

**ComEd.**  
Energy Efficiency Program



**Commonwealth Edison Company's  
Energy Efficiency and Demand  
Response Plan  
2022-2025**

**March 1, 2021**

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## 1. Executive Summary

Commonwealth Edison Company (“ComEd”) submits its 2022–2025 Energy Efficiency and Demand Response Plan (“Plan” or “Plan 6”) and the accompanying 2022-2025 Energy Efficiency and Demand Response Plan Stipulation Agreement (“Stipulation”)<sup>1</sup> to the Illinois Commerce Commission (“Commission” or “ICC”) for approval in accordance with Section 8-103B of the Public Utilities Act (“Act” or “PUA”). The Plan is ComEd’s sixth energy efficiency (“EE”) and demand response (“DR”) plan, and covers the four-year period commencing January 1, 2022, and extending through December 31, 2025 (“Plan Period” or “Plan 6 Period”). Prior to the filing of this Plan, and since June 1, 2008, ComEd has administered EE programs to retail customers in its service territory in accordance with Section 8-103 or 8-103B of the Act, as applicable.

As explained in greater detail in this Plan, Plan 6 and the Stipulation synergistically create the most expansive and equitable EE portfolio to be offered to ComEd’s retail customers in the State’s nearly 15-year history of planning and implementing electric EE programs. While ComEd will continue to offer its popular and well-subscribed residential and business EE offerings over the four-year Plan Period, the Plan also introduces new and innovative programs, and dedicates the largest budget to assisting ComEd’s most vulnerable customers since the EE portfolio’s inception – on average \$85.6 million per year to the income eligible (“IE”) segment,<sup>2</sup> which is a more than 240% increase over the statutory minimum requirement. This commitment – coupled with the Stipulation’s new Market Development Initiative targeted at elevating diverse supplier participation in the portfolio – are intended to equitably deliver EE-related energy savings, customer assistance and economic stimulus throughout the ComEd service territory.<sup>3</sup>

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<sup>1</sup> In addition to ComEd, the signatories to the Stipulation are ICC Staff, the Citizens Utility Board (“CUB”), Environmental Law and Policy Center (“ELPC”), the Natural Resources Defense Council (“NRDC”), the People of the State of Illinois, by Kwame Raoul, Attorney General (“Illinois AG”), the City of Chicago, Community Organizing and Family Issues (“COFI”), by its attorney, National Consumer Law Center (“NCLC”), ACES 4 Youth (“ACES”), the Green Power Alliance (“GPA”), and People for Community Recovery (“PCR”), collectively with ComEd, the “Parties”). See *Commonwealth Edison Company 2022-2025 Energy Efficiency & Demand Response Plan (Plan 6) Stipulation Agreement*, executed February 26, 2021, provided as ComEd Ex. 1.02.

<sup>2</sup> The annual average of \$85.6 million includes: (1) the Stipulation commitment to “spend a minimum of \$77 million per year, on average over the four-year plan period, on Income Eligible (IE) customers, excluding allocated overhead but including IE R&D and public housing effort”; and (2) an additional \$8.6 million to be spent on IE customers through portfolio-level costs, also allowed for under the Stipulation. See Stipulation, ComEd Ex. 1.02 (“ComEd will allocate portfolio level costs across the following customer sectors – (1) residential customers, (2) commercial and industrial/business customers, (3) public sector customers, and (4) income eligible customers. Allocation to customer sectors will be based on their portion of program budgets.”).

<sup>3</sup> “To the extent that any provision in this Stipulation is not specifically memorialized in the filed Plan, ComEd agrees that it will implement the Plan consistent with the terms of this Stipulation.” See Stipulation, ComEd Ex. 1.02.

## Plan 6 and Stipulation Highlights

The Plan and Stipulation are designed to create a portfolio of programs and offerings that will outperform past EE goals and metrics in virtually every area, including:

- **Achieving Plan 6 Energy Savings Goals within Budget:** The Parties agree that Plan 6 is designed to achieve Section 8-103B of the PUA's applicable statutory savings goals within the budgets established by Section 8-103B(m) for the four-year Plan Period.
- **Offering a Diverse Portfolio of Programs for All Non-Exempt Customers:** ComEd's portfolio serves four primary customer groups: residential customers, IE customers, business customers, and public sector customers. Residential customers, including IE customers, will be offered a suite of program elements that provide opportunities for them to participate in the portfolio (e.g., Retail/Online discounts, Single-Family Upgrades). ComEd will also offer a variety of opportunities to participate in the portfolio for commercial and industrial ("C&I") customers, which include businesses and public sector customers (e.g., Small Business, Incentives).

