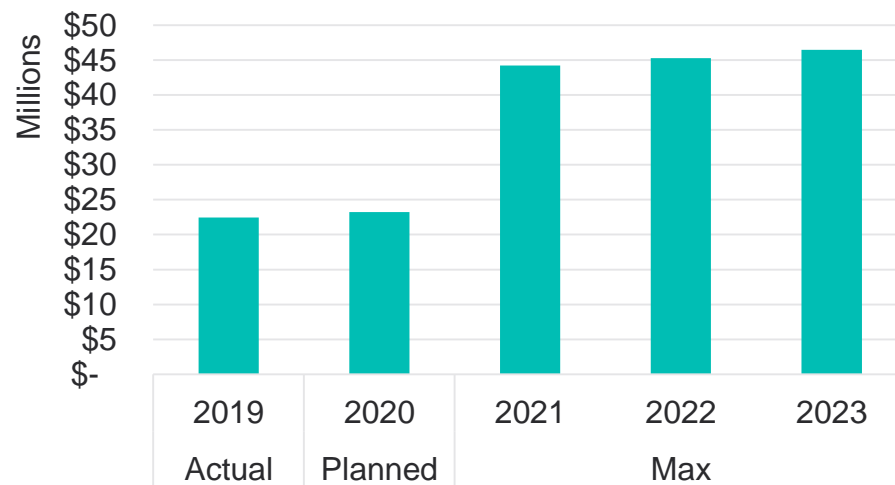
Lower Bound Estimate of Incentives in Max Scenario

- Estimated forward-looking per-unit-savings incentive costs by removing the residential lighting program savings and incentives from the 2019 program
 - As residential lighting opportunities diminish, the cost of each unit of savings will increase very quickly in the near term
- Applied the \$ incentives/unit savings to Dunsky’s Max Scenario to estimate theoretical lower bound on cost increases to get to Max Scenario

Electric Incentive Spend



Gas Incentive Spend



Incentive spend could increase at least ~45% (electric), ~90% (gas) from 2020 to 2021 to reach Max scenario targets

Measure Scaling in Max Scenario - REVISED

- Achieving max scenario savings would require top measure savings to immediately scale by large volumes:

Fuel	Sector	Measure	Rank in Dunsky Results (Max 2021)	2020 Planned Annual Savings (MMBtu)	2021 Dunsky Max Annual Savings (MMBtu)	Increase
Gas	Resi & IE	Wi-Fi Thermostat	#2 Resi/IE Measure	12,207	58,561	480%
	Resi & IE	Gas Furnace	#5 Resi/IE Measure	2,558	39,920	1561%
	C&I	Gas Boilers	#1 C&I Measure	6,992	70,304	1006%

Fuel	Sector	Measure	Rank in Dunsky Results (Max 2021)	2020 Planned Savings (kWh)	2021 Dunsky Max Savings (kWh)	Increase
Electric	Resi & IE	Smart Strips	#3 Resi/IE Measure	3,250,839	6,963,392	214%
	Resi & IE	Mini-Split Replacing Electric Resistance or Replace on Burnout	#5 Resi/IE Measure	844,850	5,899,090	698%
	C&I	Heat Pumps (Not Fuel Switching)	#5 C&I Measure	35,784	6,340,041	17718%
	C&I	Food Service Equipment	#7 C&I Measures	56,903	4,295,277	7548%

Measure scaling from 2020 to 2021 Max results could require year-over-year scaling for some key measures from ~200% to ~18,000%

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