

Commonwealth Edison Company's Infrastructure Investment Plan

2013 Annual Update

April 1, 2013

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Executive Summary

Plan Overview

On November 8, 2011, Commonwealth Edison Company (“ComEd”) filed its proposed performance-based formula rate, Rate DSPP – Delivery Service Pricing and Performance (“Rate DSPP”), with the Illinois Commerce Commission (“Commission”) pursuant to Section 16-108.5 of the Public Utilities Act (“Act”). The Commission commenced Docket No. 11-0721 to review that filing. In making that filing, ComEd confirmed that it elected to become a “participating utility”, and committed to undertake the investments described in Section 16-108.5(b) of the Act. Section 16-108.5(b) also called on ComEd, within 60 days of such filing, to submit a plan for satisfying its infrastructure investment program commitments, which must include information regarding scope, schedule and staffing. ComEd submitted its Infrastructure Investment Plan (“Plan”) to the Commission on January 6, 2012. Section 16-108.5(b) further requires ComEd, no later than April 1 of each subsequent year, to submit to the Commission a report that includes any updates to the Plan, a schedule for the next calendar year, the expenditures made for the prior calendar year and cumulatively, and the number of full-time equivalent jobs created for the prior calendar year and cumulatively.

Accordingly, ComEd submits to the Commission this 2013 Annual Update to its Plan (“2013 Annual Update”), for informational purposes, as prescribed by the Act.

Consistent with ComEd's Plan, this 2013 Annual Update organizes individual projects under two broad categories of investment:

Reliability-Related Investments: Section I of the Plan sets forth electric system upgrades, modernization projects, and training facilities; and

Smart Grid-Related Investments: Section II of the Plan describes the Smart Grid electric system upgrades and transmission and distribution infrastructure upgrades and modernization.

This 2013 Annual Update includes actual expenditures to date, as well as revisions to ComEd's Plan with corresponding explanations. Consistent with ComEd's Plan, the 2013 Annual Update also includes an estimated cumulative total of approximately \$1.3 billion of capital investment plus associated expenses in electric system upgrades, modernization projects, and training facilities ("Reliability-Related Investments") over the planned five year period plus the permitted ramp-up and ramp-down time. The 2013 Annual Update also includes an estimated cumulative total of approximately \$1.3 billion of capital investment plus associated expenses in Smart Grid electric system upgrades ("Smart Grid-Related Investments") over the planned 10-year period plus the permitted ramp-up and ramp-down time.

As required by Section 16-108.5(b), the total estimated \$2.6 billion of cumulative capital investment under the Plan will be incremental to ComEd's total annual capital investment program, as defined in Section 16-108.5(b). That is, over the term of the Plan, ComEd will invest an estimated cumulative total of \$2.6 billion more capital than a capital investment program that invested at an annual rate defined by ComEd's average

capital spend for calendar years 2008, 2009, and 2010, as reported in ComEd's applicable Federal Energy Regulatory Commission ("FERC") Form 1s. If the forecasted capital investment costs exceed \$3.0 billion a report will be submitted to the Commission that identifies the increased costs and explains the reasons. The report shall be submitted no later than the year in which the forecasts will exceed capital investment costs of \$3.0 billion. In no case will \$3.0 billion in capital investment costs be exceeded without the approval of the General Assembly.

During 2012 - the first year of the Plan - ComEd gained many insights in the implementation of specific programs, which now inform the estimates reflected in the 2013 Annual Update. Specifically, these insights have resulted in a current estimated net favorability of \$59 million over the course of the programs as compared to the initial cost estimates set forth in the Plan, while maintaining or actually increasing scope on certain programs. This favorability has resulted from, among other things, the benefit of bidding long-term contracts for definable scopes of work, refinement in unit rate defect estimates, and the alignment of communications infrastructure investments within the Smart Grid-related investments scope of work. In sum, these results provide helpful indicators that ComEd's Plan is on track, and further provide ComEd with the flexibility to respond to unforeseen challenges that may arise over the remaining nine years of Plan implementation.

Separately, certain scopes of work have been deferred as a result of the uncertainty in the regulatory process encountered during 2012, which is still unresolved, and its continued impacts on the ability to recover the costs of investments under the

Plan. This deferral is referred to throughout this 2013 Annual Update as the “2012 Deferral.”

Finally, in the event that Section 16-108.5 becomes inoperative or Rate DSPP is terminated, then the Plan, including but not limited to all programs and investments, will also become inoperative and terminate immediately.

Summary Plan Scope

Reliability-Related Investments. These programs are described in detail in Section I of this 2013 Annual Update, and include, but are not limited to, the following specific programs briefly described below:

- **Underground Residential Cable (“URD”) injection and replacement.** This program is designed to remediate nearly 4,400 miles of bare concentric cable, some of which was installed as early as 1966. This represents a change in scope of approximately 190 additional miles of URD cable remediated, as compared with ComEd’s Plan. This change in scope is discussed in further detail in Section I.A of this 2013 Annual Update. This work will reduce long duration outages primarily experienced in residential subdivisions.
- **Mainline cable system refurbishment and replacement.** As noted in ComEd’s Plan, this is the most complex of all the Reliability-Related Investments, and is primarily targeted at the testing and replacement of lead cable in urban areas. Based on ComEd’s experience in 2012, the scope of the program has been adjusted, resulting in lower cumulative cost while actually increasing program

scope. Over the course of the program, ComEd plans to assess all manholes on its system (approximately 32,000) and perform refurbishment within the parameters of the Act. In addition, ComEd will replace an estimated 660 miles of mainline underground cable, and test an estimated 930 sections of mainline cable over the course of the program. This represents a change in scope of approximately 4,000 additional manholes, 135 additional miles of cable replaced, and 850 fewer sections of cable tested, as compared with ComEd's Plan. This change in scope is discussed in further detail in Section I.B of this 2013 Annual Update. Because remediation scope is based on inspection results, the complex nature of the underground system, interrelationship of multiple circuits within a manhole, and certain potential moratoriums on work, this program also continues to contain the highest degree of scope uncertainty of all the Reliability-Related Investments. Future-year plans will continue to incorporate insights gained through implementation.

- **Ridgeland 69kV cable replacement.** This program involves planned replacement of approximately 10 miles of high voltage (69kV) underground cable, a majority of which was installed in the early 1950's, and some as early as 1927. This scope is the same as that presented in ComEd's Plan.
- **Construction of training facilities.** This program provides for planned construction of two new facilities – one in Chicago and one in Rockford – to provide electric and customer operations training. These facilities will provide the ability to offer year-round practical, hands-on training to ComEd's field

employees and will enable them to practice classroom theory on real equipment and technology year-round. This scope is the same as that presented in ComEd's Plan, although the schedule for the Chicago training facility has been deferred.

- **Wood pole inspection, treatment, and replacement.** There are approximately 1.5 million wood poles on the ComEd system, which translates to approximately 149,000 poles inspected per year. This refinement in program scope is the result of a manual review of the records in ComEd's asset management systems. This program entails planned inspection and treatment of approximately 733,000 wood poles over the five-year program period, and replacement or reinforcement of an estimated 19,000 poles over the course of the program. This represents a change in scope of approximately 66,000 additional poles inspected and treated over the five-year program period, and approximately 4,000 additional poles replaced or reinforced, as compared with ComEd's Plan. This change in scope is discussed in further detail in Section I.E of this 2013 Annual Update. This program will reduce customer interruptions due to wood pole failures by programmatically assessing the strength and integrity of ComEd's wood poles, and represents the first five years of a ten-year plan to transition ComEd to a ten-year inspection cycle for wood poles.
- **Storm hardening.** This program is designed to further reduce the susceptibility of certain circuits to storm-related damage, and will include deployment of a variety of engineered solutions, including, but not limited to, overhead-to-

underground conversion, installation of tree-resistant conductors, and additional vegetation management. In order to optimize customer benefits, certain circuits will be prioritized based on historical susceptibility to storm-related damage. Engineered solutions will be designed specifically for each circuit. This scope is the same as that presented in ComEd's Plan, however, the schedule has been adjusted due to the 2012 Deferral.

These programs are planned to be completed over a five-year period plus reasonable ramp-up and ramp-down periods. More detailed descriptions of each of these programs, including scope, schedule, capital budget, staffing and units of work are included in Section I of this 2013 Annual Update.

Smart Grid Electric System Upgrades. These programs are described in detail in Section II of this 2013 Annual Update, and include, but are not limited to, the following specific programs briefly described below:

- **Distribution Automation (“DA”).** DA technology uses “sectionalizing” devices and remote communications to detect issues on the distribution system and automatically re-route power to minimize the number of customers impacted. This is commonly referred to as the self-healing nature of the Smart Grid. ComEd's DA program includes planned installation of approximately 2,600 DA devices, and also encompasses the replacement of the older 900 MHZ radio system with a new higher security communication system that meets newly-established government regulations. In addition, the older 34kV field devices will be upgraded to the newer Intelli-team (“IT-2”) software to allow for better

flexibility with fault isolation and operation with the new radio system. This represents the same number of DA devices installed that was presented in ComEd's Plan. Program scope has been adjusted to include the necessary secure communications infrastructure. The corresponding program budget increase is offset by reductions in the Smart Meter program budget. This change in scope is discussed in further detail in Section II.A of this 2013 Annual Update.

- **Substation micro-processor relay upgrades.** This program is designed to modernize ten ComEd substations, including upgrade of electro-mechanical protective relays to modern microprocessor-based devices, replacement of aging circuit breakers, two-way communications between ComEd's control center and each substation, and installation of technology to remotely monitor the health of ComEd's largest assets, its transformers. This program provides for fault detection, remote asset monitoring and improved site security. Partial upgrades may be applied across the service territory. ComEd has over 250 transmission-fed substations, and over 800 substations in total. This scope is the same as that presented in ComEd's Plan.
- **Smart Meters.** At the completion of this program, all retail meters on the ComEd distribution system will have been replaced with Smart Meters, including deployment of an Advanced Metering Infrastructure ("AMI"), which provides a two-way communications infrastructure to support other customer services and Smart Grid applications. Expected benefits include reductions in the number of estimated bills, unaccounted for energy, and consumption on inactive meters.

Deployment of AMI will occur pursuant to the Advanced Metering Infrastructure Deployment Plan (“AMI Plan”), which was approved by the Commission on December 5, 2012, and the Smart Grid Advanced Metering Annual Implementation Progress Report filed on April 1, 2013 (“2013 AMI Report”). The Smart Meter capital budget has been adjusted to reflect outcomes of the bidding process, assignment of secure communications infrastructure with the DA program, and adjustment in the deployment schedule.

- **Associated cyber secure data communications network.** A cyber-secure data communications infrastructure will be incorporated into each functional area of the Smart Grid. It includes implementation of a robust security model that is aligned with industry best practices and existing security standards. This security model will address confidentiality, integrity, availability and non-repudiation of data transport through the network.

Descriptions of each of these programs, including scope, schedule, capital budget, staffing and units of work are included in Section II of this 2013 Annual Update.

These descriptions, as with the forecasts generally included within this 2013 Annual Update, are illustrative of the investments that ComEd currently proposes to make pursuant to Section 16-108.5 of the Act over its 5- and 10-year horizons (exclusive of ramp-up and ramp-down periods). Of course, as time passes, specific investment needs, customer electric use patterns, customer applications, customer attitudes, and commercially available equipment and technologies will all evolve. Section 16-108.5 recognizes that change will occur as ComEd implements its Plan,

including in its annual reporting process, its emphasis on technological interoperability, and its innovative test bed feature. Moreover, the effects of change and the need for adaptability in a plan only increase the further out the planning horizon extends. Over periods as long as those called for by Section 16-108.5, specific work plans must be conceptual.¹ A sound operating plan thus must not only retain the flexibility to adapt to such an evolutionary environment, it must embrace it, while still providing overall guidance and vision.

This 2013 Annual Update includes actual work completed in 2012 and revised estimates of projected work scope in future years. These revisions are based on insights gained from 2012 actual experience, outcomes of long-term contracts, and better alignment of program scopes. Consistent with this structure, those estimates are planning tools. They are not benchmarks. They will continue to evolve both as new information becomes available, and as ComEd gains actual experience. In particular, the actual work plans will be developed on the quarterly cycles. The purpose of this work in any given period may evolve from that now planned, schedules may be either accelerated or delayed, and implementation may require either fewer or more units of work at lower or higher cost, even if the scope and timing of the planned work does not change. The Plan is not to limit or confine the ability of that process to function. Moreover, such change does not imply any flaw in ComEd's Plan, nor any imprudence

¹ ComEd is also submitting its 2013 Investment Plan, which contains more specific detail about the planned activities for the 2013 year and is attached hereto as Attachment 2.

or unreasonableness in its execution. To the contrary, planning without flexibility would be unwise and unreasonable.

Summary Plan Schedule

In order to establish a framework to plan for and schedule future work while efficiently addressing this inherent change and uncertainty, ComEd is employing a proven iterative planning structure. Under this structure, work plans will be developed on a rolling basis for each quarter of the investment period. Each work plan will outline a series of tasks comprising: project and work planning, design, regulatory and public affairs functions where required (e.g., permitting), project implementation, and review. Consistent with ComEd's Plan, this quarterly cycle is illustrated throughout this 2013 Annual Update in a series of Gantt charts showing repeating cycles of work planning and management activity. Please note that while this work planning and management cycle repeats on a quarterly basis, the activities associated with each quarter's iteration may take longer than a quarter to complete. This structure allows ComEd to implement its multi-year Plan effectively and rigorously, while retaining the required flexibility. The Gantt charts that appear in this 2013 Annual Update are illustrative and are not intended to establish specific milestones.

The individual program schedules included in this 2013 Annual Update explain when each program is planned to start and end. Most include both a rolling quarterly work plan process and a high-level task list. It is recognized that scope priorities will be adjusted over the course of the programs as new information is obtained.

ComEd's entire Plan covers a 10-year time period. All program areas are planned for completion within the five years with the exception of the Smart Meter program, which is planned to be completed within 10 years. All program schedules include reasonable ramp-up and ramp-down periods.

Figure B.1 in Appendix B presents a high level schedule to complete the entire scope of work associated with the Plan. Detailed schedules are provided in the sections that follow for specific program areas.

Summary Plan Budget

The program budget identifies the estimated annual capital cost for each program. The Plan budget total is estimated to be approximately \$2.6 billion in capital investments plus associated expenses. As prescribed by the Act, the estimated \$2.6 billion of capital investment under the Plan must be incremental to ComEd's annual capital investment program, which the Act defines as ComEd's "average capital spend for calendar years 2008, 2009, and 2010 as reported in the applicable Federal Energy Regulatory Commission ("FERC") Form 1." 220 ILCS 5/16-108.5(b). The annual capital expenditures for calendar years 2008, 2009, and 2010 are \$951.6 million, \$848.7 million, and \$955.8 million, respectively, as reflected in the statement of cash flows from each year's respective FERC Form 1. This results in an annual baseline of \$918.7 million, derived by summing \$951.6 million + \$848.7 million + \$955.8 million = \$2.8 billion and dividing \$2.8 billion by 3. Thus, the baseline, over the 10 year period is \$9.2 billion.

This 2013 Annual Update includes actual expenditures in 2012, as well as revised estimates of projected expenditures in future years. Table B.1 in Appendix B presents a summary of the Plan's estimated total capital budget by program, and Figure B.2 in Appendix B presents the estimated total capital budget by year associated with the Plan.

Summary Plan Staffing

Program staffing identifies the annual full-time equivalent employees ("FTEs") required for completion of program scope of work. (See Appendix A)

FTEs have been calculated by taking the estimated Direct and Contractor worker-hours to execute the Plan and dividing by 2,080 hours. Estimated worker-hours for Direct jobs and Contractor positions are each composed of the following two sub-categories:

Assigned: Worker-hours assigned to specific work orders associated with Plan program scopes of work; and

Support: Worker-hours charged on timesheets in support of the Plan

Support FTEs are not allocated to specific Plan scopes of work, and are not presented in the FTE sections for individual programs in this 2013 Annual Update. Note that this is a change in format from ComEd's Plan, in which Support FTEs were allocated to specific scopes of work proportionally, based on estimated investments for specific scopes of work. Rather, Figure B.3 in Appendix B presents the estimated Assigned FTEs and Support FTEs to execute the entire scheduled scope of work

associated with the 2013 Annual Update. This revised format for presentation of Assigned FTEs and Support FTEs is more consistent with ComEd's timekeeping approach and ultimately a more accurate representation of how Support FTEs are allocated to Plan execution. Estimates for Support FTEs in the 2013 Annual Update are based on the 2012 actual proportion of Assigned FTEs to Support FTEs.

Job classifications associated with Assigned FTEs and Support FTEs may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, legal support and craft. FTEs are not defined as employee head counts, and should not be confused with employment levels and trends.

The estimated FTEs presented in this 2013 Annual Update include Direct and Contractor FTEs, however, they do not include any Induced FTEs. ComEd's 2012 Energy Infrastructure Modernization Act Annual Jobs Creation Report, submitted on April 1, 2013, includes actual Direct, Contractor, and Induced FTEs for 2012.

Summary Plan Quantity of Units

The program quantity of units describes the estimated number of work units, where applicable, that are planned to be completed each year for each program area. This 2013 Annual Update includes actual units of work completed in 2012 and revised estimates of units of work that are projected to be completed in future years. All units of work associated with the identified work scopes are included in the estimated quantities in this 2013 Annual Update, and will be counted towards achievement of the Plan goals. However, this does not limit additional units from being completed as part of the baseline spend at ComEd's discretion.

Attachments

This Plan includes, for informational purposes, a 2012 Plan Review, included as Attachment 1 to this Plan. The 2012 Plan Review provides more information on the actual annual expenditures and cumulative units of work completed in 2012, as compared to those estimated in ComEd's Plan, with corresponding explanations of changes. The 2012 Plan review is attached hereto as Attachment 1.

This Plan also includes, for informational purposes, a schedule and staffing plan for the calendar year 2013 investments ("2013 Plan") included as Attachment 2 to this Plan. The 2013 Plan provides more information on scope, schedule, budget, staffing, and units of work that are planned to be completed in 2013 in association with the Plan. The monthly targets listed are not intended to be firm milestones, but rather to provide directional guidance towards accomplishment of the annual goals. The 2013 Plan is attached hereto as Attachment 2.

SECTION I: Reliability-Related Investments

SECTION I.A: Underground Residential Cable (“URD”) Injection and Replacement

I.A.1: Summary of Program Revisions

Over the course of the program, ComEd expects to remediate more miles of URD cable at a lower overall program capital cost, as compared to ComEd’s Plan. Details of these revisions to the Plan are presented in the sections that follow.

I.A.2: Program Scope

ComEd’s URD system has approximately 8,700 miles of bare concentric neutral cable that was installed between 1966 and 1985, which is primarily used to serve residential and commercial areas. The URD Injection and Replacement program excludes mainline cable, which is covered under the Mainline Cable System Refurbishment and Replacement program described in Section I.B below. URD cable failures mainly occur within the population of bare concentric neutral cable. The number of annual failures in this type of cable has been trending up in recent years as this cable continues to age. ComEd currently projects injection or replacement of approximately 4,400 miles of the problematic cable over the course of the program. ComEd anticipates that, by the end of the program, the number of annual failures in this type of cable will be significantly reduced. This reduction in faults will reduce long-duration outages primarily experienced in residential subdivisions. The program consists of two major components:

- URD Cable Injection
- URD Cable Replacement

Each of these components is described in more detail below.

URD Cable Injection

Cable injection fills in cable insulation voids and avoids cable failures. In general, URD cables that are candidates for injection typically have intact concentric neutral conductors, are not solid cable or strand-filled cable, and have a low number of cable splices. Where it is practical, cable injection is typically a more cost beneficial way to avoid URD cable failures than cable replacement. Based on ComEd's past experience with URD cable injection, it is estimated that during the course of the program approximately 810 miles will be injected. This scope is the same as that presented in ComEd's Plan.

URD Cable Replacement

URD cables that cannot practically or economically be injected will be replaced on a schedule prioritized to replace the worst-performing URD cables first. It is expected that at the end of the program approximately 3,563 miles of URD cable will have been replaced. This represents a change in scope of 196 additional miles of URD cable replaced, as compared with ComEd's Plan.

I.A.3: Program Schedule

This program is planned to be completed over a five-year period plus reasonable ramp-up and ramp-down periods. Estimates of cost, units of work, and schedules for that work, may evolve over time.