**Maximizing IE Program Spend:** While the law requires that a minimum of \$25 million per year be allocated towards IE programs, ComEd has dedicated an average of \$85.6 million per year to this customer segment, of which \$77 million will be spent on IE programs, public housing, and Research & Development ("R&D"). Within the \$77 million, ComEd will spend an average of \$44 million per year on IE Single-Family and Multifamily Upgrades (ComEd's whole-building retrofit programs), excluding allocated overhead; and a minimum of \$25 million will go specifically to IE Multifamily Upgrades. In addition, \$8.6 million has also been budgeted for portfolio-level activities.

**Enhancing Program Implementation:** The Stipulation optimizes many IE program design features and health and safety provisions, including strengthening of the connection between EE IE programs and financial assistance programs, and establishes various procedural and operational commitments to improve the Income Qualified North Committee.

**Increasing Coordination with Gas Utilities:** ComEd has committed to make best efforts to reach agreement with the gas utilities on joint or coordinated delivery of its IE Single-Family and Multifamily Upgrades programs and investment in building envelope improvements in non-IE homes. If these efforts do not succeed, ComEd also agreed, as a backstop, to purchase kilowatt-hours ("kWh") from the gas utilities for relevant offerings they may have and sell therms to the gas utilities for ComEd's relevant offerings.

**Streamlining Third-Party Programs:** The Plan 6 Third-Party solicitation will focus on Retro-Commissioning and Industrial Systems (under the Business & Public Sector Targeted Systems ("Targeted Systems") offering) and delivery of up to \$5 million of innovative and non-

duplicative approaches to IE customers. Other new, innovative ideas can continue to be submitted for consideration through ComEd's existing R&D submission process.

**Expanding Supplier Diversity:** Building on ComEd EE's prior diversity initiatives, Plan 6 includes a new Market Development Initiative ("MDI") targeted at further diversifying the suppliers supporting the portfolio. ComEd will dedicate on average \$4 million annually to the MDI.

**Increasing Reporting:** Beginning in 2022, ComEd will significantly expand its reporting metrics on a range of topics, including but not limited to: IE Multifamily, health and safety, equity/affordability, and supplier diversity. ComEd agrees to support the inclusion of additional reporting metrics or topics in an updated version of the Illinois Energy Efficiency Policy Manual ("Policy Manual").

#### Portfolio Summary by the Numbers

Table 1-1 provides, for each calendar year, the following data: the statutory cumulative persisting annual savings ("CPAS") goal by percent and megawatt-hour ("MWh"); the legacy savings by percent and MWh; the applicable annual incremental goal ("AAIG") in MWh; the DR goal in megawatt ("MW"); and the annual budget, which has been established in accordance with the statutory budget calculation set forth in Section 8-103B(m). See ComEd Ex. 1.03 (Section 8-103B(m) Budget Calculations).

**TABLE 1-1: PLAN PERIOD GOALS AND BUDGET<sup>4</sup>**

Item	2022	2023	2024	2025
Statutory CPAS (Percent)	13.1%	14.4%	15.7%	17.0%
Statutory CPAS (MWh)	10,205,451	11,218,205	12,230,960	13,243,715
Legacy Savings (Percent)	3.5%	3.1%	2.8%	2.5%
Legacy Savings (MWh)	2,726,647	2,415,030	2,181,318	1,947,605
Applicable Annual Incremental Goal (MWh)	930,563	1,012,755	1,012,755	1,012,755
Demand Response Goal (MW)	7.17	7.44	7.42	7.43
Annual Budget	\$376,429,489	\$376,429,489	\$376,429,489	\$376,429,489

As required by the Act, the portfolio (not including IE programs) must also be cost-effective, as determined by the Total Resource Cost (“TRC”) test.

The Plan 6 portfolio is designed to achieve the statutory EE and DR goals within the annual budgets and do so cost-effectively, based on current Illinois Technical Reference Manual 9.0 (“IL-TRM”) assumptions.

The projected budgets and impacts of the programs are shown in Table 1-2 and Table 1-3.

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<sup>4</sup> Section 8-103B requires that ComEd’s largest customers be excluded from participating in or funding the Plan (“Exempt Group”). Because the final determination of the Exempt Group cannot be made until after December 31, 2021 (see 220 ILCS 5/8-103B(f)), ComEd will make a compliance filing with the Commission in February 2022 that identifies the final Plan 6 CPAS, legacy, budget, and AAIG values. As a result, the CPAS, legacy, budget, and AAIG values presented in this Plan are initial values, subject to change based on the final Exempt Group calculation.