Figure I.A.3 presents the estimated schedule to complete the URD Injection and Replacement program. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

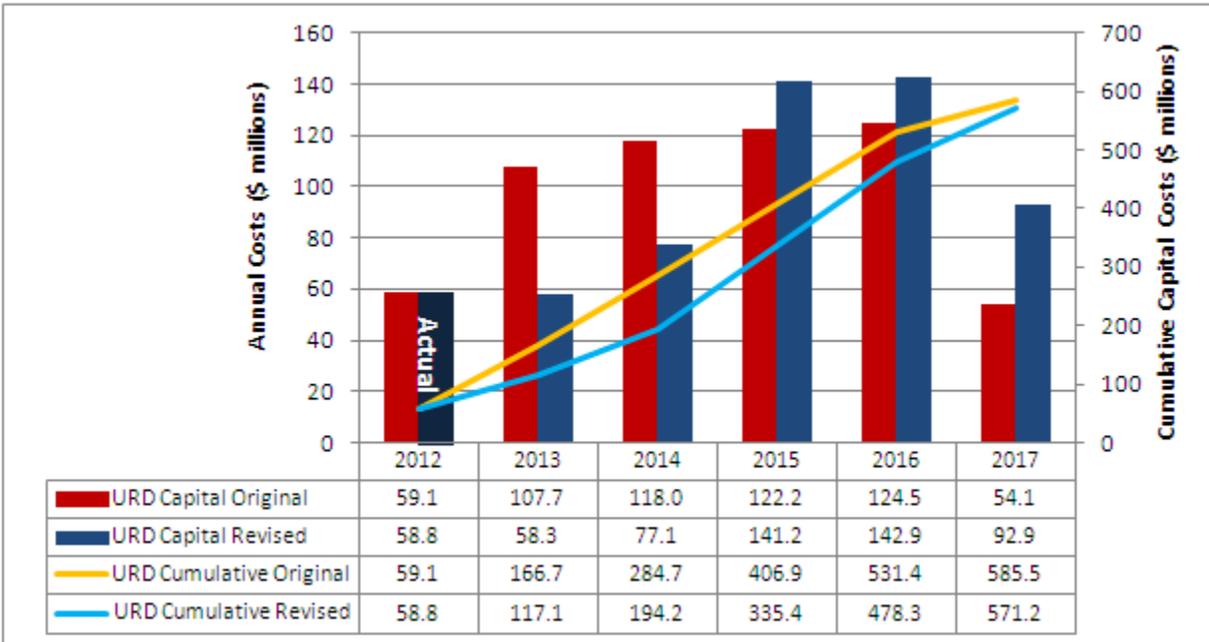
- Mobilization and ramp-up
- Establish priority for the calendar year
- Perform scoping
- Perform design tasks, procure material, and identify required outages in schedule
- Planning (develop work packages and secure permits)
- Construction – Boring, injection or replacement
- Construction – Splicing where required
- Test and liven
- Landscaping restoration
- Demobilization and ramp-down period

Activity ID	Activity Name	Cal. Days	Start	Finish	2012			2013			2014			2015			2016			W17
					Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
URD4-15-4-0610	Test & Liven 2016 2nd Q	180	21-Aug-16	23-Feb-17																
URD4-15-4-0700	Landscaping Restoration for 2016 2nd Q	180	21-Aug-16	23-Feb-17																
URD5-16-1-0200	Scoping for 2016 3rd Q	90	20-Mar-16	18-Jun-16																
URD5-16-1-0300	Design / Procure / Outage for 2016 3rd Q	90	19-May-16	18-Aug-16																
URD5-16-1-0400	Planning for 2016 3rd Q	90	21-Jul-16	19-Oct-16																
URD5-16-1-0500	Construction - Boring, Inject or Replace for 2016 3rd Q	180	21-Sep-16	25-Mar-17																
URD5-16-1-0600	Construction - Splicing for 2016 3rd Q	180	22-Oct-16	25-Apr-17																
URD5-16-1-0610	Test & Liven 2016 3rd Q	180	22-Nov-16	28-May-17																
URD5-16-1-0700	Landscaping Restoration for 2016 3rd Q	180	22-Nov-16	28-May-17																
URD5-16-2-0200	Scoping for 2016 4th Q	90	20-Jun-16	19-Sep-16																
URD5-16-2-0300	Design / Procure / Outage for 2016 4th Q	90	21-Aug-16	19-Nov-16																
URD5-16-2-0400	Planning for 2016 4th Q	90	22-Oct-16	25-Jan-17																
URD5-16-2-0500	Construction - Boring, Inject or Replace for 2016 4th Q	180	26-Dec-16	26-Jun-17																
URD5-16-2-0600	Construction - Splicing for 2016 4th Q	180	28-Jan-17	28-Jul-17																
URD5-16-2-0610	Test & Liven 2016 4th Q	180	27-Feb-17	27-Aug-17																
URD5-16-2-0700	Landscaping Restoration for 2016 4th Q	180	27-Feb-17	27-Aug-17																
URD5-16-2-0800	Demobilization Ramp Down	0	30-Apr-17																	
URD5-16-3-0100	Work Priority for 2017	0	20-Jun-16																	
URD5-16-3-0200	Scoping for 2017 1st Q	90	21-Sep-16	21-Dec-16																
URD5-16-3-0300	Design / Procure / Outage for 2017 1st Q	90	22-Nov-16	25-Feb-17																
URD5-16-3-0400	Planning for 2017 1st Q	30	28-Jan-17	26-Feb-17																
URD5-16-3-0500	Construction - Boring, Inject or Replace for 2017 1st Q	180	30-Mar-17	28-Sep-17																
URD5-16-3-0600	Construction - Splicing for 2017 1st Q	180	30-Apr-17	29-Oct-17																
URD5-16-3-0610	Test & Liven 2017 1st Q	180	28-May-17	28-Nov-17																
URD5-16-3-0700	Landscaping Restoration for 2017 1st Q	180	28-May-17	28-Nov-17																

I.A.4: Program Budget

Figure I.A.4 represents the estimated capital budget for the URD Injection and Replacement program as compared with ComEd’s Plan. ComEd estimates the program cost to be capital investments of \$571 million plus associated expenses over the program period. This represents a reduction of approximately \$14 million from ComEd’s Plan. The net reduction is due to savings from favorable vendor contract negotiations; budget adjustments based on 2012 actual costs; and increased scope for cable replacement. Additionally, because of the 2012 Deferral, ComEd anticipates a more gradual initial ramp up in investments for this program, with higher investment peaks in later years, as compared with ComEd’s Plan. However, as Figure I.A.4 illustrates, ComEd expects to complete investments related to this program in the same year presented in the Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

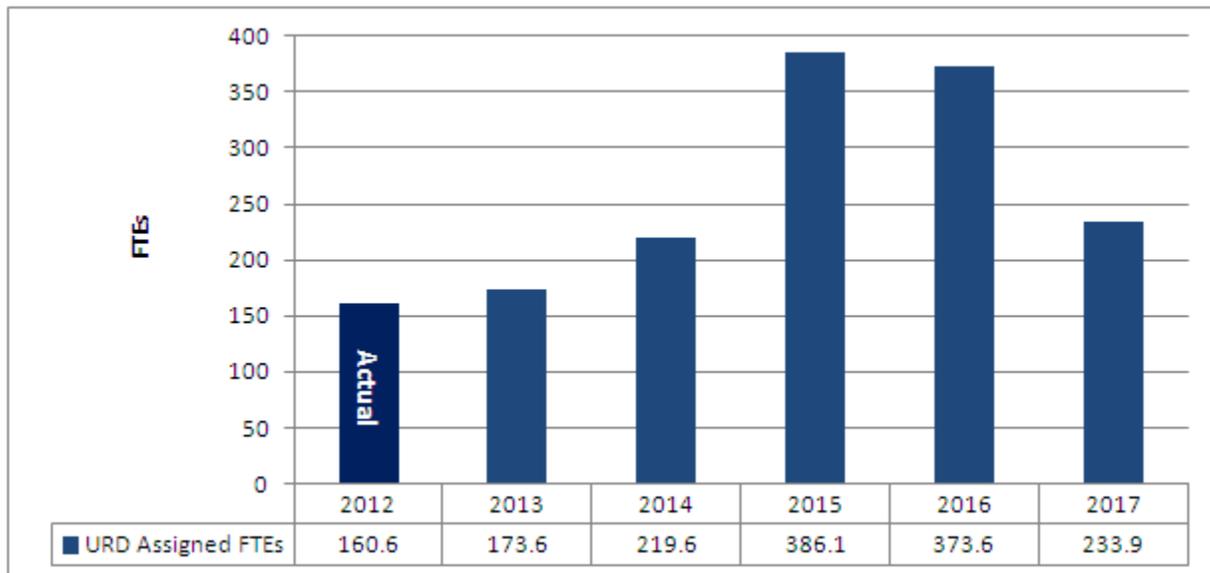
FIGURE I.A.4: URD INJECTION AND REPLACEMENT CAPITAL BUDGET



I.A.5: Program FTEs

Figure I.A.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.A.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

FIGURE I.A.5: URD INJECTION AND REPLACEMENT FTES



I.A.6: Program Units

Figure I.A.6.A shows the miles of URD cable estimated to be injected. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work to be accomplished, as well as the scope of work left to be performed. It is estimated that approximately 810 miles of URD cable will be injected over the course of the program. This total is consistent with ComEd's Plan. However, as Figure I.A.6.A illustrates, due to the 2012 Deferral, ComEd anticipates a more gradual initial ramp up in units completed, with higher planned annual numbers of units completed in later years, as compared with ComEd's Plan. As Figure I.A.6.A also illustrates, ComEd anticipates that the revised plan for this program will require additional permitted ramp-down time, as compared with ComEd's Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE I.A.6.A: URD CABLE INJECTION UNITS

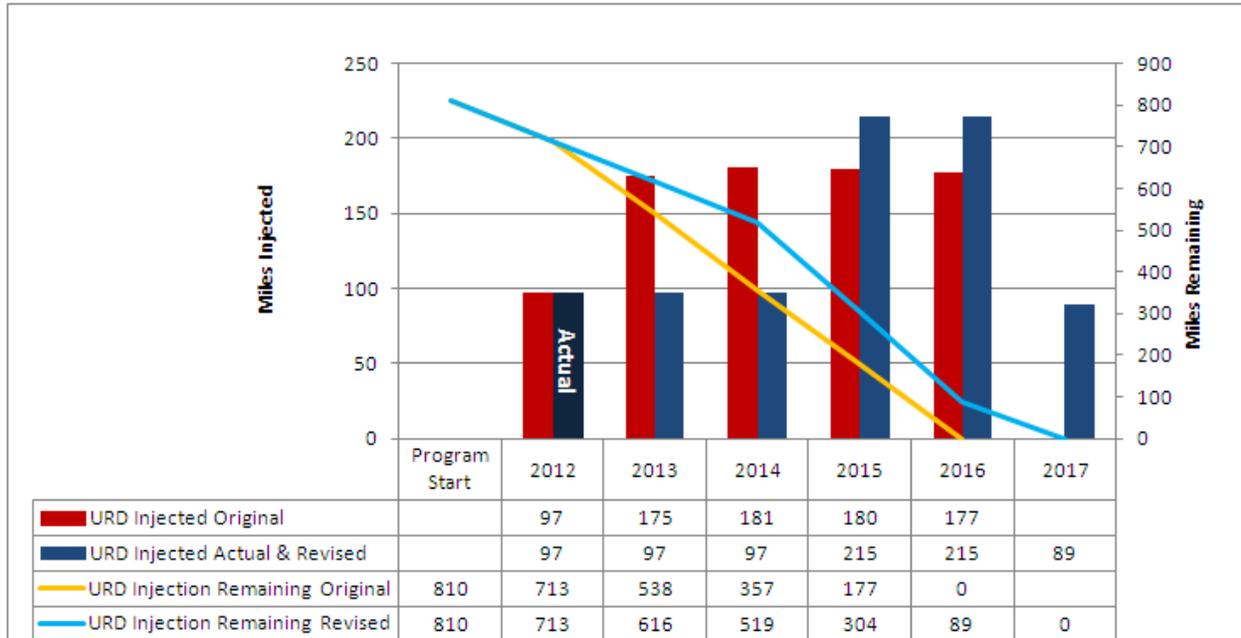
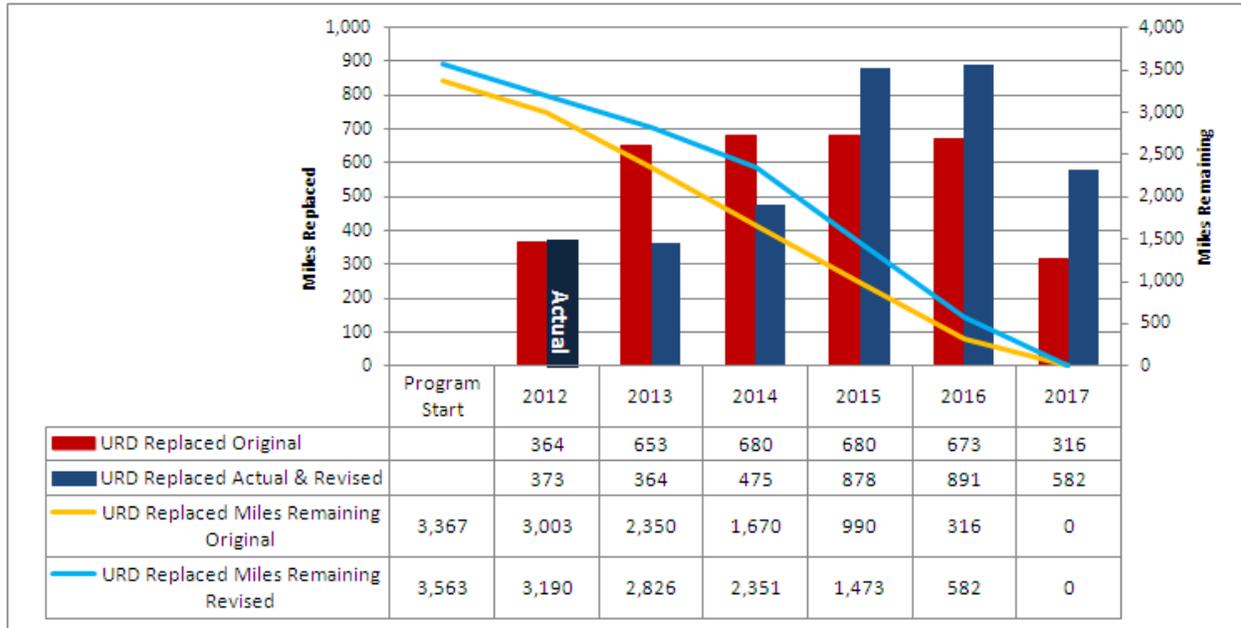


Figure I.A.6.B shows the miles of URD cable estimated to be replaced. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. It is estimated that approximately 3,563 miles of URD cable will be replaced over the course of the program. As Figure I.A.6.B illustrates, due to the 2012 Deferral, ComEd anticipates a more gradual initial ramp up in units completed, with higher planned annual numbers of units completed in later years, as compared with ComEd's Plan. An additional 196 miles of URD cables are planned to be replaced, as compared with ComEd's Plan, in order to offset the effect of compounding cable defects expected as a result of the 2012 Deferral. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE I.A.6.B: URD CABLE REPLACEMENT UNITS



SECTION I.B: Mainline Cable System Refurbishment and Replacement

I.B.1: Summary of Program Revisions

Over the course of the program, ComEd expects to assess and refurbish more manholes, replace more miles of mainline cable, and test fewer sections of mainline cable, at a lower overall program capital cost. Details of these revisions to the Plan are presented in the sections that follow.

I.B.2: Program Scope

The ComEd mainline underground system includes approximately 8,300 miles of cable installed in conduit systems or direct buried. Mainline cable system refurbishment and replacement has the most complex scope of work of all the programs. The scope is composed of three main work categories:

- Manhole assessment and refurbishment of manholes and cable systems
- Cable replacement
- Cable testing

The accomplishment of this scope is highly dependent on the ability to obtain necessary permits and to schedule equipment outages. Certain periods of time or certain work restrictions, such as summer moratoriums, may limit the types of work that can be performed due to the need to maintain system configuration. Such periods will be reflected in ComEd's annual or summer critical work plans. Because remediation scope is based on inspection results, the complex nature of the underground system, interrelationship of multiple circuits within a manhole, and certain potential moratoriums

on work, this program continues to contain the highest degree of scope uncertainty of all the Reliability-Related investments. Future-year plans will continue to incorporate insights gained through implementation.

Manhole Assessment and Cable System Refurbishment

ComEd has approximately 32,026 manholes on its system. This is approximately 3,700 more manholes than the estimate presented in ComEd's Plan, resulting from a manual review of ComEd's suburban underground system maps and records. Over the course of the program, ComEd plans to assess all manholes on its system and perform refurbishment within the parameters of the Act.

Assessment includes the evaluation of the overall condition of the manhole, cables, and cable support systems. Refurbishment includes replacing or repairing cable systems in the manhole, and addressing other structural issues as required. Manhole structural work may range from minor refurbishment to replacement of an entire manhole.

Concurrent with manhole assessments, cable joint issues discovered within the manholes (e.g., bulging or leaking joints) will be addressed primarily with cable replacement. As assessments are performed, work plans will be generated to address the findings.

Cable Replacement

Replacement criteria will be based, in part, on the method of original installation. Replacement of cable in conduit will be based on manhole assessment findings. Direct buried mainline cable will either be replaced without testing, or replaced after testing, based on cable length and prior fault history. It is estimated that approximately 661

miles of mainline cable will be replaced over the course of the program. This represents an estimated 135 miles of additional mainline cable to be replaced as compared with ComEd's Plan, resulting from actual cable defect find rates in 2012 that were greater than originally planned. This estimate is based on assumptions concerning inspection results, which will be adjusted over time as actual data become available. Because of their inherent reliance on assumptions, early estimates of cable replacement contain a high degree of uncertainty and are not intended to reflect firm scope.

Cable Testing

Underground cable is divided into sections largely as a result of limits placed on cable lengths by the manufacturers and limits due to the physical configuration of the circuits.

An estimated 929 circuit sections will be selected for Very Low Frequency ("VLF") Testing per the Institute of Electric and Electronics Engineers ("IEEE") standard 400.2 to validate the serviceability of the section of cable following manhole refurbishment and mainline cable replacement. This represents a change in approach from the Plan based on 2012 experience, by eliminating a pre-test prior to manhole refurbishment and mainline cable replacement. The scope is now focused on performing "proof tests" at the conclusion of repair activities to validate the serviceability of the section of cable, diagnostic testing for long direct buried sections, and some re-tests following a failure of proof tests or diagnostic tests. This refinement of the cable testing strategy results in approximately 850 fewer tests performed. It is estimated that cable tests will result in replacement of cable sections, which are included in the estimate shown in the "Cable Replacement" section above. This estimate is based on

assumptions concerning inspection results, which will be adjusted over time as actual data become available. Because of their inherent reliance on assumptions, early estimates of cable testing contain a high degree of uncertainty and are not intended to reflect firm scope.

I.B.3: Program Schedule

The overall Mainline Cable System Refurbishment and Replacement program is planned to be completed over a five-year period plus reasonable ramp-up and ramp-down periods. Estimates of cost, and units of work, and schedules for that work, may evolve over time. The schedule for each of the three program areas is described below.