**TABLE 1-2: PLAN 6 BUDGETS BY PROGRAM AND YEAR**

Programs	2022	2023	2024	2025	4-Year Plan
	Budgets	Budgets	Budgets	Budgets	Budgets
<b>Residential &amp; Income Eligible Programs</b>					
Retail/Online	\$38,086,239	\$38,977,287	\$37,864,568	\$38,903,104	\$153,831,198
Single-Family Upgrades	\$29,616,494	\$30,650,353	\$26,920,834	\$24,562,292	\$111,749,974
Multifamily Upgrades	\$26,214,329	\$29,479,215	\$30,871,468	\$30,609,217	\$117,174,230
Product Distribution	\$13,869,670	\$13,943,741	\$13,990,029	\$14,133,273	\$55,936,712
Behavior – Res/IE	\$5,471,295	\$5,571,295	\$5,571,295	\$5,571,295	\$22,185,180
New Construction – IE	\$3,035,045	\$3,039,441	\$3,329,465	\$3,473,477	\$12,877,428
Contractor/Midstream Rebates	\$3,236,998	\$3,453,256	\$3,646,514	\$3,836,772	\$14,173,540
Third Party – IE	\$1,600,000	\$1,800,000	\$2,300,000	\$2,300,000	\$8,000,000
Sector General	\$2,175,000	\$1,675,000	\$1,675,000	\$1,675,000	\$7,200,000
<b>RES/IE TOTAL</b>	<b>\$123,305,070</b>	<b>\$128,589,588</b>	<b>\$126,169,174</b>	<b>\$125,064,430</b>	<b>\$503,128,262</b>
<b>Business &amp; Public Sector Programs</b>					
Small Business	\$76,316,640	\$85,123,694	\$84,278,119	\$85,607,517	\$331,325,970
Incentives	\$74,410,254	\$61,592,815	\$65,942,108	\$66,898,619	\$268,843,796
Targeted Systems	\$24,752,649	\$25,790,472	\$26,371,291	\$27,595,745	\$104,510,157
Midstream/Upstream	\$13,835,002	\$13,282,835	\$12,889,336	\$12,562,569	\$52,569,741
Behavior – Bus/Pub	\$6,275,942	\$6,275,942	\$6,275,942	\$6,275,942	\$25,103,770
New Construction – Bus/Pub	\$5,914,935	\$5,557,657	\$4,851,635	\$4,952,154	\$21,276,381
Assessments	\$3,018,499	\$3,018,499	\$3,018,499	\$3,018,499	\$12,073,997
Sector General	\$8,117,822	\$7,110,403	\$7,652,242	\$8,248,265	\$31,128,732
<b>BUS/PUB TOTAL</b>	<b>\$212,641,743</b>	<b>\$207,752,319</b>	<b>\$211,279,173</b>	<b>\$215,159,310</b>	<b>\$846,832,545</b>
<b>Portfolio-Level Costs</b>					
Evaluation	\$9,500,000	\$9,500,000	\$8,500,000	\$8,500,000	\$36,000,000
Research & Development	\$11,800,000	\$11,400,000	\$11,300,000	\$9,500,000	\$44,000,000
Market Development Initiative	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$16,000,000
Portfolio Administration	\$13,200,000	\$13,200,000	\$13,200,000	\$13,200,000	\$52,800,000
Education & Awareness	\$2,000,000	\$2,000,000	\$2,000,000	\$1,000,000	\$7,000,000
<b>PORTFOLIO-LEVEL COSTS TOTAL</b>	<b>\$40,500,000</b>	<b>\$40,100,000</b>	<b>\$39,000,000</b>	<b>\$36,200,000</b>	<b>\$155,800,000</b>
<b>PORTFOLIO TOTAL</b>	<b>\$376,446,813</b>	<b>\$376,441,907</b>	<b>\$376,448,347</b>	<b>\$376,423,740</b>	<b>\$1,505,760,807</b>

**TABLE 1-3: PROJECTED PLAN 6 CPAS BY PROGRAM AND YEAR**

Programs	2022 CPAS Contribution* (MWh)	2023 CPAS Contribution* (MWh)	2024 CPAS Contribution* (MWh)	2025 CPAS Contribution* (MWh)	4-Year CPAS Energy Savings (MWh)
<b>Residential &amp; Income Eligible Programs</b>					
Retail/Online	197,380	411,269	630,224	842,136	842,136
Single-Family Upgrades	39,263	77,713	111,146	141,184	369,307
Multifamily Upgrades	35,130	73,504	110,139	145,411	364,184
Product Distribution	127,659	262,732	403,392	543,339	1,337,122
Behavior – Res/IE	108,900	213,542	253,037	272,743	848,222
New Construction – Res/IE	2,808	5,536	8,386	11,341	28,071
Contractor/Midstream Rebates	13,355	28,493	45,352	63,950	151,150
Third Party – IE	4,134	8,786	14,729	20,672	48,320
<b>RES/IE TOTAL</b>	<b>528,629</b>	<b>1,081,575</b>	<b>1,576,406</b>	<b>2,040,776</b>	<b>2,040,776</b>
<b>Business &amp; Public Sector Programs</b>					
Small Business	224,449	451,231	677,384	896,978	896,978
Incentives	238,625	467,582	716,344	968,137	968,137
Targeted Systems	95,496	194,009	296,112	396,126	396,126
Midstream/Upstream	176,522	355,542	534,509	699,688	699,688
Behavior – Bus/Pub	36,395	72,791	109,186	145,582	145,582
New Construction – Bus/Pub	14,853	30,071	43,593	57,960	57,960
Assessments	3,364	6,728	10,091	12,722	12,722
<b>BUS/PUB TOTAL</b>	<b>789,704</b>	<b>1,577,953</b>	<b>2,387,219</b>	<b>3,177,193</b>	<b>3,177,193</b>
<b>Multi-Segment &amp; Portfolio-Level Activities</b>					
Voltage Optimization	165,366	330,435	554,467	817,979	817,979
Research & Development	14,002	29,061	45,654	64,753	64,753
<b>ComEd EE Portfolio</b>					
<b>PORTFOLIO TOTAL</b>	<b>1,497,701</b>	<b>3,019,024</b>	<b>4,563,746</b>	<b>6,100,701</b>	<b>6,100,701</b>