Figure I.B.3.A presents the estimated schedule to complete the Manhole Assessment and Cable System Refurbishment program. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

- Mobilization and ramp-up
- Establish manhole inspection priority for the calendar year
- Perform scoping and configuration analysis; review sequence for capacity issues
- Perform design tasks, procure material, and identify required outages in schedule; include identified joint issues in evaluation
- Planning (develop work packages secure permits)
- Construction - Manhole cleaning (environmental) if required
- Construction - Conduct manhole assessments and refurbish cable systems as necessary

- Evaluate results
- Develop cable replacement plans as necessary
- Demobilization ramp-down period

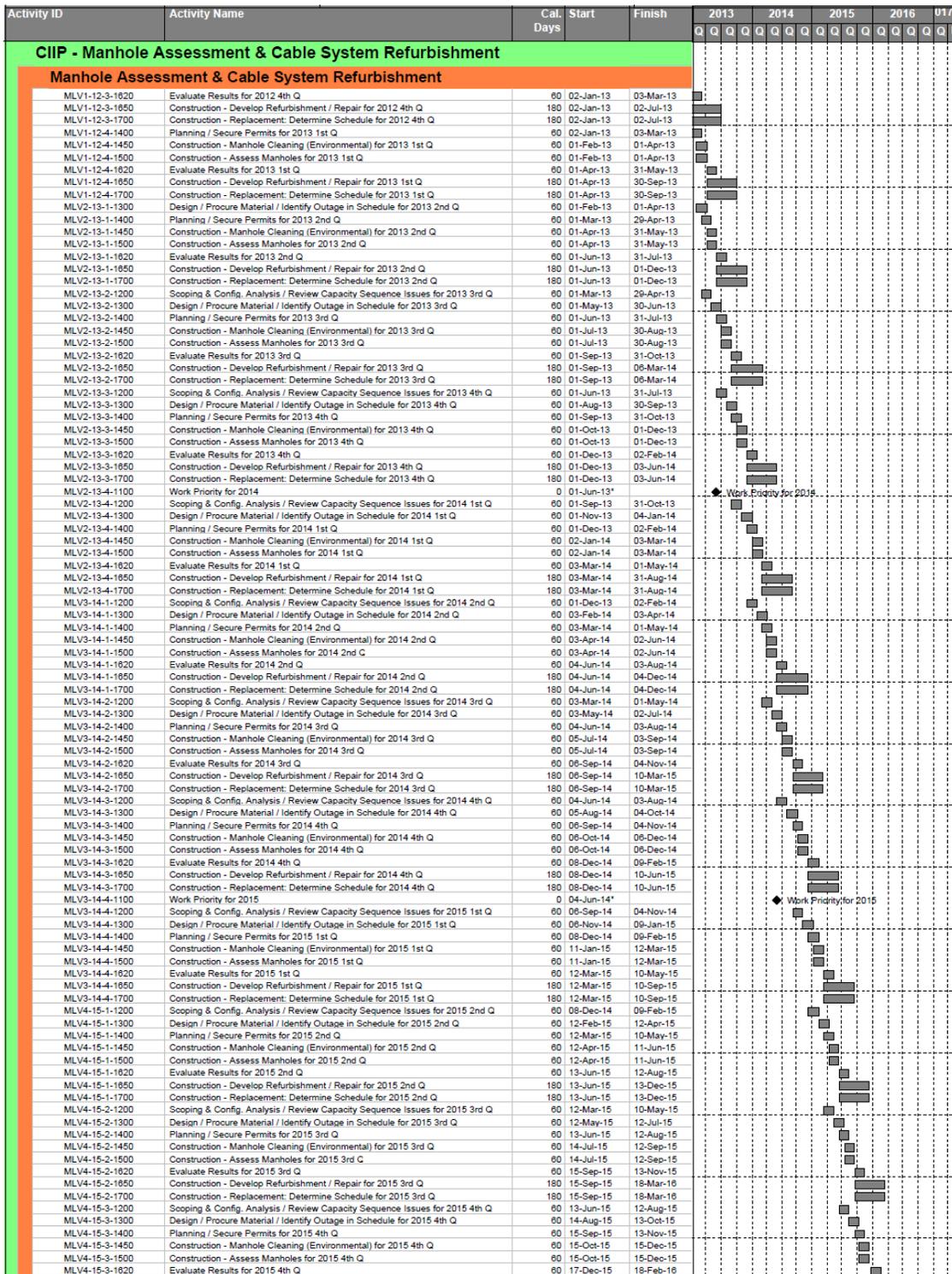
Figure I.B.3.B presents the estimated schedule to complete the Mainline Cable Replacement program. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish replacement priority for the calendar year
- Perform scoping and configuration analysis; review sequence for capacity issues
- Perform design tasks, procure material, and identify required outages in schedule; include identified joint issues in evaluation
- Planning (develop work packages and secure permits)
- Construction – Install conduit when required
- Construction – Pull / install cable and terminal pole work
- Construction – Pull / install cable
- Construction – Install dead joints
- Test cable and liven
- Demobilization ramp-down period

Figure I.B.3.C presents the estimated schedule to complete the Mainline Cable Testing program. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish testing priority for the calendar year
- Perform scoping and configuration analysis; review sequence for capacity issues
- Perform design tasks, procure material, and identify required outages in schedule; include identified joint issues in evaluation
- Planning (develop work packages and secure permits)
- Perform testing
- Evaluate results
- Develop work program for testing failures (*i.e.*, cable replacement) based on results
- Demobilization ramp-down period

FIGURE I.B.3.A: MANHOLE ASSESSMENT SCHEDULE



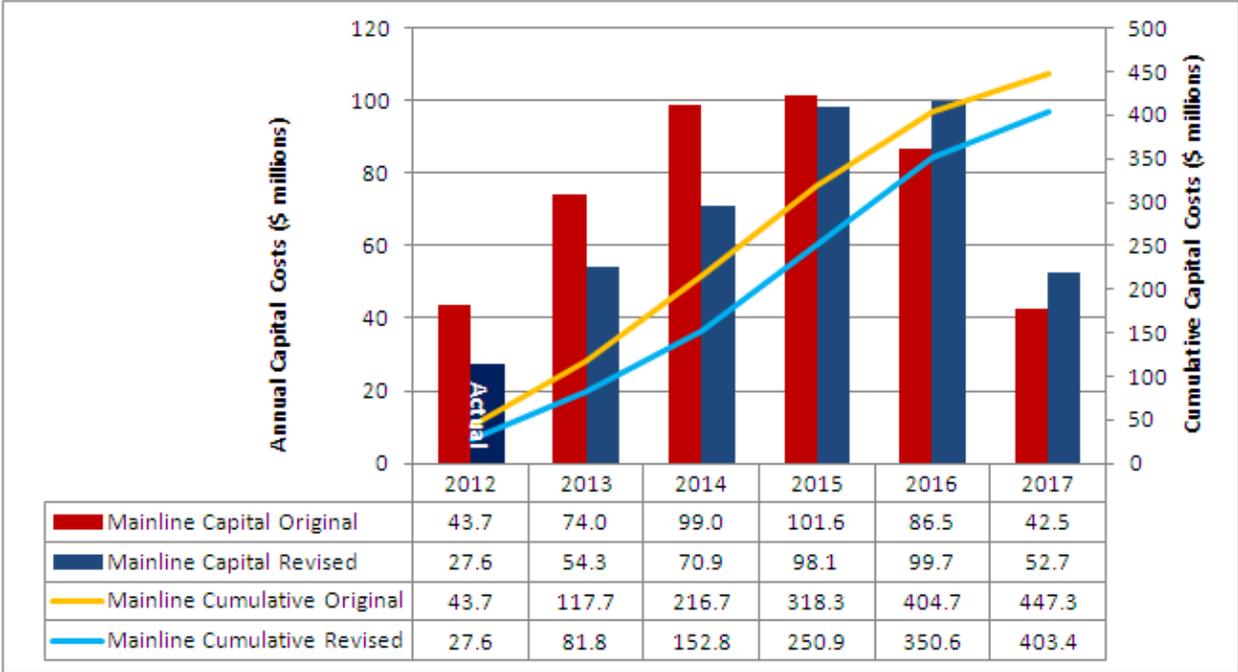
Activity ID	Activity Name	Cal. Days	Start	Finish	2013			2014			2015			2016			U1/
					Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
	MLV4-15-3-1650	180	17-Dec-15	18-Jun-16													
	MLV4-15-3-1700	180	17-Dec-15	18-Jun-16													
	MLV4-15-4-1100	0	13-Jun-15*														
	MLV4-15-4-1200	60	15-Sep-15	13-Nov-15													
	MLV4-15-4-1300	60	15-Nov-15	19-Jan-16													
	MLV4-15-4-1400	60	17-Dec-15	18-Feb-16													
	MLV4-15-4-1450	60	21-Jan-16	20-Mar-16													
	MLV4-15-4-1500	60	21-Jan-16	20-Mar-16													
	MLV4-15-4-1620	60	21-Mar-16	19-May-16													
	MLV4-15-4-1650	180	21-Mar-16	19-Sep-16													
	MLV4-15-4-1700	180	21-Mar-16	19-Sep-16													
	MLV5-16-1-1200	60	17-Dec-15	18-Feb-16													
	MLV5-16-1-1300	60	21-Feb-16	20-Apr-16													
	MLV5-16-1-1400	60	21-Mar-16	19-May-16													
	MLV5-16-1-1440	0	21-Jun-16*														
	MLV5-16-1-1450	60	21-Apr-16	20-Jun-16													
	MLV5-16-1-1500	60	21-Apr-16	20-Jun-16													
	MLV5-16-1-1620	60	22-Jun-16	21-Aug-16													
	MLV5-16-1-1650	180	22-Jun-16	22-Dec-16													
	MLV5-16-1-1700	180	22-Jun-16	22-Dec-16													

Activity ID	Activity Name	Cal. Days	Start	Finish	2013			2014			2015			2016			2017
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
MLV1-16-1-700	Construction- Remove / Replace / Cable / Repair ...	75	16-Jan-16	31-Mar-16													
MLV1-16-1-800	Construction - Complete Terminations for 2016 1...	74	17-Jan-16	31-Mar-16													
MLV1-16-1-975	Test & Liven for 2016 1st Q	74	17-Jan-16	31-Mar-16													
MLV1-16-2-100	Work Priority for 2016 2nd Q	0	17-Jan-16*														
MLV1-16-2-200	Scoping & Config. Analysis / Review Sequence f...	90	17-Jan-16	16-Apr-16													
MLV1-16-2-400	Design / Procure Material / Identify Outages in S...	90	07-Feb-16	06-May-16													
MLV1-16-2-500	Preliminary Planning / Develop Work Plan / Secu...	90	07-Mar-16	05-Jun-16													
MLV1-16-2-600	Construction - Walkdown Manhole / Finalize Wor...	60	27-Mar-16	25-May-16													
MLV1-16-2-700	Construction- Remove / Replace / Cable / Repair ...	75	16-Apr-16	30-Jun-16													
MLV1-16-2-800	Construction - Complete Terminations 2016 2nd Q	74	17-Apr-16	30-Jun-16													
MLV1-16-2-975	Test & Liven for 2016 2nd Q	74	17-Apr-16	30-Jun-16													
MLV1-16-3-100	Work Priority for 2016 3rd Q	0	17-Apr-16*														
MLV1-16-3-200	Scoping & Config. Analysis / Review Sequence f...	90	17-Apr-16	17-Jul-16													
MLV1-16-3-400	Design / Procure Material / Identify Outages in S...	90	07-May-16	06-Aug-16													
MLV1-16-3-500	Preliminary Planning / Develop Work Plan / Secu...	90	06-Jun-16	04-Sep-16													
MLV1-16-3-600	Construction - Walkdown Manhole / Finalize Wor...	60	26-Jun-16	25-Aug-16													
MLV1-16-3-700	Construction- Remove / Replace / Cable / Repair ...	75	17-Jul-16	30-Sep-16													
MLV1-16-3-800	Construction - Complete Terminations for 2016 3r...	74	18-Jul-16	30-Sep-16													
MLV1-16-3-975	Test & Liven for 2016 3rd Q	74	18-Jul-16	30-Sep-16													
MLV1-16-4-100	Work Priority for 2016 4th Q	0	18-Jul-16*														
MLV1-16-4-200	Scoping & Config. Analysis / Review Sequence f...	90	18-Jul-16	16-Oct-16													
MLV1-16-4-400	Design / Procure Material / Identify Outages in S...	90	07-Aug-16	05-Nov-16													
MLV1-16-4-500	Preliminary Planning / Develop Work Plan / Secu...	90	06-Sep-16	06-Dec-16													
MLV1-16-4-600	Construction - Walkdown Manhole / Finalize Wor...	60	26-Sep-16	26-Nov-16													
MLV1-16-4-700	Construction- Remove / Replace / Cable / Repair ...	72	16-Oct-16	30-Dec-16													
MLV1-16-4-800	Construction - Complete Terminations for 2016 4t...	72	17-Oct-16	31-Dec-16													
MLV1-16-4-975	Test & Liven for 2016 4th Q	72	17-Oct-16	31-Dec-16													
MLV1-17-1-100	Work Priority for 2017 1st Q	0	17-Oct-16*														
MLV1-17-1-200	Scoping & Config. Analysis / Review Sequence f...	90	17-Oct-16	20-Jan-17													
MLV1-17-1-400	Design / Procure Material / Identify Outages in S...	90	06-Nov-16	08-Feb-17													
MLV1-17-1-500	Preliminary Planning / Develop Work Plan / Secu...	90	07-Dec-16	10-Mar-17													
MLV1-17-1-600	Construction - Walkdown Manhole / Finalize Wor...	60	29-Dec-16	28-Feb-17													
MLV1-17-1-700	Construction- Remove / Replace / Cable / Repair ...	70	20-Jan-17	30-Mar-17													
MLV1-17-1-800	Construction - Complete Terminations for 2017 1...	70	21-Jan-17	31-Mar-17													
MLV1-17-1-975	Test & Liven for 2017 1st Q	70	21-Jan-17	31-Mar-17													
MLV1-17-2-100	Work Priority for 2017 2nd Q	0	21-Jan-17*														
MLV1-17-2-200	Scoping & Config. Analysis / Review Sequence f...	90	21-Jan-17	20-Apr-17													
MLV1-17-2-400	Design / Procure Material / Identify Outages in S...	90	10-Feb-17	10-May-17													
MLV1-17-2-500	Preliminary Planning / Develop Work Plan / Secu...	90	11-Mar-17	09-Jun-17													
MLV1-17-2-600	Construction - Walkdown Manhole / Finalize Wor...	60	31-Mar-17	30-May-17													
MLV1-17-2-700	Construction- Remove / Replace / Cable / Repair ...	70	20-Apr-17	29-Jun-17													
MLV1-17-2-800	Construction - Complete Terminations for 2017 2...	70	21-Apr-17	30-Jun-17													
MLV1-17-2-975	Test & Liven for 2017 2nd Q	70	21-Apr-17	30-Jun-17													

I.B.4: Program Budget

Figure I.B.4 presents the estimated capital budget for the Mainline Cable System Refurbishment and Replacement program. ComEd estimates the program cost to be capital investments of \$403 million, plus associated expenses over the program period. This represents a reduction of approximately \$44 million in capital spend from ComEd's Plan. The net reduction is due to savings from favorable vendor contract negotiations; and adjustments as a result of insights gained in 2012, which include fewer manhole structural replacements; increased scope for manhole assessments; and higher cable defect find rates. Additionally, ComEd anticipates a more gradual initial ramp-up in investments for this program, with higher investment peaks in later years, as compared with ComEd's Plan. However, as Figure I.B.4 illustrates, ComEd expects to complete investments related to this program in the same year presented in the Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

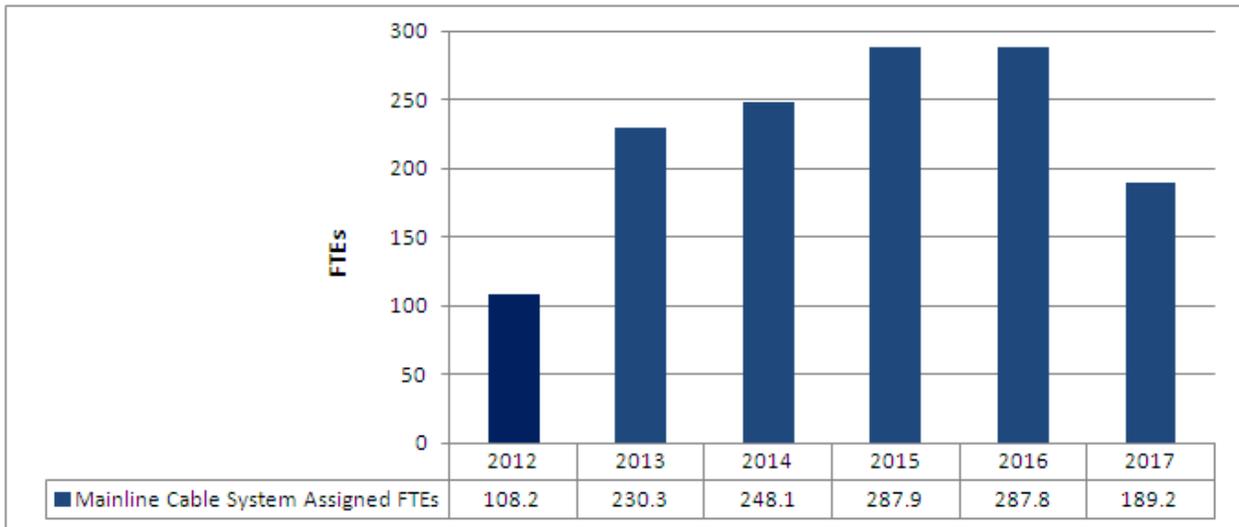
FIGURE I.B.4: MAINLINE CABLE SYSTEM REFURBISHMENT AND REPLACEMENT CAPITAL BUDGET



I.B.5: Program FTEs

Figure I.B.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.B.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

FIGURE I.B.5: MAINLINE CABLE SYSTEM REFURBISHMENT AND REPLACEMENT FTES

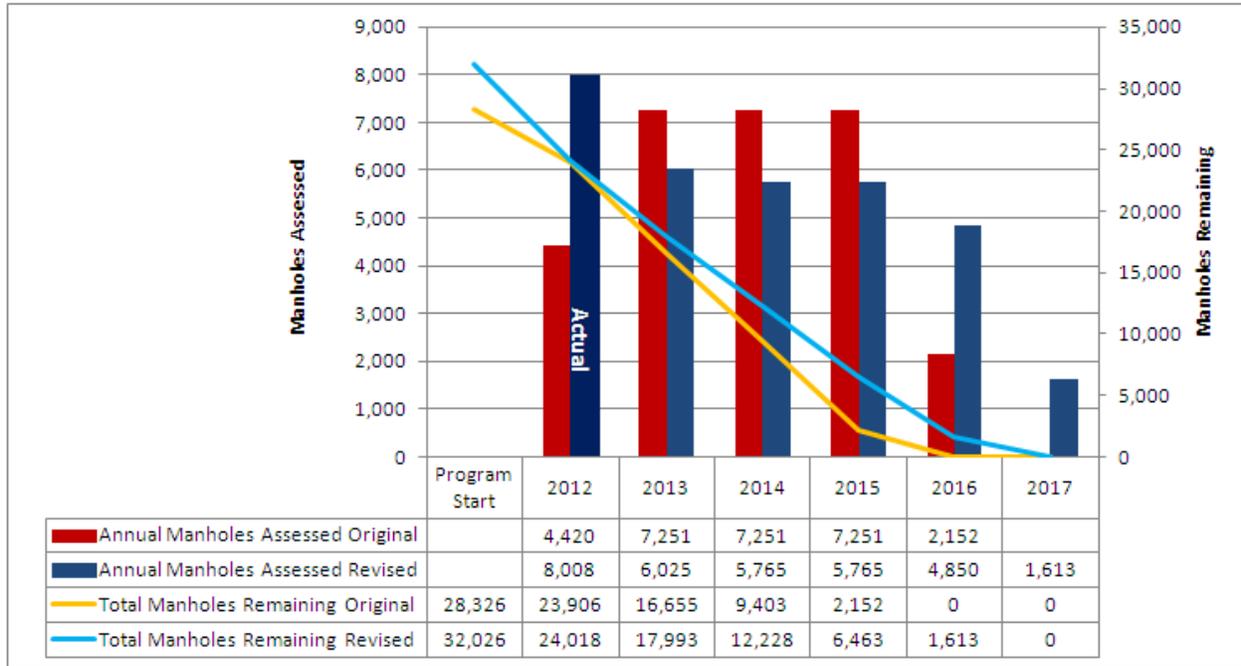


I.B.6: Program Units

Manhole Assessment and Cable System Refurbishment

Figure I.B.6.A shows the estimated number of manhole assessments to take place over the course of the program at 32,026. This is approximately 3,700 more manholes than the estimate presented in ComEd's Plan, resulting from a manual review of ComEd's suburban underground system maps and records. As Figure I.B.6.A illustrates, ComEd anticipates that the revised plan for this program will require additional permitted ramp-down time, as compared with ComEd's Plan. The annual manhole assessment scope has been refined to reflect a more levelized approach based on 2012 experience, and to prevent creation of an aging backlog of repairs. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time.