\*Plan 6 CPAS contribution does not account for expiring savings from previous years.



## 2. Introduction

ComEd submits Plan 6 to the Commission in compliance with Section 8-103B of the Act. The provisions of Section 8-103B require ComEd to have one of the largest EE portfolios in the country, with aggressive energy savings goals that will be challenging to achieve. The overall ComEd savings goal is the achievement of CPAS of 21.5% by 2030. ComEd is confident that, through collaboration with stakeholders, it has developed a Plan that demonstrates an ability to achieve this and all other statutory goals for the life of this Plan while building a foundation for future success.

Since 2008, ComEd has offered a growing portfolio of EE programs and services to its residential and C&I customers, which have enabled its customers to save over \$5.2 billion on their electric bills to-date. This Plan builds on these previous efforts and successes by continuing successful programs; adding new programs; offering outreach efforts that target specific customer segments (e.g., IE and public sector); and achieving all the statutory requirements set forth in Section 8-103B. This Plan sets out how the statutory requirements, including the aggressive CPAS goals in Section 8-103B, will be achieved during the Plan 6 Period.

This Plan represents the culmination of an extensive planning process that involved Illinois stakeholders during 2020 and 2021, which has resulted in the executed Stipulation. Consensus-building first began through the Illinois Stakeholder Advisory Group (“SAG”) process, during which positions, challenges, and opportunities were presented and discussed by the utilities and the stakeholders. Following SAG discussions, ComEd engaged in extensive negotiations with the Parties over several months, addressing a number of key components of the Plan, such as energy savings goals, IE program spend, coordination with the gas utilities, Third-Party programs, a new market development initiative, and increased reporting. These efforts were successful and resulted in the executed Stipulation and this refined Plan.

### 3. Plan Overview

Plan 6 is designed to address and balance the multiple statutory requirements laid out in Section 8-103B(g) of the PUA, as follows:

- Achieve the statutory CPAS goals using the statutory budgets for each of the four years of the Plan and demonstrate that the proposed EE measures will achieve the applicable requirements (i.e., savings targets);
- Present specific proposals to implement new building and appliance standards that have been placed into effect;
- Demonstrate that ComEd's portfolio, excluding the IE programs; is cost-effective using the TRC test; however, individual measures need not be cost-effective;<sup>5</sup>
- Present a diverse portfolio that provides a cross-section of opportunities for customers of all rate classes, other than the Exempt Group, in which to participate;<sup>6</sup>
- Solicit and fund, at a minimum, a \$25 million per year third-party EE implementation program;
- Provide programs for IE customers funded at a minimum of \$25 million per year;<sup>7</sup>
- Allocate 10% of the portfolio budget to public sector customers;
- Implement cost-effective DR measures to reduce peak demand by 0.1% over the prior year for eligible retail customers and customers that elect to receive hourly service from ComEd;
- Include a cost-recovery tariff mechanism;
- Provide for the independent evaluation of portfolio cost effectiveness, as well as a full review of the multi-year Plan's results of the broader net program impacts. Such independent evaluation will influence, to the extent practicable, future adjustment of measures. The resources for such evaluation shall not exceed 3% of the portfolio budget in any year;
- Provide for adjustment to ComEd's return on equity component of its weighted

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<sup>5</sup> See 220 ILCS 5/8-103B(g)(3) (providing that "[i]ndividual measures need not be cost effective").

<sup>6</sup> Any retail customer account that had a 30-minute electric demand greater than 10 MW at any time during the 12 consecutive monthly billing periods prior to January 1, 2022, is automatically exempted from funding of and participation in the Plan. See 220 ILCS 5/8-103B(f).