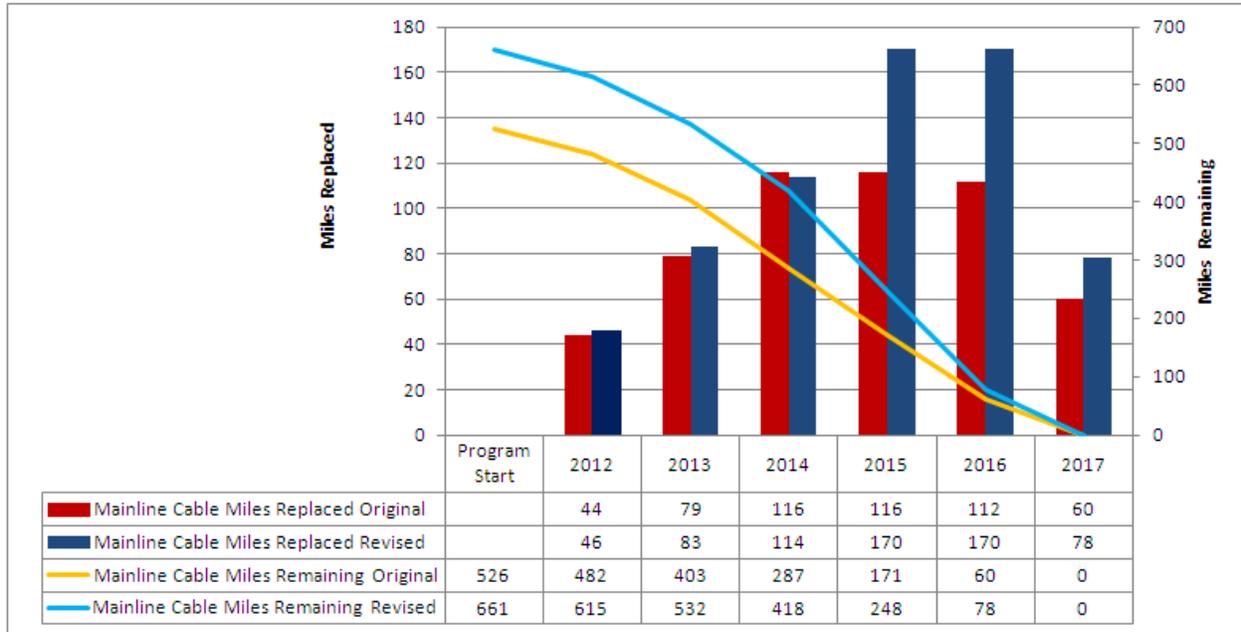
FIGURE I.B.6.A: MANHOLE ASSESSMENT UNITS



Cable Replacement

Figure I.B.6.B shows the estimated miles of mainline cable to be replaced. It is expected that some cables will be replaced based on historical performance of the cable. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year as well as the scope of work left to be performed. The current estimate for replacement is approximately 661 miles of mainline underground cable, which includes cables replaced and those that may fail VLF testing. This represents an estimated 135 miles of additional mainline cable that will need to be replaced as compared with ComEd's Plan, resulting from actual cable defect find rates in 2012 that were greater than originally planned. As Figure I.B.6.B illustrates, ComEd anticipates higher planned annual numbers of units completed in later years, as compared with ComEd's Plan, resulting from the increased cable defect find rate and necessary repairs identified in prior year manhole assessments. Estimates of cost, units of work, and schedules for that work may evolve over time.

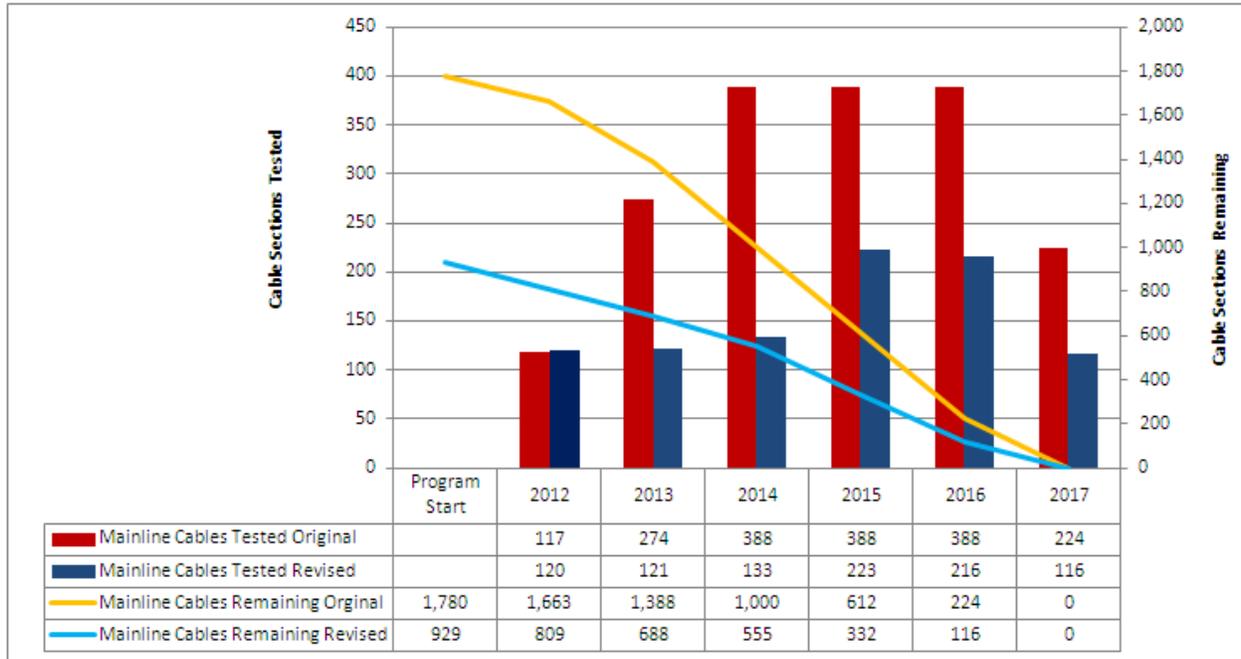
FIGURE I.B.6.B: MAINLINE CABLE REPLACEMENT UNITS



Cable Testing

Figure I.B.6.C shows the estimated number of sections of mainline cable to be VLF tested. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work to be accomplished as well as the scope of work left to be performed. It is estimated that approximately 929 sections of mainline cable will be VLF tested over the course of the program. This represents a change in scope of approximately 851 fewer sections of mainline cable tested, as a result of 2012 experience, by eliminating a pre-test prior to manhole refurbishment and mainline cable replacement. The scope is now focused on performing “proof tests” at the conclusion of repair activities to validate the serviceability of the section of cable, diagnostic testing for long direct buried sections, and some re-tests following a failure of proof tests or diagnostic tests, as the testing schedule is now dependent on the replacement schedule. As Figure I.B.6.C illustrates, ComEd anticipates that the revised plan for this program will require additional permitted ramp-down time, as compared with ComEd’s Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE I.B.6.C: MAINLINE CABLE TESTING UNITS



SECTION I.C: Ridgeland 69kV Cable Replacement

I.C.1: Summary of Program Revisions

Over the course of the program, ComEd expects to complete the same scope of work presented in its Plan, at a lower overall program capital cost. Details of these revisions to the Plan are presented in the sections that follow.

I.C.2: Program Scope

The Ridgeland 69kV cable system is approximately 40.5 circuit miles, composed of four cable subsystems: Solid Paper Lead (“PL”), Cross-Link Polyethylene (“XLPE”), Low Pressure Fluid Filled (“LPFF”), and High Pressure Fluid Filled (“HPFF”).

The cable replacement program for the Ridgeland area began in 1998, targeting poor performing paper insulated lines. The majority of the paper insulated lines that are being replaced were installed in the early 1950’s, although some were installed as early as 1927. Replacement of circuits with the reliable XLPE cable systems will increase the long-term reliability in the area.

The focus of this program is to replace five circuits with XLPE cable systems, representing a total of 10.2 circuit miles. This scope is the same as that presented in ComEd’s Plan.

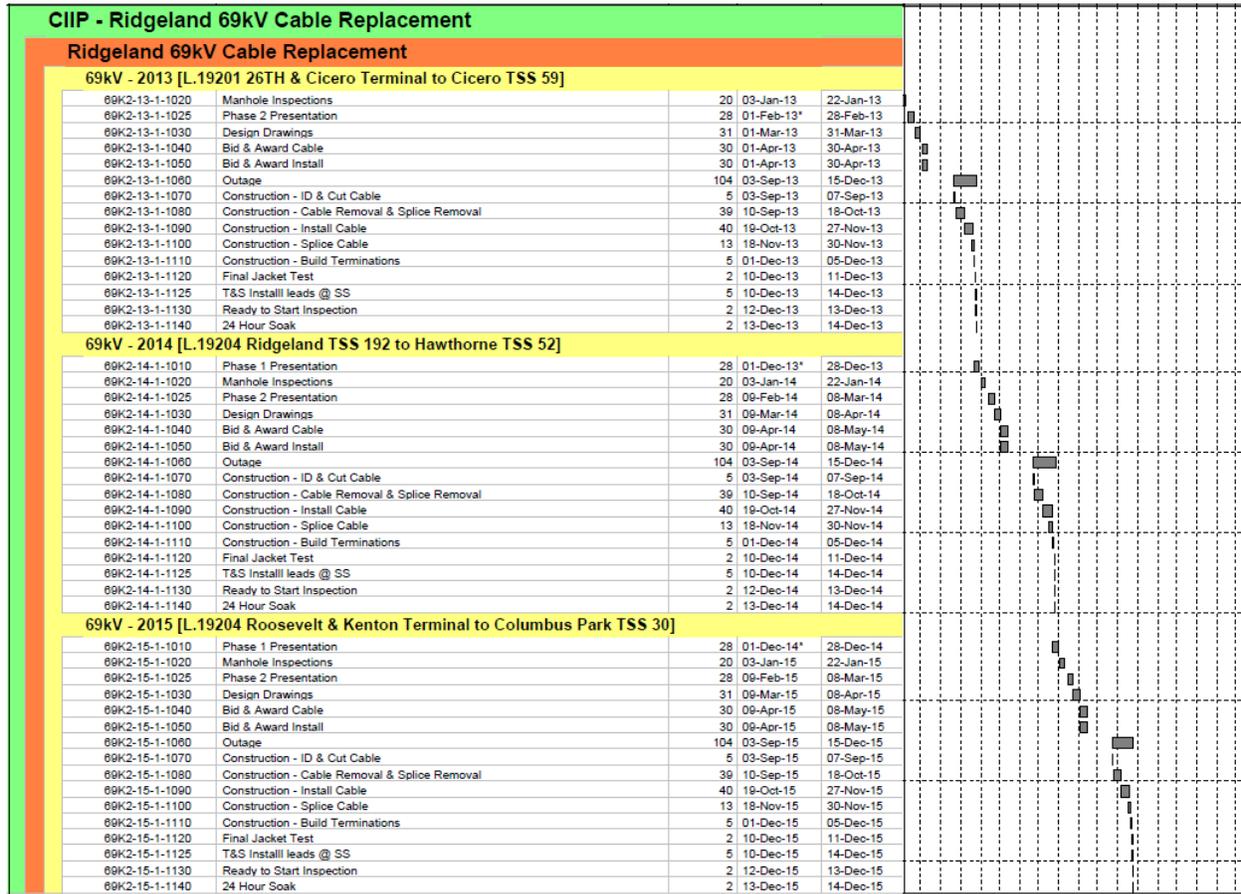
I.C.3: Program Schedule

The Ridgeland 69kV Cable Replacement program is planned to be completed over a four-year period. Estimates of cost, units of work, and schedules for that work may evolve over time.

Figure I.C.3 presents the estimated schedule to complete the Ridgeland 69kV Cable Replacement program. The schedule consists of the following key tasks:

- Ramp-up period
- Establish replacement priority for the calendar year
- Perform scoping and configuration analysis; review sequence for capacity issues
- Perform design tasks, procure material, and identify required outages in schedule; include identified joint issues in evaluation
- Planning (develop work packages secure permits)
- Construction – Remove old cable
- Construction – Pull / install new cable and splice
- Cable Commissioning (test cable and liven)
- Demobilization ramp-down period

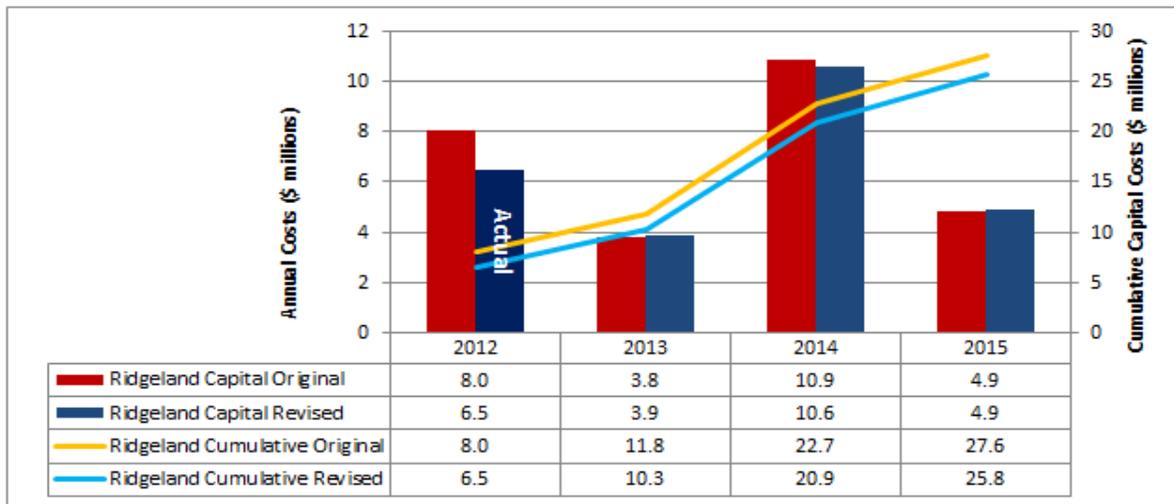
FIGURE I.C.3: RIDGELAND 69KV CABLE REPLACEMENT SCHEDULE



I.C.4: Program Budget

Figure I.C.4 presents the estimated capital budget for the Ridgeland 69kV Cable Replacement program. ComEd estimates the program cost to be capital investments of \$26 million, plus associated expenses over the program period. This represents a reduction of approximately \$2 million in capital spend from ComEd’s Plan. The net reduction is due to actual 2012 costs that were lower than budgeted, due to existing duct condition being better than expected, minimal environmental issues, minimal adjacent circuit issues and minimal substation modifications. Estimates of cost, units of work, and schedules for that work may evolve over time.

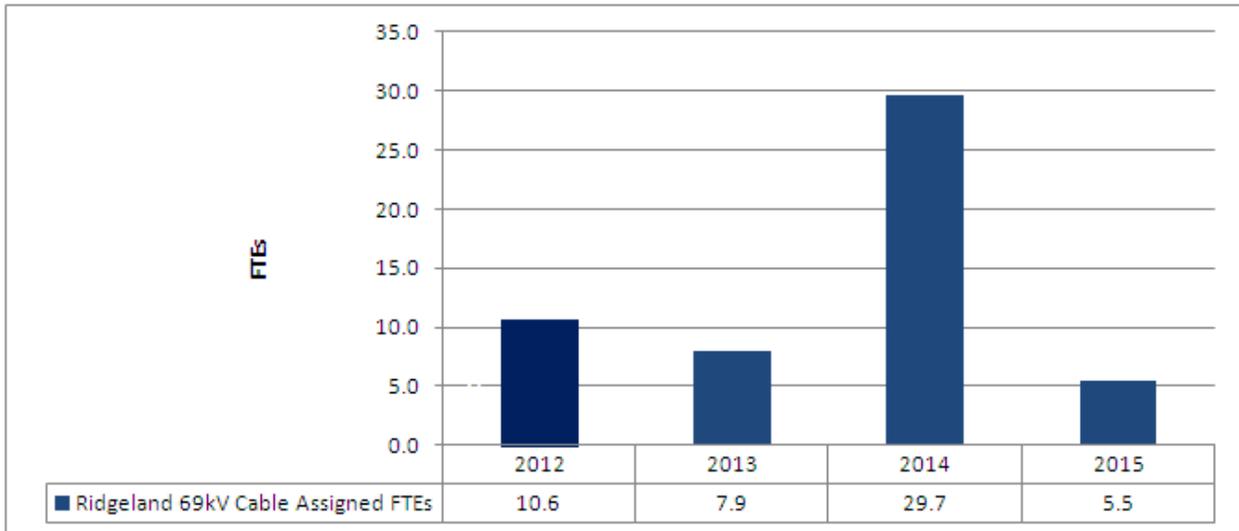
FIGURE I.C.4: RIDGELAND 69KV REPLACEMENT CAPITAL BUDGET



I.C.5: Program FTEs

Figure I.C.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.C.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

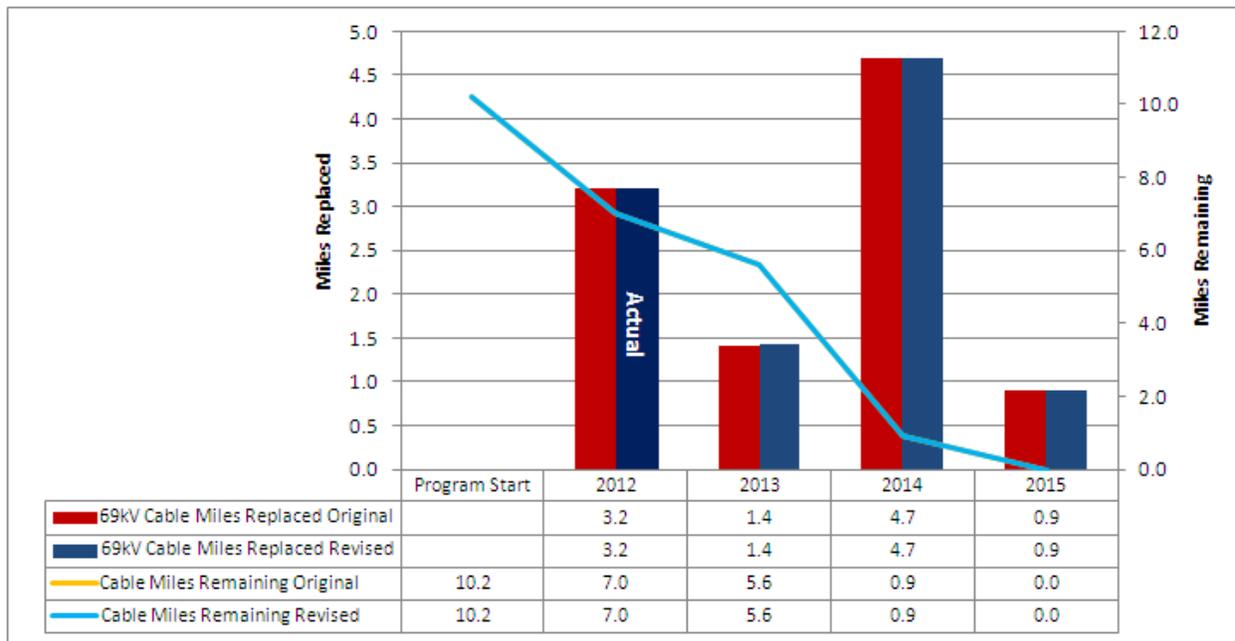
FIGURE I.C.5: RIDGELAND 69KV CABLE REPLACEMENT FTEs



I.C.6: Program Units

Figure I.C.6 shows the estimated miles of 69kV cable to be replaced. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. An estimated 10.2 circuit miles of 69kV cable will be replaced over the course of the program. This is the same scope as presented in ComEd's Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE I.C.6: RIDGELAND 69KV CABLE REPLACEMENT UNITS



SECTION I.D: Construction of Training Facilities

I.D.1: Summary of Program Revisions

Over the course of the program, ComEd expects to execute the same scope of work as was presented in its Plan for the same cost. However, construction of the Chicago Facility is deferred to 2016. Details of the revisions to the Plan are presented in the sections that follow.

I.D.2: Program Scope

ComEd currently provides electric and customer operations training at five locations within its service territory, with one location being leased and two locations using temporary trailers. Under Section 16-108.5(b)(1)(A)(ii), ComEd must undertake training facility construction or upgrade projects totaling an estimated \$10,000,000. This Section further provides that, at a minimum, one facility must be located in a municipality having a population of more than 2 million residents and one facility must be located in a municipality having a population of between 150,000 and 170,000 residents. Accordingly, the Training Facilities program provides for construction or upgrade of two training facilities - one facility to be located in Chicago (approximately 2.7 million residents); and one facility to be located in Rockford (approximately 153,000 residents).