<sup>7</sup> Section 8-103B provides that low-income households are those households at or below 80% of the Area Median Income ("AMI"). See 220 ILCS 5/8-103B(c).

average cost of capital to implement performance adjustments related to the extent to which ComEd achieve the AAIG; and

- Allocate no more than 6% of the portfolio budget for research, development, or pilot deployment of new technology platforms or innovative approaches.

ComEd’s analysis of the Plan’s costs to acquire EE savings demonstrates that the statutory CPAS and DR targets applicable to ComEd during the Plan Period can be met within the statutory budgets. As reflected in Table 3-1, ComEd has therefore balanced the program mix such that the entire cost of the portfolio is within the overall budget.

**TABLE 3-1: FORECASTED PLAN 6 SAVINGS<sup>8</sup>**

Savings	2022	2023	2024	2025
Statutory CPAS Goal - MWh	10,205,451	11,218,205	12,230,960	13,243,715
Portfolio CPAS - MWh	10,462,038	11,554,141	12,575,530	13,588,890
Percent of CPAS Goal	103%	103%	103%	103%
CPAS Surplus (Shortfall) - MWh	256,588	335,936	344,570	345,176
Statutory DR Goal - MW	7.17	7.44	7.42	7.43
Portfolio Peak Demand Savings - MW	70.7	73.4	64.2	61.3
Percent of DR Goal	986%	987%	865%	825%
DR Surplus (Shortfall) - MW	63.53	65.96	56.78	53.87

Section 8-103B also requires specific allocations of the portfolio budget to IE and public sector customers. While Section 8-103B’s minimum allocation for IE customers is \$25 million annually, the significant portion of ComEd’s residential customers who qualify as IE (more than 40% of ComEd’s residential customers) prompted ComEd to commit to an unprecedented allocation of EE funding to the IE segment. For Plan 6, ComEd has dedicated \$85.6 million on average annually to this customer segment,<sup>9</sup> which is more than 240% over the statutory minimum. This amount also far exceeds ComEd’s Plan 5’s commitment of \$48 million on average annually for IE customers (which was for IE program and allocated portfolio-level costs). Importantly, this critical expansion of funding to the IE sector can be accomplished during the Plan Period while still meeting statutory savings goals and maintaining a cost-effective portfolio.

Section 8-103B also requires that 10% of the portfolio budget be allocated to public sector customers. ComEd is similarly been able to satisfy this requirement in this Plan.

Table 3-2 shows ComEd’s budgets for these statutorily-required customer segments, as well as the \$25 million minimum Third-Party statutory requirement.

<sup>8</sup> See footnote 2, *supra*.

<sup>9</sup> See footnote 4, *supra*.

**TABLE 3-2: PLAN 6 BUDGETS FOR STATUTORILY-REQUIRED SPEND PROGRAMS**

Programs	2022		2023		2024		2025	
	Budget (\$M)	%	Budget (\$M)	%	Budget (\$M)	%	Budget (\$M)	%
<b>Customer Segments</b>	\$376.4	100%	\$376.4	100%	\$376.4	100%	\$376.4	100%
Public Sector	\$51.6	14%	\$48.6	13%	\$48.5	13%	\$48.5	13%
Income Eligible	\$82.2	22%	\$87.6	23%	\$86.6	23%	\$85.2	23%
Third-Party	\$13.9	4%	\$32.4	9%	\$33.5	9%	\$34.6	9%

*Note: Customer segment costs include portfolio-level allocations.*

### 3.1 Key Statutory Requirements

Section 8-103B's key statutory requirements are briefly discussed below.

#### 3.1.1 CPAS Goals

The energy savings goals applicable to ComEd under this Plan are measured cumulatively. Per Section 8-103B, ComEd's annual energy savings goals are based on CPAS. The CPAS methodology calculates the total electric energy savings achieved in a given year from measures installed in that year and in previous years, but no earlier than January 1, 2012, that are still operational and providing savings in that year (because the measures have not yet reached the end of their useful lives). The CPAS methodology thus values the lifetime savings of the measure versus only the first-year savings, and is designed to focus ComEd's attention on deployment of measures with persisting savings. As a result, ComEd must consider the decay, or drop-off, of savings from measures that were previously installed but have not reached the end of their measure life, as well as the energy savings from new measures installed during each year of this Plan..

Section 8-103B also sets the value of deemed cumulative persisting annual savings attributable to measures installed prior to January 1, 2018 (but after January 1, 2012) – i.e., installed under the prior Section 8-103 framework (commonly called “legacy savings”) – that are still providing savings in the applicable year. These legacy savings are applied by the utilities toward their CPAS goals.