Chicago Facility

The Chicago facility will be designed for the purpose of obtaining certification under the United States Green Building Council's Leadership in Energy Efficiency Design (LEED) Green Building Rating System. The Chicago facility will be an overhead, underground, substation construction, transmission underground, area operating and distribution operations training facility planned to have the following characteristics:

- Indoor space consisting of classrooms, lecture hall, instructor office space, restroom and locker facilities, indoor equipment area, new technology area, storage, conference room, student break area, meter shop, 30 indoor underground cable splicing bays, customer education area, and an indoor pole yard.
- Outdoor yard area consisting of approximately 60 poles and associated overhead primary and secondary conductors, overhead equipment, distribution automation equipment, URD distribution equipment, underground manholes and conduit, and substation equipment.

Rockford Facility

ComEd's recently-commissioned Rockford Training Center, which opened in 2012, is an overhead construction training facility with the following characteristics:

- Indoor area consisting of classrooms, lecture hall, instructor office space, restroom and locker facilities, storage, customer education area, student break area, and meter and substation shop area.

- Indoor pole yard consisting of 16 poles, smart grid equipment, 28' transmission tower, and a manhole.
- Outdoor yard area consisting of 60 poles and associated overhead primary and secondary conductors, overhead equipment, distribution automation equipment, two underground manholes and conduit, and URD distribution equipment. The yard size is approximately 85,000 square feet.

I.D.3: Program Schedule

The Training Facilities program is planned to be completed in two phases. The Rockford Facility was completed in 2012, and the Chicago Facility is currently planned for completion in 2016 due to the 2012 Deferral. Estimates of cost, units of work, and schedules for the Chicago Facility may evolve over time. Figure I.D.3 presents the estimated schedule to complete the Training Facilities program. The schedule consists of the following key tasks for each facility:

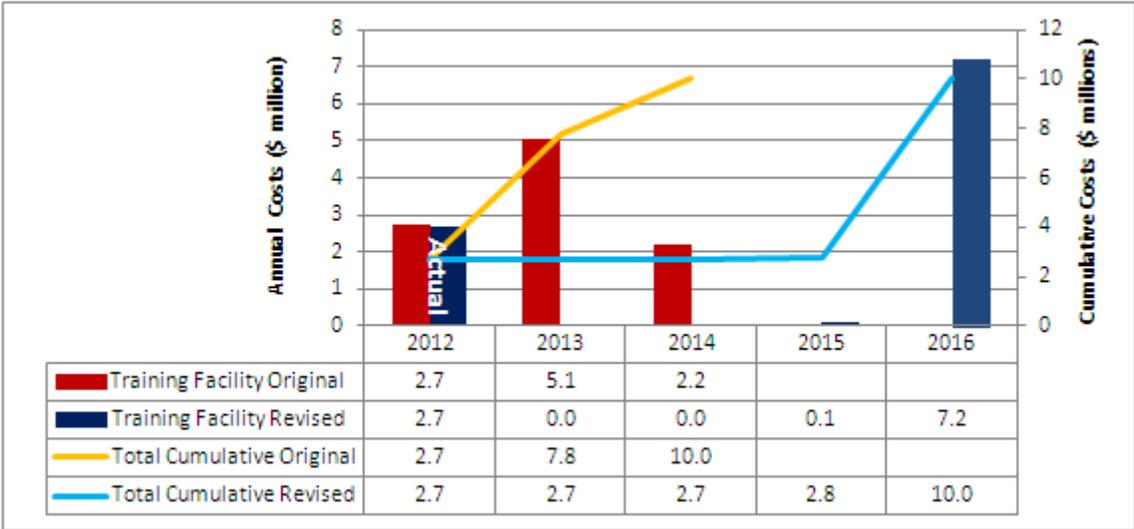
- Mobilization and ramp-up
- Building requirement and location research
- Concept and schematic design
- Construction design
- Construction documents
- Permitting
- Bidding process

I.D.4: Program Budget

Pursuant to Section 16-108.5(b)(1)(A)(ii) of the Act, ComEd will invest in training facility construction or upgrade projects totaling an estimated \$10 million. Figure I.D.4 presents the estimated capital budget for the Training Facilities program to be accounted for under the Plan². As Figure I.D.4 illustrates, due to the 2012 Deferral, ComEd anticipates construction of the Chicago Facility to commence in 2016, which is later than that proposed in ComEd's Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

² Although the Plan includes capital investments of \$10 million in Training Facilities, plus associated expenses, pursuant to Section 16-108.5(b) of the Act, this does not limit ComEd's ability to make additional capital investments in Training Facilities through baseline capital investments at ComEd's discretion.

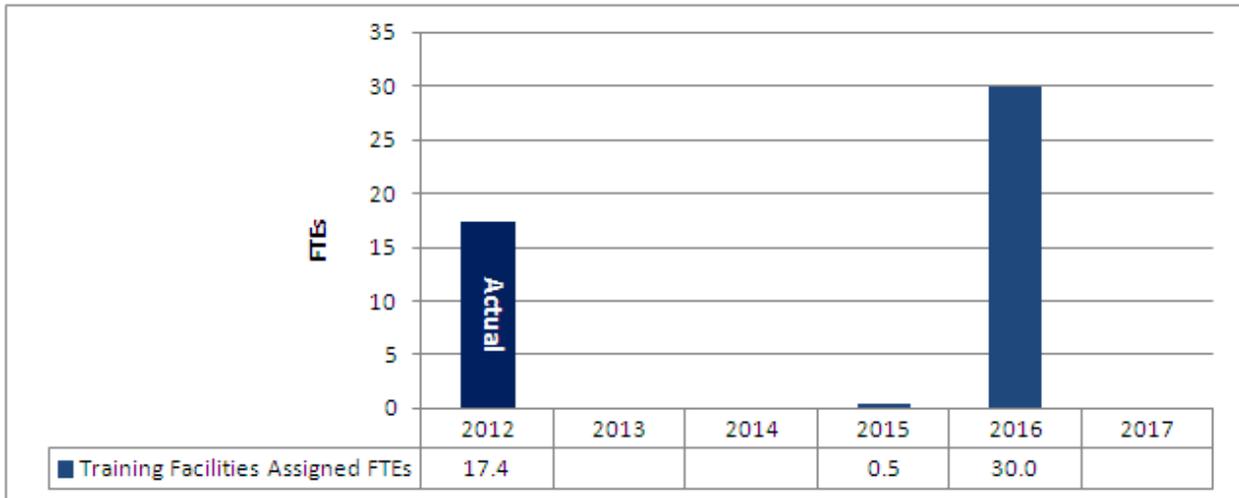
FIGURE I.D.4: TRAINING FACILITIES CAPITAL BUDGET UNDER PLAN



I.D.5: Program FTEs

Figure I.D.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.D.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

FIGURE I.D.5: TRAINING FACILITIES FTES



SECTION I.E: Wood Pole Inspection, Treatment and Replacement

I.E.1: Summary of Program Revisions

Over the course of the program, ComEd expects to inspect, treat, and replace or reinforce more poles at a higher overall program capital cost, as compared to ComEd's Plan. Details of these revisions to the Plan are presented in the sections that follow.

I.E.2: Program Scope

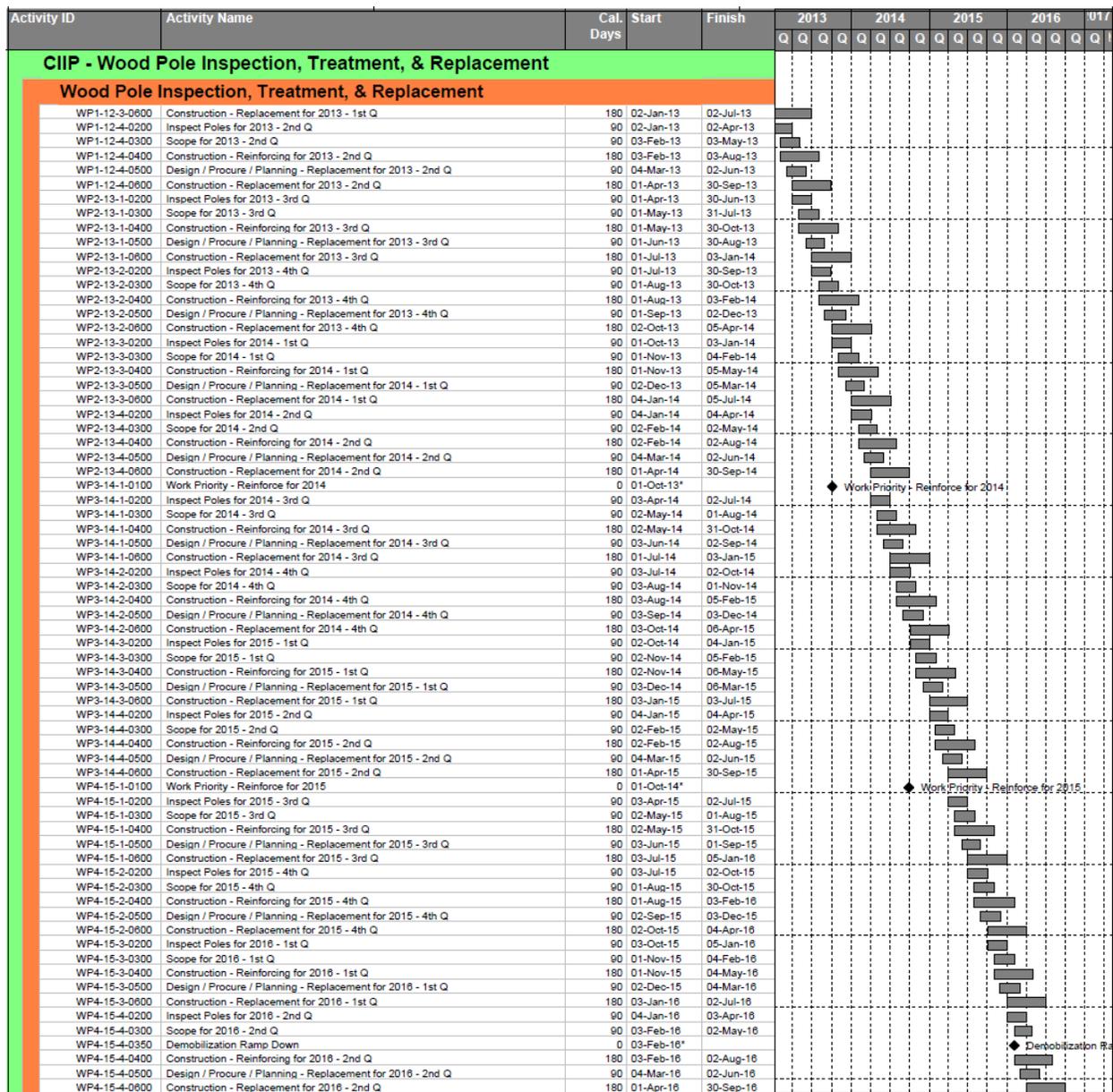
The Wood Pole Inspection, Treatment and Replacement program entails inspection and required treatment of approximately 733,152 wood poles over the five-year program period, or approximately 149,000 poles per year. Based on ComEd's past inspection experience, approximately 19,138 pole replacements or reinforcements are projected to be identified from the inspections over the five-year program period. This represents a change in scope of approximately 66,152 additional poles inspected and treated, and 4,138 additional poles replaced or reinforced, as compared with ComEd's Plan. This refinement in program scope is a result of a manual review of the records in ComEd's asset management systems, resulting in an estimated 1.5 million poles on its system, and a corresponding increase in the annual number of pole inspections needed to transition to a ten-year cycle. This program represents the first five years of a ten-year plan to transition ComEd to a ten-year inspection cycle for wood poles.

I.E.3: Program Schedule

Figure I.E.3 presents the estimated schedule to complete the scope of work associated with the Wood Pole Inspection, Treatment and Replacement program during the five-year period. Estimates of cost, and units of work, and schedules for that work, may evolve over time. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish work priority for the calendar year
- Perform inspections
- Perform scoping and configuration analysis for pole treatments or replacements
- Perform design tasks, procure material, and identify required outages in schedule
- Planning (develop work packages and secure permits)
- Construction – replace, treat or reinforce poles

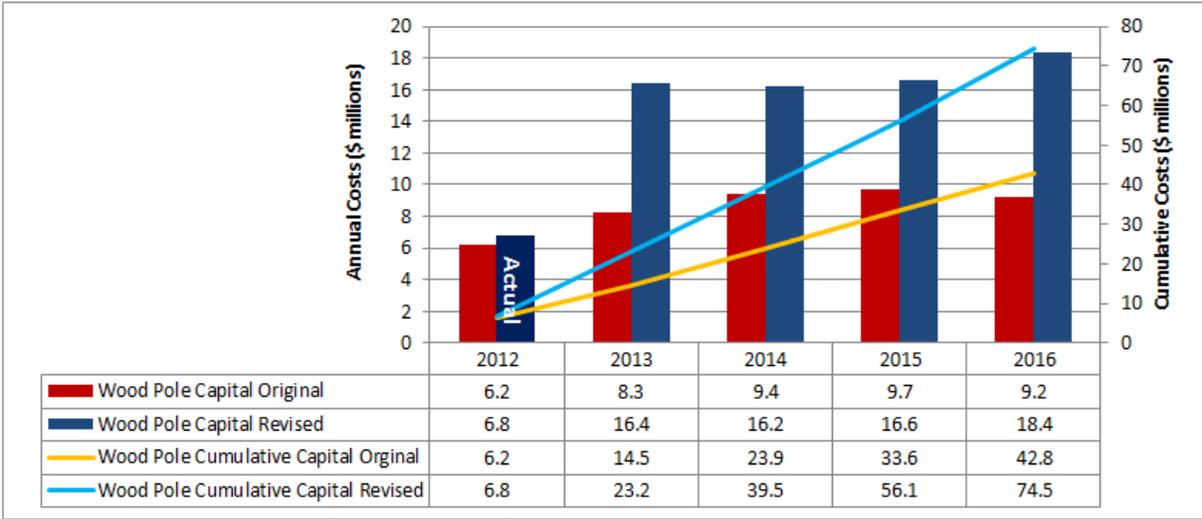
FIGURE I.E.3: WOOD POLE INSPECTION, TREATMENT AND REPLACEMENT SCHEDULE



I.E.4: Program Budget

Figure I.E.4 presents the estimated capital budget for the Wood Pole Inspection, Treatment and Replacement program. ComEd estimates the program cost to be capital investments of \$75 million, plus associated expenses over the program period. This represents an increase of approximately \$32 million from ComEd's Plan. The net increase is due to refined estimates of per-unit costs for pole replacements accounting for regional differences in complexity of installations, and increased pole replacements and reinforcements resulting from the increase in total number of poles on the ComEd system discussed in Section I.E.2 above, and a corresponding assumption that more poles will be identified that require replacement. Estimates of cost, units of work and schedules for that work may evolve over time.

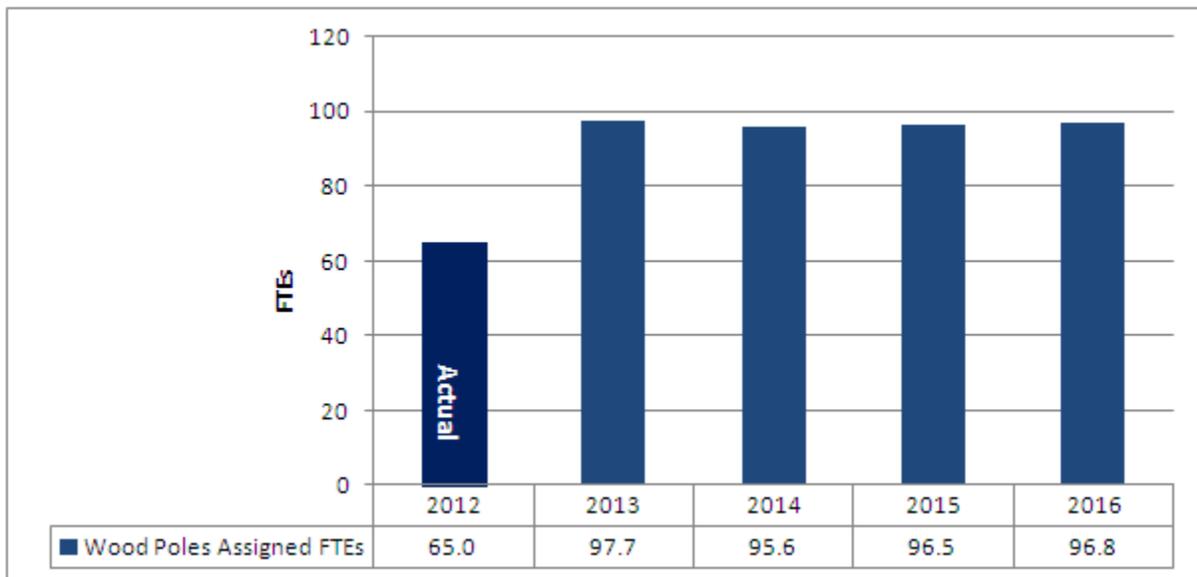
FIGURE I.E.4: WOOD POLE INSPECTION, TREATMENT AND REPLACEMENT CAPITAL BUDGET



I.E.5: Program FTEs

Figure I.E.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.E.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

FIGURE I.E.5: WOOD POLE INSPECTION, TREATMENT AND REPLACEMENT FTEs

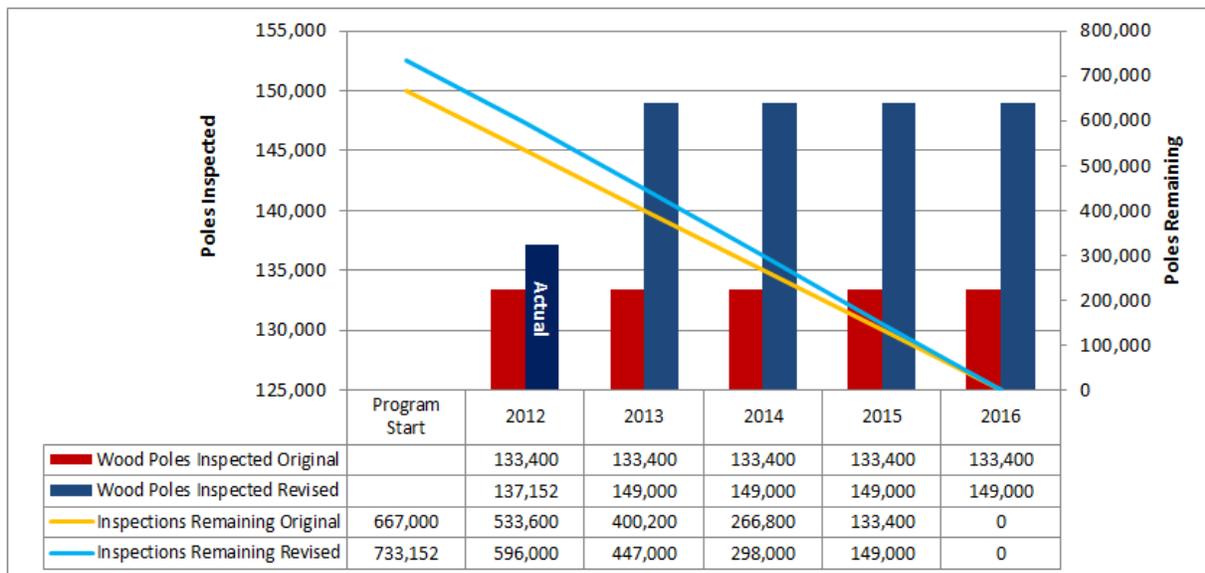


I.E.6: Program Units

Wood Pole Inspections

Figure I.E.6.A shows the estimated quantity of wood poles to be inspected. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. It is estimated that approximately 733,152 wood poles will be inspected over the course of the program. This represents a change in scope of approximately 66,152 additional poles inspected, as compared with ComEd's Plan. This refinement in program scope is a result of a manual review of the records in ComEd's asset management systems, resulting in an estimated 1.5 million poles on its system, and a corresponding increase in the annual number of pole inspections needed to transition to a ten-year cycle. Estimates of cost, units of work, and schedules for that work may evolve over time.

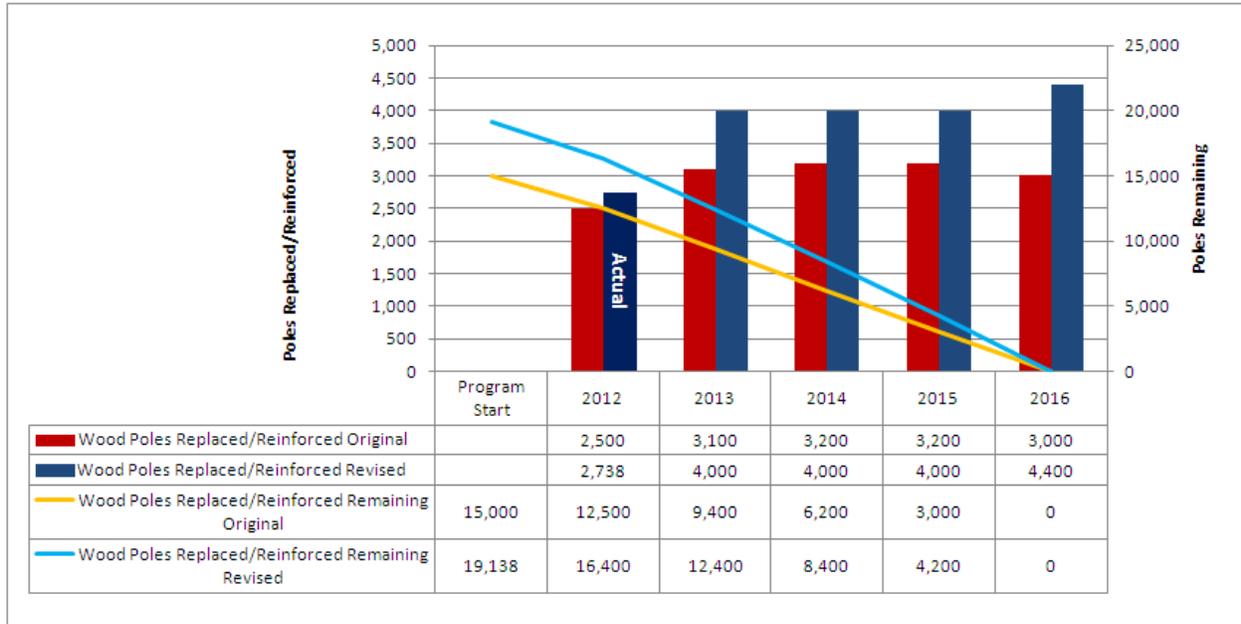
FIGURE I.E.6.A: WOOD POLE INSPECTION UNITS



Wood Pole Replacements/Reinforcements

Figure I.E.6.B shows the estimated quantity of wood poles to be replaced and or reinforced. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. It is estimated that approximately 19,138 wood poles will be replaced or reinforced over the course of the program. This represents a change in scope of approximately 4,138 additional poles replaced or reinforced, as compared with ComEd's Plan. The increase in scope is a result of a revised estimate for the total number of poles on the ComEd system, and a corresponding assumption that more poles will be identified that require replacement. Estimates of cost, units of work, and schedules for that work may evolve over time. This estimate is based on assumptions concerning inspection results, which will be adjusted over time as actual data become available. Early estimates of wood pole replacements/reinforcements such as these, therefore, contain a high degree of uncertainty and are not intended to reflect firm scope.

FIGURE I.E.6.B: WOOD POLE REPLACEMENT/REINFORCEMENT UNITS



SECTION I.F: Storm Hardening

I.F.1: Summary of Program Revisions

Over the course of the program, ComEd expects to complete essentially the same scope of work presented in its Plan, at a slightly higher program capital cost. Details of these revisions to the Plan are presented in the sections that follow.

I.F.2: Program Scope

Storm hardening is designed to further reduce the susceptibility of circuits to storm-related damage, including but not limited to high winds, thunderstorms, and ice storms. Improvements may include, but are not limited to, overhead to underground conversion, installation of tree-resistant cable, additional vegetation management and other engineered solutions. This program is aimed at hardening facilities in accordance with the directives of Section 16-108.5(b)(1)(A)(iv) of the Act, and is not directed at any defect or failure to properly design, engineer, construct, or maintain the existing system. Additionally, while storm hardening is designed to further reduce the susceptibility of circuits to storm-related damage, it does not make circuits immune to damage from storms or other sources.

Circuits will be prioritized based on each circuit's historical susceptibility to storm-related damage and the ability to provide the greatest customer benefit upon completion of the improvement.

For a circuit to be eligible for improvement, ComEd's ability to maintain proper tree clearances surrounding the overhead circuit must not have been impeded by third parties.

Considerations for storm hardening of circuits include, but are not limited to:

- Mainline Circuits (Focus on circuits with the highest customer storm impact)
- 4kV and 12kV overhead circuits
- Prioritized by weighted reliability (SAIFI, Customers Served) and vegetation scores from 2008 to 2012
- Circuits with fewer than 500 customers
- Engineering review for determining targeted mainline portions and hardening solution
- Circuit Taps (Focus on circuits with pocket area storm duration impact)
- 4kV and 12kV overhead circuits
- Prioritized by weighted reliability (SAIFI, customer Interruptions) and vegetation scores from 2008 to 2012
- Circuit tap must meet vegetation outage and CAIDI gates
- Engineering review for determining tap portions and hardening solutions (e.g., URD, spacer cable, and enhanced trimming)

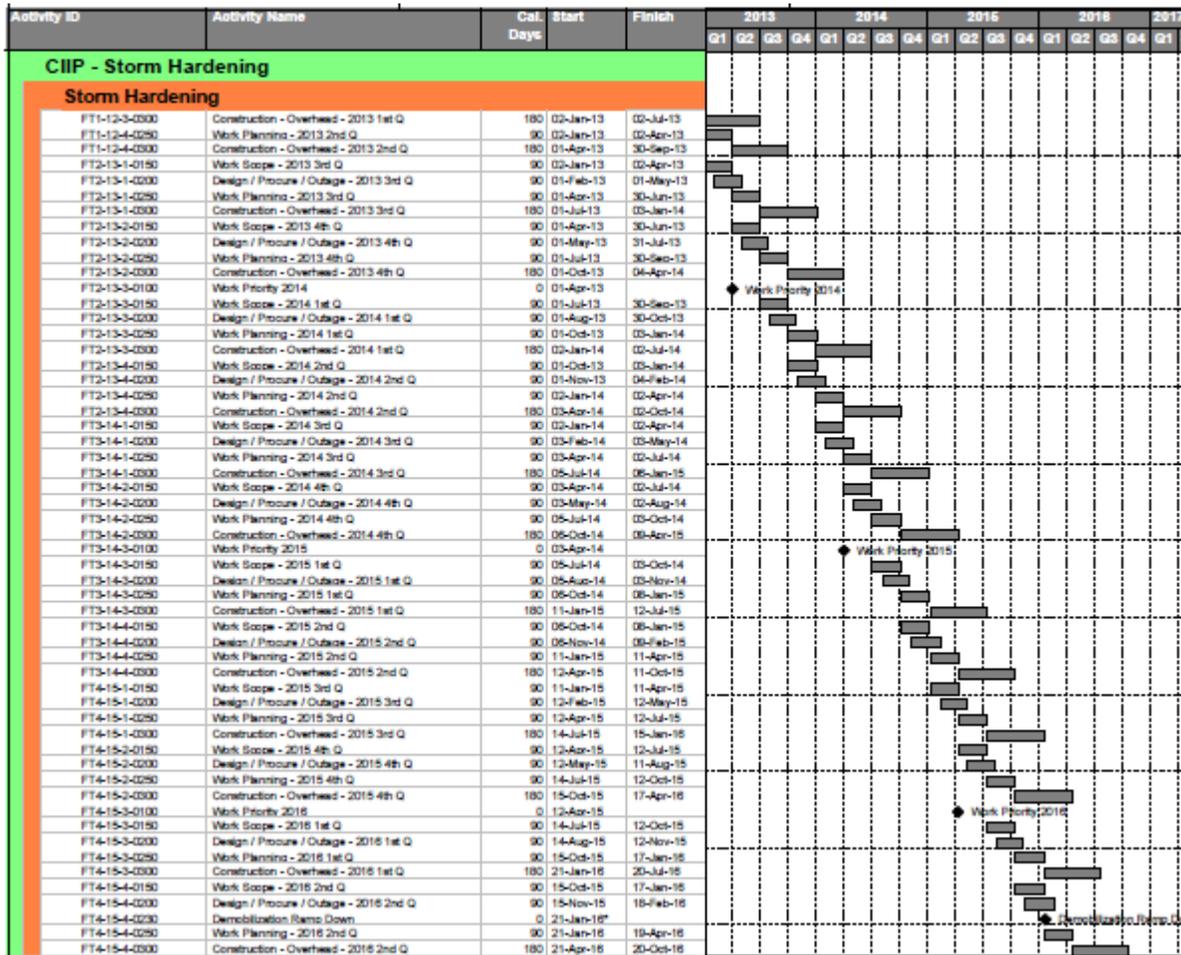
I.F.3: Program Schedule

The Storm Hardening program is planned to be completed over a five-year period with reasonable ramp-up and ramp-down periods. Estimates of cost, and units of work, and schedules for that work, may evolve over time.

Figure I.F.3 presents the estimated schedule to complete the Storm Hardening program. The schedule consists of essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish priority for the calendar year
- Perform scoping and configuration analysis; review sequence for capacity issues
- Perform design tasks, procure material, and identify required outages in schedule
- Planning (develop work packages and secure permits)
- Construction – Install conduit when required
- Construction – Cable terminal pole work
- Construction – Install cable / overhead conductor / other engineered solutions
- Test cable / conductor and liven
- Demobilization ramp-down period

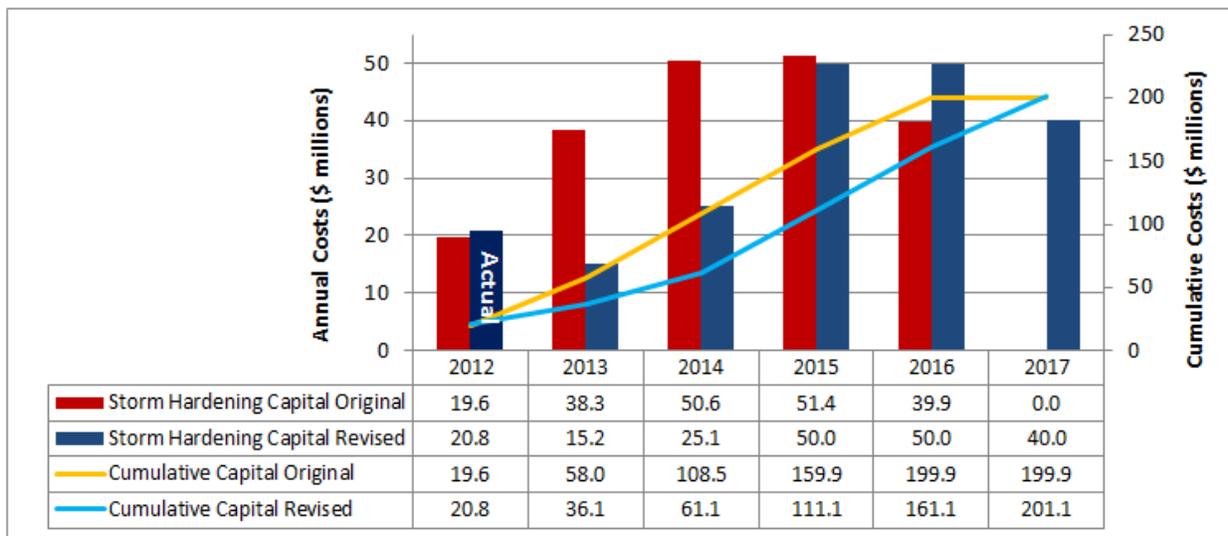
FIGURE I.F.3: STORM HARDENING SCHEDULE



I.F.4: Program Budget

Figure I.F.4 presents the estimated capital budget for the Storm Hardening program. ComEd estimates the program cost to be capital investments of \$201 million, plus associated expenses, over the program period. ComEd anticipates a more gradual initial ramp up in investments for this program, with higher investment peaks in later years, as compared with ComEd's Plan. Due to the 2012 Deferral, program scope has been shifted to perform more work in the later years of the program, and to utilize the permitted ramp-down time. Estimates of cost, units of work, and schedules for that work may evolve over time.

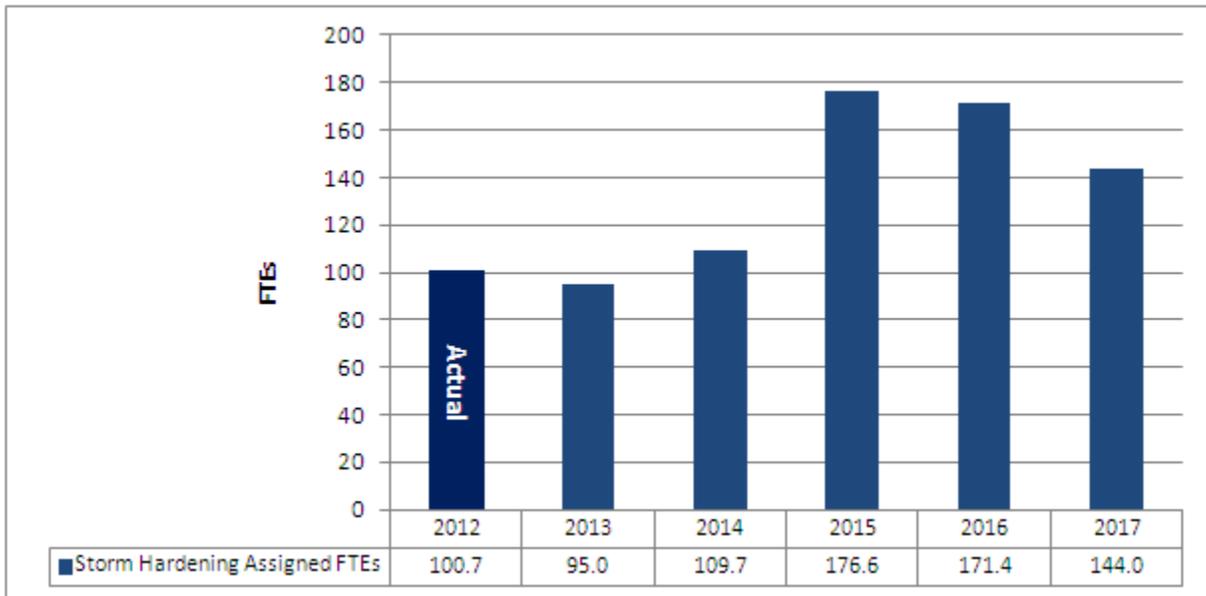
FIGURE I.F.4: STORM HARDENING CAPITAL BUDGET



I.F.5: Program FTEs

Figure I.F.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours Assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure I.F.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

FIGURE I.F.5: STORM HARDENING FTES



SECTION II: Smart Grid-Related Investments

SECTION II.A: Distribution Automation

II.A.1: Summary of Program Revisions

Over the course of the program, ComEd expects to complete the same scope of Distribution Automation (“DA”) work that was presented in the Plan, at a higher overall program capital cost. Details of these revisions to the Plan are presented in the sections that follow.

II.A.2: Program Scope

DA technology uses “sectionalizing” devices and remote communications to detect issues on the distribution system and automatically re-route power, accordingly, to minimize the number of customers impacted. This is commonly referred to as the self-healing nature of the Smart Grid.

The ComEd DA technologies include:

- Field sectionalizing devices to detect and isolate faults at various segments of the distribution system;
- A radio system to remotely transmit and relay control functions and indicate the status of various system parameters; and
- The computer systems that control, operate, monitor and store the data for the DA system.

The DA program targets installing DA field devices, and also encompasses the replacement of the older 900 MHz radio system with a new higher security system that meets the cyber security requirements of the Act. In addition, the older 34kV field devices will be upgraded to the newer Intelli-team (“IT-2”) software to allow for better flexibility with fault isolation and operation with the new radio system. The DA program includes the planned installation of approximately 2,600 new DA devices.

II.A.3: Program Schedule

This program is planned to be completed over a five-year period plus reasonable ramp-up and ramp-down periods. Estimates of cost, and units of work, and schedules for that work, may evolve over time.

Figure II.A.3 presents the estimated schedule to complete the DA program. The schedule consists of essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish priority for the calendar year
- Perform scoping
- Perform design tasks, procure material, and identify required outages in schedule
- Planning (develop work packages and secure permits)
- Construction – install reclosers
- Construction – install radios, repeaters

- Test and liven
- Demobilization ramp-down period

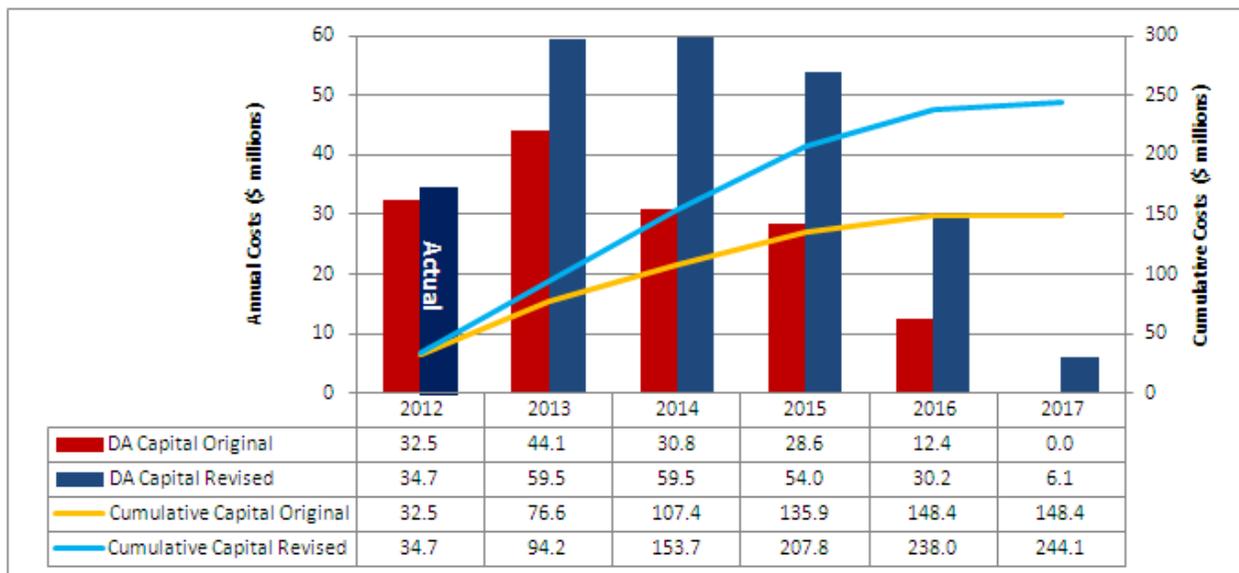
FIGURE II.A.3: DISTRIBUTION AUTOMATION SCHEDULE



II.A.4: Program Budget

Figure II.A.4 presents the estimated capital budget for the DA program. ComEd estimates the program cost to be capital investments of \$244 million, plus associated expenses, over the program period. This represents an increase of approximately \$96 million from ComEd's Plan. The net increase is due to more accurate assignment of costs associated with the secure DA communications network; and adjustments of per-unit costs for DA device installations due to the more complex configurations anticipated in the upcoming work scope. The program budget increase is offset by reductions in the Smart Meter program budget. As Figure II.A.4 illustrates, costs are expected to extend one additional year as compared with ComEd's Plan, due primarily to final upgrades of radio systems on existing devices. Estimates of cost, units of work, and schedules for that work may evolve over time.