#### 3.1.2 Performance Adjustment

Section 8-103B includes a performance mechanism that increases or decreases the return-on-equity component of ComEd's weighted average cost of capital, depending on the extent to which ComEd exceeds or falls short of the AAIG for a given year. The AAIG is a different measurement than CPAS and is defined by statute as “the difference between the cumulative persisting annual savings goal for the calendar year that is the subject of the independent evaluator's determination and the cumulative persisting annual savings goal for the immediately preceding calendar year.” 220 ILCS 5/8-103B(g)(7.5). In other words, the AAIG measures the amount of incremental first-year energy savings that ComEd achieved in an individual year. The AAIG measure is also used in the

determination of the amount of non-electric energy savings that can be counted.

### **3.1.3 Large-Customer Exemption**

Section 8-103B of the Act exempts ComEd's largest customers from the funding of, and participation in, the Plan. The exclusion is explicitly denoted within the statute, and provides that any retail customer account that had a 30-minute electric demand greater than 10 MW at any time during the 12 consecutive monthly billing periods prior to the start of the first year of each multi-year plan is automatically exempted from providing funding for, or participating in, EE program subject to Section 8-103B. For Plan 6, that would be the 12 consecutive monthly billing periods preceding Plan 6's January 1, 2022 start date. See 220 ILCS 5/8-103B(f). This exemption is mandatory for this customer group, i.e., the Exempt Group, and the Act does not contain an opt-in provision. Customer accounts that do not now qualify for the Plan 6 exemption, but whose demand later exceeds 10 MW during this Plan cycle, will continue to be eligible to participate in the Plan because the exemption is determined at the start of a Plan cycle and will not be recalculated until the next plan cycle (i.e., for Plan 7).

### **3.1.4 Income Eligible (IE) Customers**

Section 8-103B(c) requires ComEd to allocate a minimum of \$25 million to IE customers annually. IE customers are customers whose household income is at or below 80% of the AMI. Measures implemented under this requirement need not be cost effective under the TRC test. Section 8-103B(c) also requires ComEd to establish reporting processes that demonstrate progress toward the IE spend and goal and to convene an IE advisory committee to provide input into the design, delivery, and evaluation of IE programs.

### **3.1.5 Public Sector**

Section 8-103B(c) requires that a minimum of 10% of the annual EE funding level be used to procure cost-effective EE measures from local government, municipal corporations, school districts, public housing, and community college districts. Public housing must be funded at a minimum percentage that is equal to public housings' share of total public-building energy consumption. Public housing spend can count toward both the 10% public sector spend requirement and the \$25 million IE spend requirement.

### **3.1.6 Third-Party**

Section 8-103B(g)(4) requires that ComEd budget \$25 million annually for programs solicited from, and implemented by, one or more third parties.

### **3.1.7 Voltage Optimization**

Section 8-103B(b-20) allows ComEd to include cost-effective VO measures in the Plan, and ComEd may count the associated energy savings toward the CPAS goals for this Plan. Costs incurred to implement VO are recovered under ComEd's distribution rates and

therefore are not included within the EE budget or recovered through ComEd's related cost-recovery mechanism, Rider EEPP – Energy Efficiency Pricing and Performance (“Rider EEPP”).

### **3.1.8 Demand Response**

Section 8-103B(g)(4.5) requires that ComEd implement cost-effective DR measures that reduce peak demand by 0.1% over the prior year for eligible retail customers and hourly service customers through December 2026.

### **3.1.9 TRC Test**

Under Section 1-10 of the Illinois Power Authority Act, the benefits calculation of the TRC Test includes, *inter alia*, the avoided costs of other fuels (in addition to natural gas), as well as the avoided cost associated with reduced water consumption and reduced operation and maintenance (“O&M”) costs.

The TRC Test also includes a societal discount rate, which is based on long-term treasury yields and deemed by the IL-TRM.

### **3.1.10 Cost Recovery**

Section 8-103B allows ComEd to recover its EE expenditures into a regulatory asset and amortize those costs over a period of time that is equal to the weighted average of the EE measure lives implemented for that year that are included in the regulatory asset, which aligns cost recovery with the period during which customers receive a benefit. Additionally, ComEd may earn a return on the unamortized balance of costs in the regulatory asset and effect recovery through a dedicated formula rate. ComEd's EE formula rate is Rider EEPP; it was approved by the Commission in Docket No. 17-0287.

### **3.1.11 Non-Electricity Energy Savings**

Section 8-103B(b-25) allows ComEd to claim non-electricity energy savings of up to 10% of each year's AAIG. The non-electricity savings for IE programs must be converted to kWh first.

### **3.1.12 Research & Development**

Section 8-103B recognizes the important role that emerging technologies, R&D, and the pilot deployment of new equipment and measures and delivery mechanisms play towards achieving future-year CPAS goals, and sets the R&D budget at up to 6% of the overall portfolio budget.

## **3.2 Challenges**

Two critical planning and implementation challenges extend over the planning horizon. How these challenges are addressed will greatly affect the shape of the portfolio and

ComEd's ability to execute this Plan. Each issue and ComEd's proposed approach are described below.