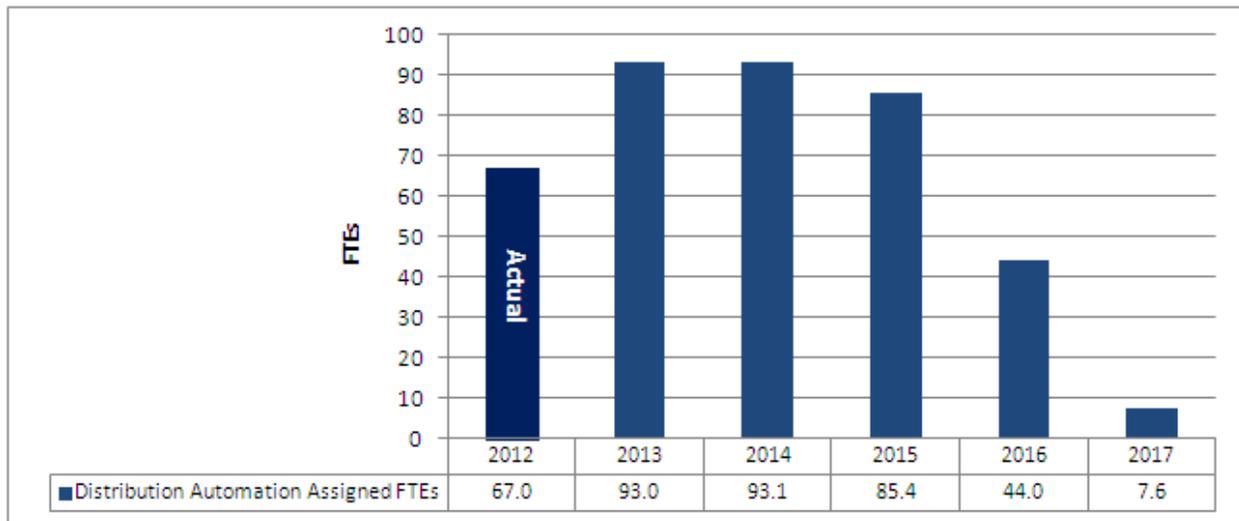
FIGURE II.A.4: DISTRIBUTION AUTOMATION CAPITAL BUDGET



II.A.5: Program FTEs

Figure II.A.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure II.A.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

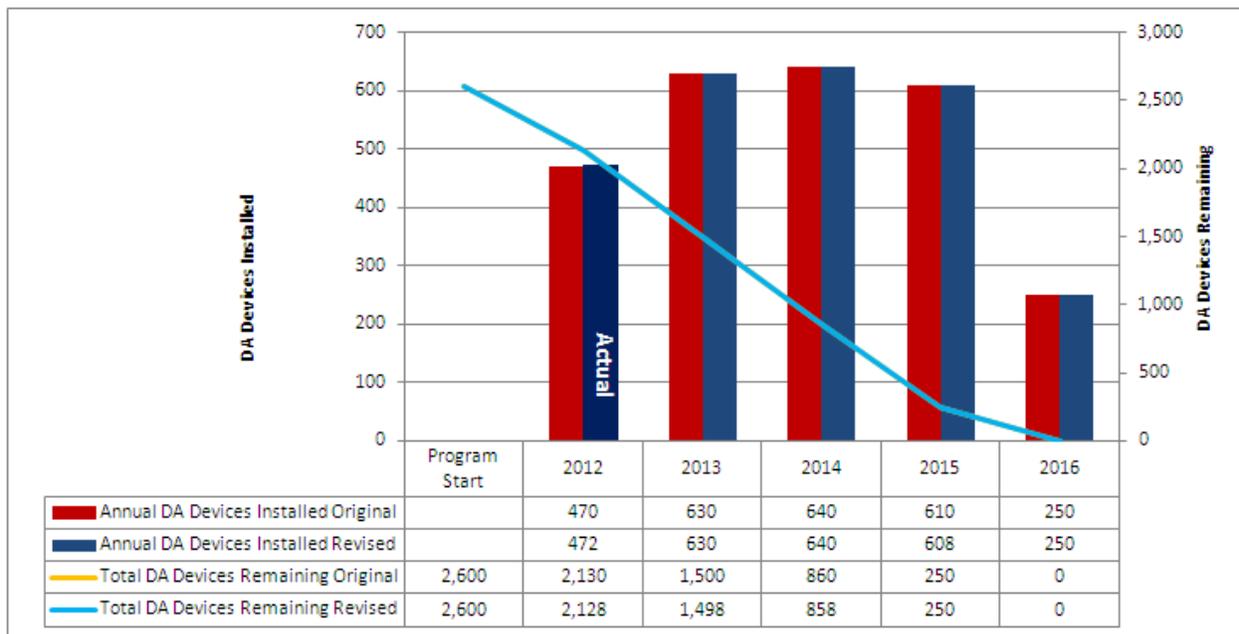
FIGURE II.A.5: DISTRIBUTION AUTOMATION FTES



II.A.6: Program Units

Figure II.A.6 show the estimated quantity of DA devices to be installed. This chart will serve as a tracking mechanism over the course of the program, and reflect the scope of work planned to be accomplished each year, as well as the scope of work left to be performed. It is estimated that approximately 2,600 DA devices will be installed over the course of the program. This scope is the same as that presented in ComEd's Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE II.A.6: DISTRIBUTION AUTOMATION UNITS



SECTION II.B: Substation Micro-Processor Relay Upgrades

II.B.1: Summary of Program Revisions

Over the course of the program, ComEd expects to complete the same scope of work presented in its Plan, at a slightly lower program capital cost. Details of these revisions to the Plan are presented in the sections that follow.

II.B.2: Program Scope

This program is planned to modernize ten ComEd substations, including upgrade of electro-mechanical protective relays to modern microprocessor-based devices, replacement of aging circuit breakers, enabling two-way communications between ComEd's control center and each substation, and installation of technology to remotely monitor the health of ComEd's largest assets, its transformers. This program provides for fault detection, remote asset monitoring, improved site security, and dynamic voltage regulation. Partial upgrades may be applied across the service territory. ComEd has over 250 transmission-fed substations, and over 800 substations in total.

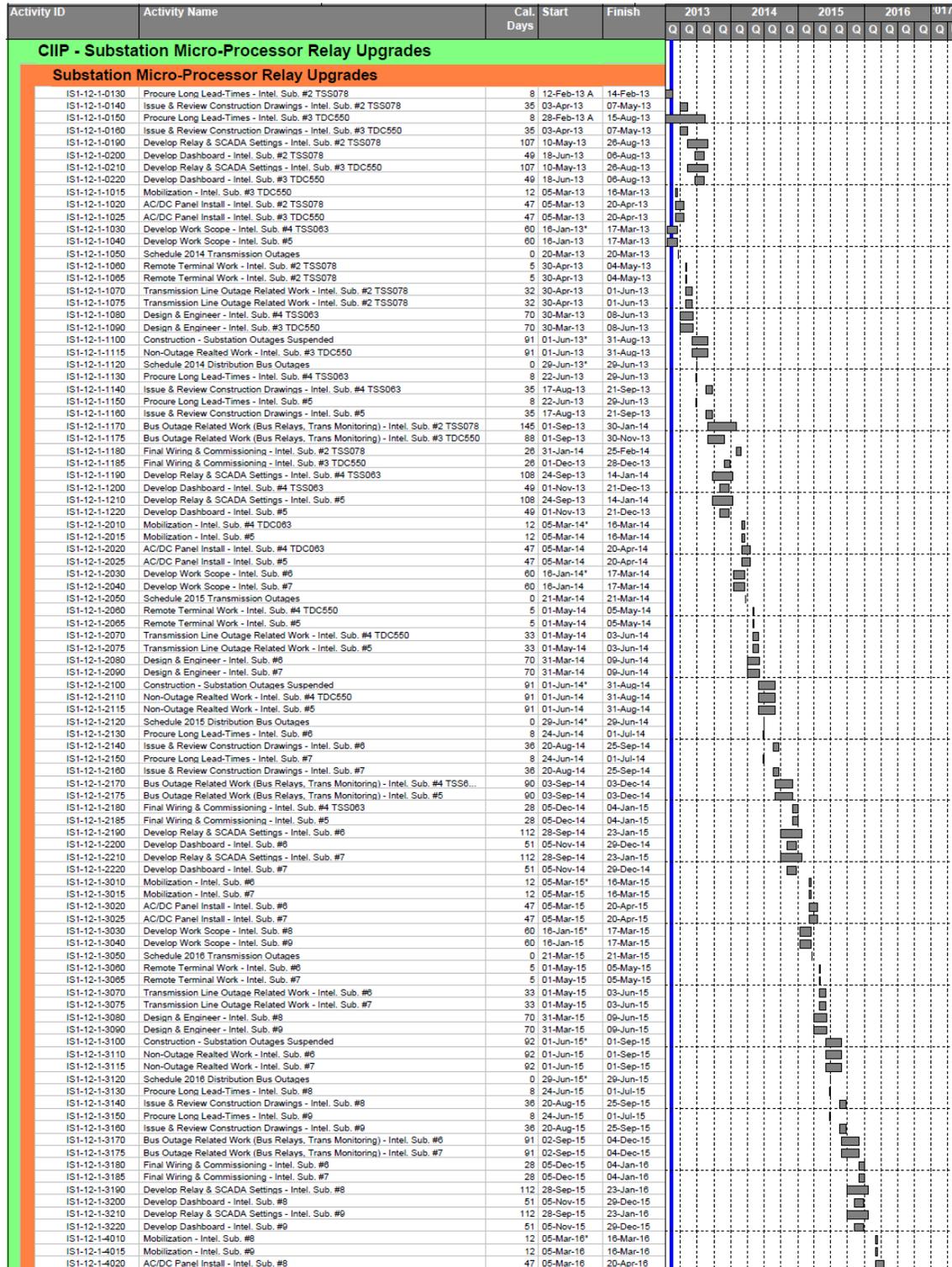
II.B.3: Program Schedule

This program is planned to be completed over a five-year period plus reasonable ramp-up and ramp-down periods. Estimates of cost, units of work, and schedules for that work may evolve over time.

Figure II.B.3 presents the estimated schedule to complete the Substation Micro-Processor Relay Upgrade Program. The schedule is essentially a rolling quarterly work plan consisting of the following key tasks:

- Ramp-up period
- Establish priority for the calendar year
- Perform scoping
- Perform design tasks, procure material, and identify required outages in schedule
- Relay and protection schemes
- Planning tasks
- Construction – install conduit, breakers, monitoring, micro-processor relays
- Test and liven
- Demobilization ramp-down period

FIGURE II.B.3: SUBSTATION MICRO-PROCESSOR RELAY UPGRADE SCHEDULE

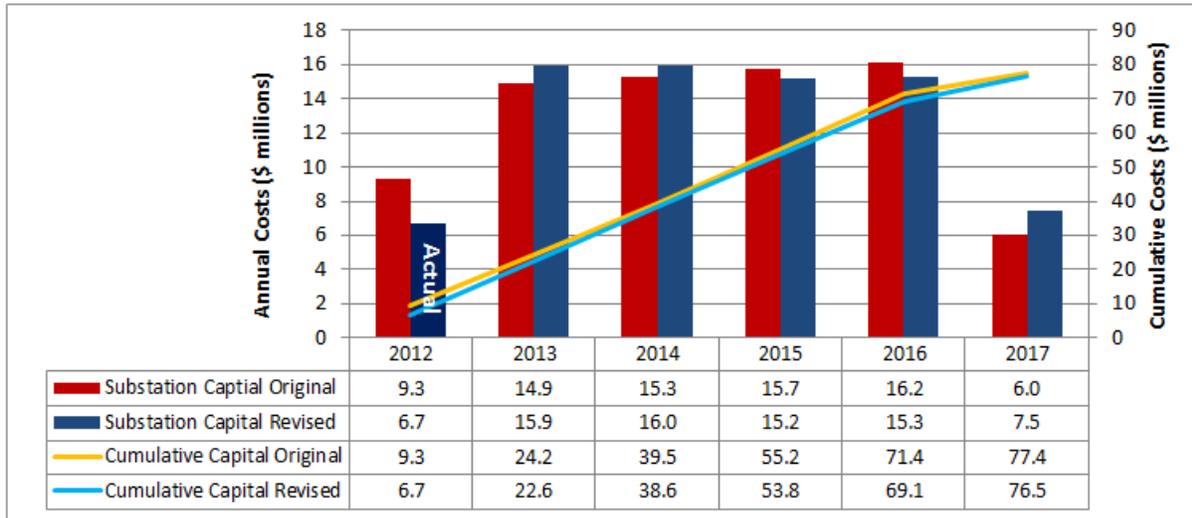


Activity ID	Activity Name	Cal. Days	Start	Finish	2013		2014		2015		2016		U17
					Q	Q	Q	Q	Q	Q	Q	Q	
IS1-12-1-4025	AC/DC Panel Install - Intel. Sub. #9	47	05-Mar-16	20-Apr-16									
IS1-12-1-4030	Develop Work Scope - Intel. Sub. #10	61	16-Jan-16*	17-Mar-16									
IS1-12-1-4050	Schedule 2017 Transmission Outages	0	21-Mar-16	21-Mar-16									
IS1-12-1-4060	Remote Terminal Work - Intel. Sub. #8	5	01-May-16	05-May-16									
IS1-12-1-4065	Remote Terminal Work - Intel. Sub. #9	5	01-May-16	05-May-16									
IS1-12-1-4070	Transmission Line Outage Related Work - Intel. Sub. #8	33	01-May-16	03-Jun-16									
IS1-12-1-4075	Transmission Line Outage Related Work - Intel. Sub. #9	33	01-May-16	03-Jun-16									
IS1-12-1-4080	Design & Engineer - Intel. Sub. #10	71	31-Mar-16	10-Jun-16									
IS1-12-1-4100	Construction - Substation Outages Suspended	92	01-Jun-16*	01-Sep-16									
IS1-12-1-4110	Non-Outage Related Work - Intel. Sub. #8	92	01-Jun-16	01-Sep-16									
IS1-12-1-4115	Non-Outage Related Work - Intel. Sub. #9	92	01-Jun-16	01-Sep-16									
IS1-12-1-4120	Schedule 2017 Distribution Bus Outages	0	29-Jun-16*	29-Jun-16									
IS1-12-1-4130	Procure Long Lead-Times - Intel. Sub. #10	8	24-Jun-16	01-Jul-16									
IS1-12-1-4140	Issue & Review Construction Drawings - Intel. Sub. #10	36	20-Aug-16	25-Sep-16									
IS1-12-1-4170	Bus Outage Related Work (Bus Relays, Trans Monitoring) - Intel. Sub. #8	91	02-Sep-16	04-Dec-16									
IS1-12-1-4175	Bus Outage Related Work (Bus Relays, Trans Monitoring) - Intel. Sub. #9	91	02-Sep-16	04-Dec-16									
IS1-12-1-4180	Final Wiring & Commissioning - Intel. Sub. #8	28	05-Dec-16	04-Jan-17									
IS1-12-1-4185	Final Wiring & Commissioning - Intel. Sub. #9	28	05-Dec-16	04-Jan-17									
IS1-12-1-4190	Develop Relay & SCADA Settings - Intel. Sub. #10	112	28-Sep-16	23-Jan-17									
IS1-12-1-4200	Develop Dashboard - Intel. Sub. #10	51	05-Nov-16	29-Dec-16									
IS1-12-1-5010	Mobilization - Intel. Sub. #10	12	05-Mar-17*	16-Mar-17									
IS1-12-1-5020	AC/DC Panel Install - Intel. Sub. #10	47	05-Mar-17	20-Apr-17									
IS1-12-1-5060	Remote Terminal Work - Intel. Sub. #10	5	30-Apr-17	04-May-17									
IS1-12-1-5070	Transmission Line Outage Related Work - Intel. Sub. #10	33	30-Apr-17	02-Jun-17									
IS1-12-1-5100	Construction - Substation Outages Suspended	92	01-Jun-17*	01-Sep-17									
IS1-12-1-5110	Non-Outage Related Work - Intel. Sub. #10	92	01-Jun-17	01-Sep-17									
IS1-12-1-5170	Bus Outage Related Work (Bus Relays, Trans Monitoring) - Intel. Sub. #10	91	02-Sep-17	04-Dec-17									
IS1-12-1-5180	Final Wiring & Commissioning - Intel. Sub. #10	28	05-Dec-17	04-Jan-18									
IS1-12-1-5190	Demobilization Ramp Down	28	05-Dec-17	04-Jan-18									

II.B.4: Program Budget

Figure II.B.4 presents the estimated capital budget for the Substation Micro-Processor Relay Upgrade program. ComEd estimates the program cost to be capital investments of \$77 million, plus associated expenses, over the program period. While this is the same scope as that presented in ComEd’s Plan, timing of investments related to specific stations has been updated, resulting in minor variations year-over-year compared with the Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

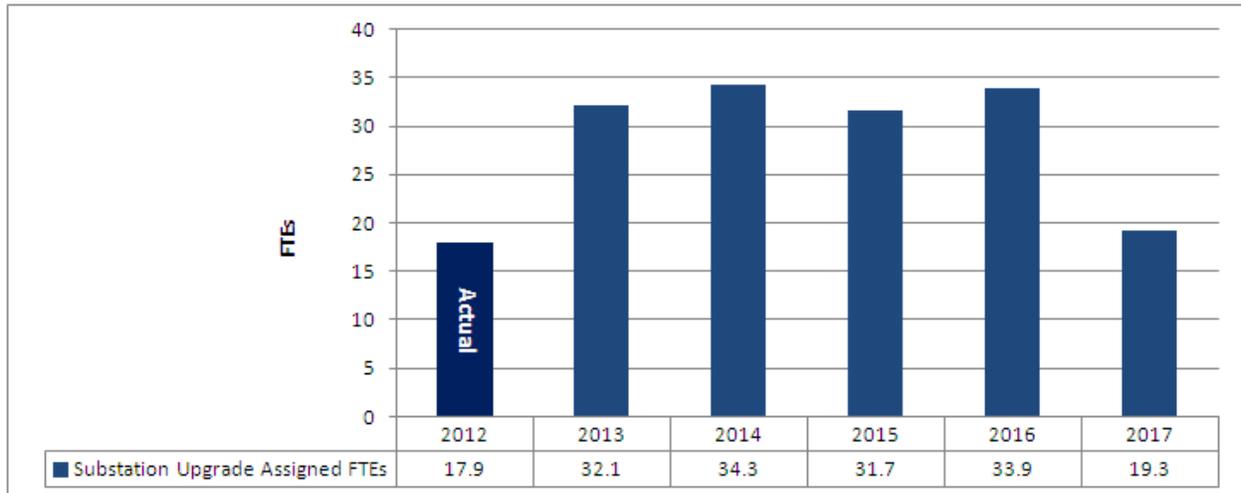
FIGURE II.B.4: SUBSTATION MICRO-PROCESSOR RELAY UPGRADE CAPITAL BUDGET



II.B.5: Program FTEs

Figure II.B.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure II.B.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

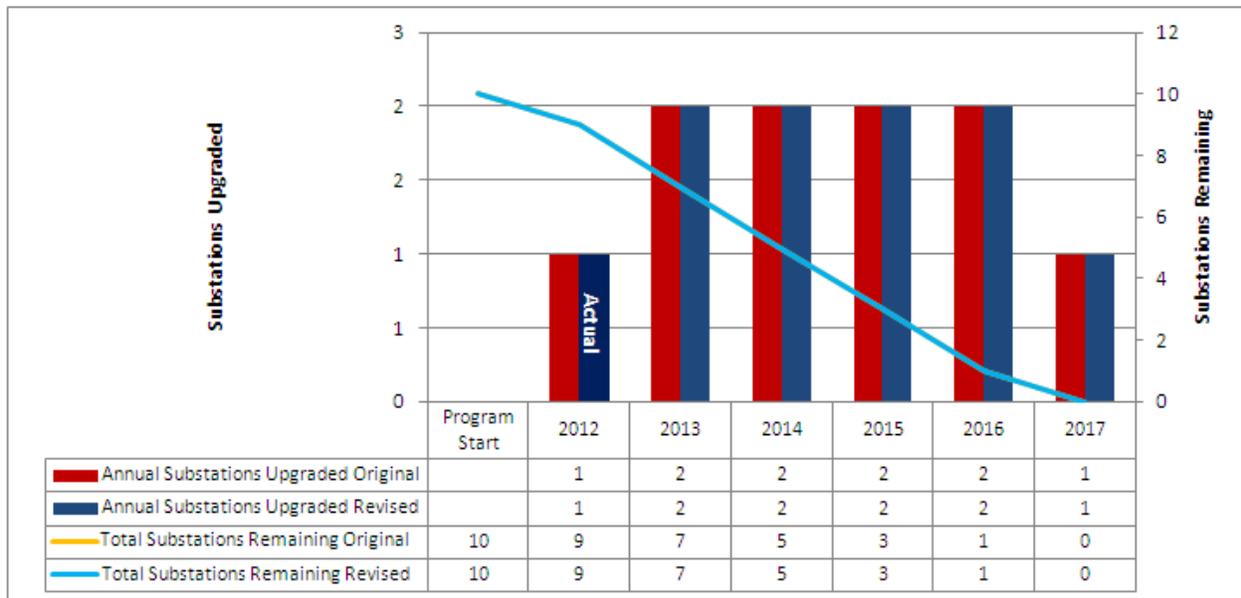
FIGURE II.B.5: SUBSTATION MICRO-PROCESSOR RELAY UPGRADES FTES



II.B.6: Program Units

Figure II.B.6 shows the estimated quantity of substation upgrades to be completed. This chart will serve as a tracking mechanism over the course of the program, and reflects the scope of work planned to be accomplished each year as well as the scope of work left to be performed. An estimated ten substations will be upgraded over the course of the program. Partial upgrades may be applied across the service territory. This is the same scope as presented in ComEd's Plan. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE II.B.6: SUBSTATION MICRO-PROCESSOR RELAY UPGRADES UNITS



SECTION II.C: Smart Meters

II.C.1: Summary of Program Revisions

ComEd expects to complete the same scope of work presented in its Plan, at a lower program capital cost. Details of these revisions to the Plan are presented in the sections that follow, and are explained more fully in ComEd's 2013 AMI Report.