### **3.2.1 Impact of the EISA Lighting Standard**

New energy efficiency standards for light bulbs were part of the Energy Independence and Security Act of 2007 ("EISA"). The first phase of these standards eliminated incandescent bulbs from the market between 2012 and 2014.

The second phase of the standards was initially expected to also eliminate halogen bulbs (more efficient than incandescent, but still the least efficient bulb on the market) from the market on January 1, 2020. The IL-TRM for 2018 and 2019 reflected that expectation and kWh savings for residential lighting were assumed to be much lower after 2020. However, in September 2019, the U.S. Department of Energy issued a rule, stating that the second phase of EISA was not required, and therefore halogen bulbs would continue to be a market choice for customers after January 1, 2020. The increased post-2020 savings were incorporated into the 2021 IL-TRM (with the changes made retroactive to 2020).

ComEd responded in its program efforts by reducing residential lighting when the IL-TRM reflected reduced savings (in 2018 and 2019) and increasing residential lighting (in 2020 and 2021) when the IL-TRM savings increased. Plan 6 assumes the continued availability of halogen bulbs through 2025 and higher kWh savings for residential lighting. Plan 6 also includes the following additional residential lighting assumptions:

- ComEd has historically incentivized approximately 50% of the total number of light bulbs installed in its service territory each year (this percentage is 90% for IE customers). ComEd expects the same rates continue during the Plan Period. However, because of the increased market share of longer-lasting LED bulbs, ComEd assumes that the total number of residential bulbs replaced each year will decline over the Plan Period.
- ComEd assumes a declining net-to-gross ratio for residential lighting during the Plan Period. This is because free ridership will likely increase as LED bulbs move closer to market saturation.

As memorialized in the Stipulation, ComEd will continue to monitor EISA developments and should changes in the law materially impact the implementation of Plan 6 or provisions of the Stipulation, the Parties will work collaboratively to discuss impacts and, if needed, reach consensus on Plan adjustments or other measures in response to such changes. This is discussed further in Section 7.

### **3.2.2 Joint and Coordinated Programs**

ComEd has historically relied upon collaboration with the Northern Illinois gas utilities (i.e., Nicor Gas, Peoples Gas, and North Shore Gas) to deliver its EE portfolio. The sharing of

program-level costs enables both the gas and electric EE measures to be installed more cost-effectively. In addition, it provides dual customers a single, more efficient interaction.

Starting early in 2020, ComEd actively met with the gas utilities to discuss potential Plan 6 joint/coordinated programs and reach agreement on which programs would be offered together and the amounts of their associated budgets and savings targets. Agreements were finalized for many programs, but unfortunately, due to time constraints leading up to the Plan filing, ComEd has not yet been able to reach consensus with the gas utilities on three program elements—IE Single-Family Upgrades, IE Multifamily Upgrades, building envelope improvements in non-IE homes (currently a gas-only funded program), and Retail/Online smart thermostat incentives.

As captured in the Stipulation, ComEd is committed to continuing these discussions and making best efforts to reach consensus to offer these four program elements jointly or in coordination with the gas utilities as is practical, given legislative and stakeholder commitments, budget limitations, and implementation constraints. As discussed further in Section 4.2.4, moreover, the Stipulation also provides for a backstop mechanism if agreement cannot be reached between ComEd and the gas utilities regarding the three program elements.

### **3.3 Opportunities**

Although ComEd is facing some significant challenges, there are also many exciting opportunities reflected in Plan 6, as discussed below.

#### **3.3.1 Income Eligible Customers**

In Plan 5, ComEd significantly increased its IE budgets – compared to prior plans – to an average of \$48 million annually, which is nearly double the \$25 million annual statutory minimum. This increase in program size involved working with non-profits and other partners to ramp up program participation and delivery. While these efforts have been incredibly successful, the scale and reality of the need in the ComEd service territory -- where more than 40% of residential customers meet the definition of “income eligible” -- call for an unprecedented commitment of funding for this vulnerable customer segment.

As reflected in the Stipulation, ComEd will dedicate to IE program elements and R&D an average of \$77 million annually during the 2022 through 2025 Plan 6 period. ComEd has also budgeted an average of \$8.6 million annually in portfolio-level costs. As previously stated, the \$85.6 million in total IE costs is more than 240% above the statutory minimum allocation, and a 78% increase from Plan 5. This commitment includes specific carveouts for and increases to the budgets for comprehensive programs and multifamily programs. ComEd will fulfill these commitments, while still meeting its statutory savings goals and maintaining a cost-effective portfolio.



In addition to dedicating more resources to the IE program elements, ComEd has committed in the Stipulation to undertake three additional ways to increase the impact of EE programs for IE customers:

- Improve the coordination and delivery of EE programs and ComEd's customer financial assistance programs to IE customers;
- Measure and track not just EE savings but also bill impacts for customers; and
- Revisit the Income Qualified North Committee framework.

ComEd believes that this is a holistic approach to the design and delivery of EE programs to IE customers. More details can be found in the Section 5.2.

### **3.3.2 Market Development Initiative**

As memorialized in the Stipulation, Plan 6 includes a new MDI. Supporting diverse market development—vendors, service providers, and workforce—has long been a priority for ComEd, and ComEd appreciates the opportunity to work with stakeholders on the MDI. To further expand the inclusivity and diversity of ComEd's EE portfolio, ComEd is dedicating \$4 million per year average to the MDI during the Plan Period.

The Plan 6 MDI was developed in collaboration with the Parties, and is designed to increase contracting opportunities for diverse business enterprises and community-based organizations ("CBOs") and assist them in developing the necessary capabilities to participate in the delivery of the EE portfolio; and improve the diversity and inclusiveness of the ComEd EE Department's supplier and supplier workforce. More details can be found in Section 5.6.

### **3.3.3 Commercial Lighting Controls**

While LED lighting continues to gain market share in interior and exterior commercial and industrial lighting applications, additional savings are available through incentivizing lighting systems that include controls. Controls can fine tune wattage levels to fit current lighting needs more closely or reduce total hours of usage. ComEd currently offers additional incentives for lighting controls through both Standard and Small Business Programs. Both the budget and the savings for lighting controls grow throughout the Plan 6 Period.<sup>10</sup>

### **3.3.4 Heat Pumps**

Because of the limited opportunities available to upgrade residential electric space heating

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<sup>10</sup> ComEd will meet periodically with NRDC and any other interested SAG participants to provide updates on progress in and discuss refinements in strategy for accelerating adoption of these technologies. See Stipulation, ComEd Ex. 1.02.

systems to more efficient heat pumps, ComEd's EE portfolio has historically placed little emphasis on heat pumps. In Plan 5, ComEd completed a demonstration project in 80 IE multifamily households. As set forth in the Stipulation, Plan 6 builds on Plan 5's efforts and expects significant growth in heat pumps for IE customers residing in multifamily buildings. For example, the Stipulation establishes a target of no less than 1,000 heat pump units in 2025.

### **3.3.5 Midstream Programs**

ComEd's Midstream program element has successfully partnered with electrical distributors to incentivize more efficient commercial lighting for about a decade. In Plan 6, this program model has been adopted for Residential HVAC, Commercial HVAC, and Commercial Food Service Equipment Programs. This program design offers the opportunity to increase the scope and reduce the \$/kWh cost.

### **3.3.6 Residential Plug Loads**

One of the fastest growing areas of residential energy usage is in electronic equipment and plug loads. ComEd's Plan 6 includes a target of over one million advanced smart power strips to be delivered through several different programs during the Plan Period.

### **3.3.7 Large Customers**

ComEd analysis has shown that large non-Exempt customers participate in ComEd EE programs, but there is an opportunity to increase their level of participation, particularly in the uptake of measures beyond lighting and lighting controls. During the Plan Period, ComEd EE will work with the ComEd large customer account management group ("Large Customer Services") to increase its targeting and development of comprehensive EE projects with larger non-Exempt customers. The Stipulation further strengthens these efforts for large public sector customers, in particular, by establishing a pilot that offers comprehensive studies (fully funded by ComEd), to inventory the customer's cost-effective opportunities for efficiency improvements across the customers' portfolio of buildings/facilities (excluding exempt facilities) and outline strategies for the customers to make identified improvements over a multi-year period.

### **3.3.8 Research & Development**

ComEd believes that the investment in new concepts is critical to the future success of its portfolio. The EE landscape has changed dramatically in the last decade. Many measures have reached saturation in the marketplace or no longer pass the required cost-effectiveness tests. In addition, more efficient appliance standards and building codes have been adopted, which reduce measure savings potential. The result is that ComEd needs to find new cost-effective, long-lived measures to help meet its energy savings goals.

In Plan 5, ComEd evaluated over 450 new technologies, proposals, and innovative

concepts and executed over 90 research and pilot projects. Through this work, the ComEd EE engaged 70 industry partners, including national laboratories, universities, program implementation firms, nonprofit organizations, and CBOs. Projects included pilots validating savings from promising new motor and HVAC technologies, pilots testing new approaches to IE customer outreach, pilots exploring long-term savings potential through Market Transformation approaches, and research into market barriers of high-potential portfolio measures.

As it relates to Plan 6, a productive innovation effort will be critical for ComEd to achieve its future portfolio savings goals. Two distinct sets of innovation-focused initiatives, Emerging Opportunities and Market Transformation, will be carried out under the umbrella of R&D, which is detailed in Section 5.6.





















































































































