II.C.2: Program Scope

ComEd will install retail Smart Meters across its entire service territory over a ten-year period. Deployment of Smart Meters will occur pursuant to the Advanced Metering Infrastructure Deployment Plan ("AMI Plan"), which was approved by the Commission on December 5, 2012, and the 2013 AMI Report. Please refer to the 2013 AMI Report for specific scope details.

II.C.3: Program Schedule

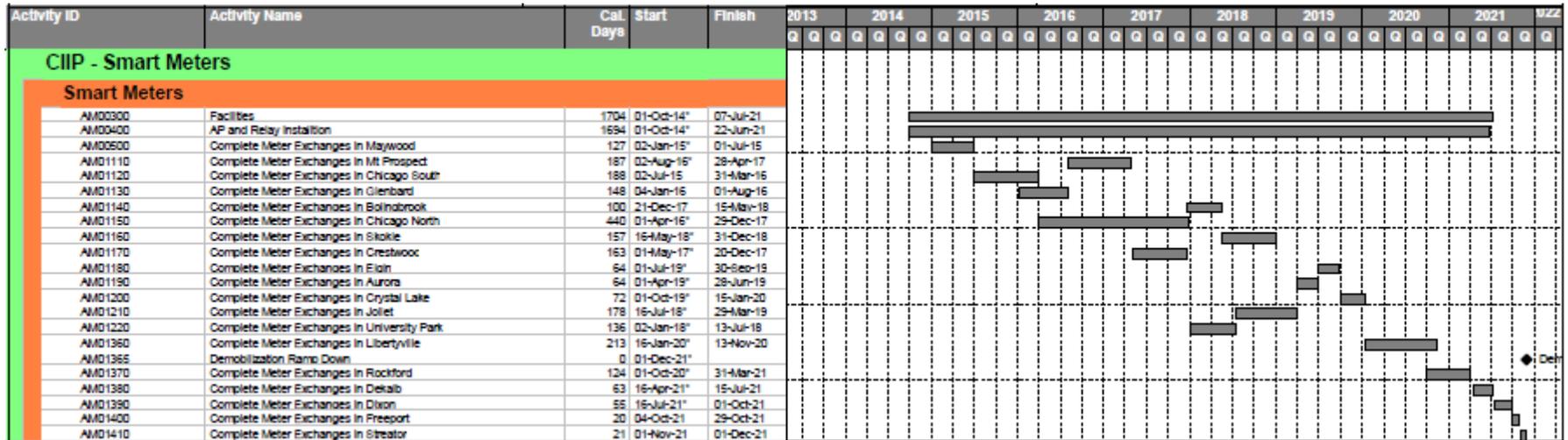
This program is planned to be completed over a ten-year period including reasonable ramp-up and ramp-down periods. Estimates of cost, units of work, and schedules for that work may evolve over time.

Figure II.C.3 presents the estimated schedule to complete the Smart Meter program. The schedule consists of tasks that are essentially repeated for each of ComEd's operating regions, including the following:

- Ramp-up period
- Establish priority for the calendar year

- Perform scoping
- Install communications network (repeaters, collectors, backhaul)
- Complete meter exchanges
- Demobilization ramp-down period

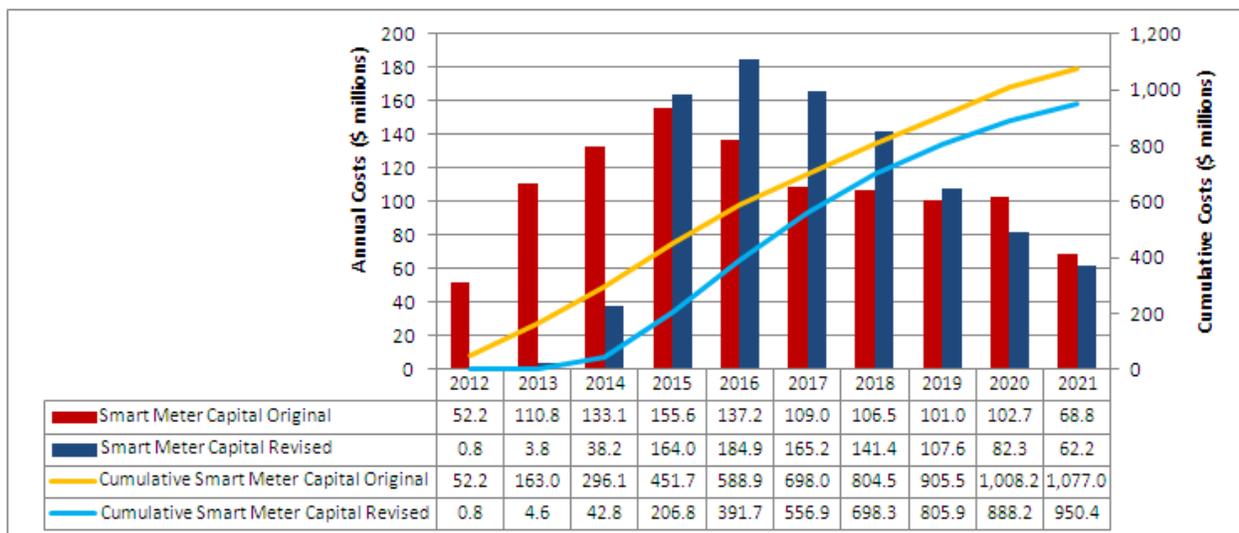
FIGURE II.C.3: SMART METER SCHEDULE



II.C.4: Program Budget

Figure II.C.4 presents the preliminary capital budget for the Smart Meter program. All work associated with the program will be covered by this budget. ComEd estimates the program cost to be capital investments of \$950 million, plus associated expenses, over the program period. This represents a decrease of approximately \$127 million in capital investments compared with ComEd's Plan. Consistent with ComEd's Plan, the Smart Meter program budget presented in this 2013 Annual Update includes costs associated with a Peak Time Rebate ("PTR") program. The updated Smart Meter program budget, exclusive of the PTR program, is presented in ComEd's 2013 AMI Report. Estimates of cost, units of work, and schedules for that work may evolve over time.

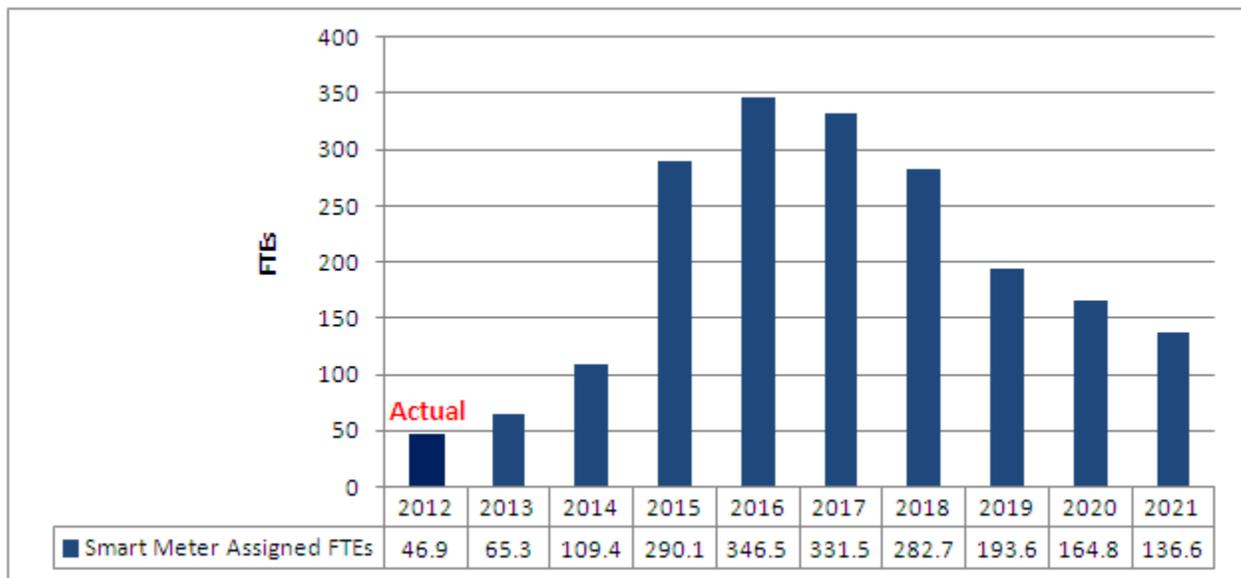
FIGURE II.C.4: SMART METER CAPITAL BUDGET



II.C.5: Program FTEs

Figure II.C.5 presents the estimated Assigned Direct and Assigned Contractor FTEs required to perform the specific scheduled scope of work. Assigned FTEs have been calculated by taking the estimated worker-hours assigned to execute the scope of work and dividing by 2,080 hours. The estimated FTEs presented in Figure II.C.5 include Assigned FTEs; however, they do not include Support FTEs or Induced FTEs.

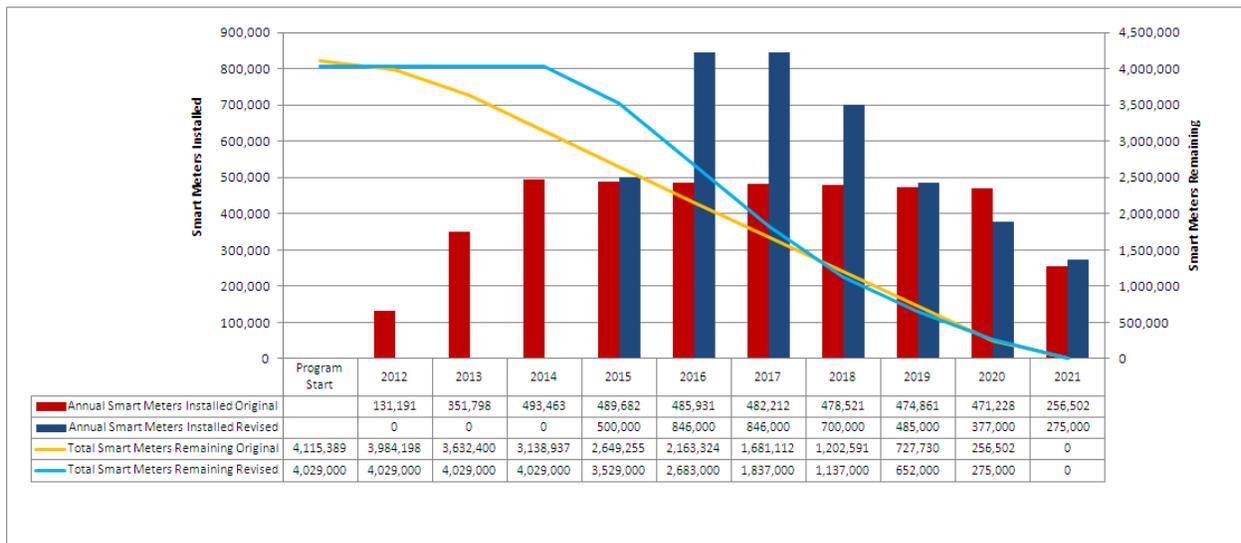
FIGURE II.C.5: SMART METER FTES



II.C.6: Program Units

Figure II.C.6 shows the estimated quantity of Smart Meters to be installed. This chart reflects the scope of work currently planned to be accomplished each year, as detailed in ComEd's 2013 AMI Report. As Figure II.C.6 illustrates, ComEd anticipates that Smart Meter installations will begin in 2015 due to the 2012 Deferral. The revised deployment plan was still deemed to be cost beneficial, and meet the statutory criteria, and was approved by the Commission. Estimates of cost, units of work, and schedules for that work may evolve over time.

FIGURE II.C.6: SMART METER UNITS



SECTION II.D. Associated Cyber Secure Data Communications Network

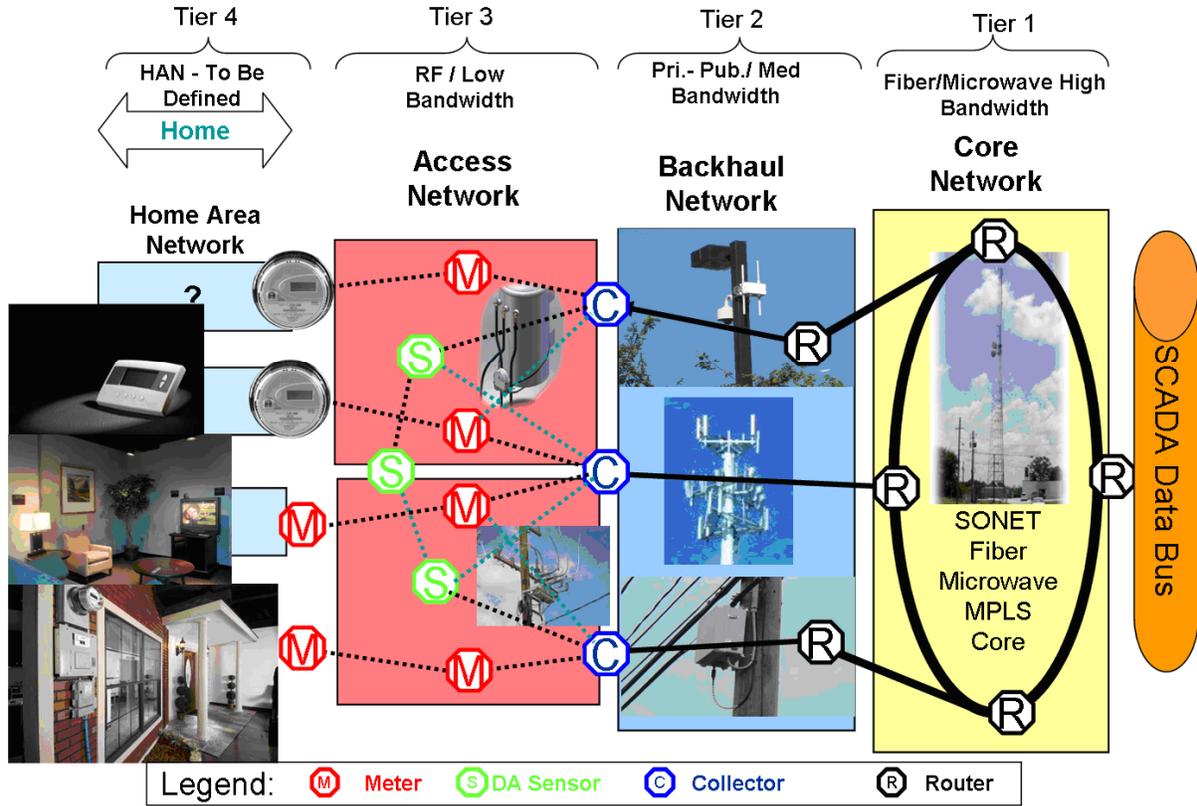
Communications infrastructure forms the foundation platform for enabling Smart Grid technologies and applications because it transcends each functional area of the Smart Grid. Consequently, the ComEd Smart Grid Communications Infrastructure will provide a secure tiered, robust and deterministic communications architecture with adequate capacity to meet the current and foreseeable future performance requirements of the Smart Grid Application portfolio.

A cyber-secure communications infrastructure is a system that includes and implements a robust security model that is aligned with industry best practices and existing security standards (such as NISTIR 7628 developed by the National Institute of Standards and Technology). The security model will address confidentiality, integrity, availability and non-repudiation of data transport through the network.

Figure II.D depicts the high-level architecture for the four tiers of the proposed ComEd communication network that would support Smart Grid communication.

FIGURE II.D: SMART GRID COMMUNICATION TIERS

Smart Grid Communication Tiers



Appendix A: Full-Time Equivalent Jobs

Requirements of 220 ILCS 5/16-108.5

As required by Section 16-108.5(b) of the Act, ComEd will demonstrate that at least 2,000 full-time equivalent jobs in Illinois were created in a “peak program year,” which is defined as the consecutive 12-month period with the highest number of full-time equivalent (“FTE”) jobs that occurs between January 1, 2013 and December 31, 2015. These jobs will include Direct jobs, Contractor positions, and Induced jobs. A portion of the FTE jobs created will include incremental personnel hired subsequent to the effective date of Section 16-108.5.

Reporting Schedule

ComEd will submit, no later than April 1 of each year, an Energy Infrastructure Modernization Act Annual FTE Jobs Creation Report that includes the number of FTE jobs created for the prior calendar year and cumulatively, including Induced FTE jobs.

Further, ComEd will report no later than 45 days after the last day of the first, second and third quarter of each year, which equates to the dates of May 15, August 14 and November 14 of each year, a verified quarterly report for the prior quarter including:

1. Total number of FTE jobs created during the prior quarter;
2. Total number of employees as of the last day of the prior quarter;

3. Total number of FTE hours in each job classification or job title; and
4. Total number of incremental employees and contractors in support of the investments included in this Plan for the prior quarter.

The quarterly reporting will not include Induced full time equivalent jobs. However, ComEd's Annual FTE Jobs Creation Report submitted on April 1 of each year will include actual Direct, Contractor, and Induced FTEs for the applicable year and cumulatively.

Definition of Full-Time Equivalent (FTE)

The full-time equivalent ("FTE") metric is a calculation used to convert full-time, temporary and part-time jobs into comparable metrics. Full-time equivalent (FTE) employment is a standard concept used by the Department of Energy and other government agencies which follows the general formula:

Total Number of Hours Worked and Funded by the Plan within the Annual Period

Annual Hours in a Full-time Schedule

Total Number of Hours Worked and Funded within the Annual Period:

In order to perform the calculation, ComEd has estimated the total worker-hours in support of the Plan on an annual basis. Estimated worker-hours for Direct jobs and Contractor positions are each composed of the following two sub-categories:

Assigned: Worker-hours assigned to specific work orders associated with Plan program scopes of work; and

Support: Worker-hours charged on timesheets in support of the Plan

Support FTEs are not allocated to specific Plan scopes of work, and are not presented in the FTE sections for individual programs in this 2013 Annual Update. Note that this is a change in format from ComEd's Plan, in which Support FTEs were allocated to specific scopes of work proportionally, based on estimated investments for specific scopes of work. Rather, Figure B.3 in Appendix B presents the estimated Assigned FTEs and Support FTEs to execute the entire scheduled scope of work associated with the 2013 Annual Update. This revised format for presentation of Assigned FTEs and Support FTEs is more consistent with ComEd's timekeeping approach and ultimately a more accurate representation of how Support FTEs are allocated to Plan execution. Estimates for Support FTEs in the 2013 Annual Update are based on the 2012 actual proportion of Assigned FTEs to Support FTEs.

Job classifications associated with Assigned FTEs and Support FTEs may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, legal support and craft.

Annual Hours in a Full Time Schedule:

For ComEd, the full-time hours for an annual period are 2,080 (52 weeks per year * 40 hours per week). This same calculation will be applied on a quarterly basis for the purpose of reporting requirements.

However, FTEs are not defined as employee "head counts" and should not be confused with employment levels and trends. This is because the 2,080 hours number used in the denominator includes compensable hours for approved time off such as vacation time, holidays, sick leave, jury duty and other approved time off, and does not just represent hours available to work in support of the Plan

For this reason, in addition to the calculation above, and in order to provide a more accurate estimate of employment levels that result from work in support of the Plan, ComEd will also report Full Time Equivalent Jobs on a quarterly basis using the following formula:

$$\frac{\text{Total Number of Hours Worked and Funded by the Plan within Reporting Quarter for ComEd and its affiliates}}{\text{Quarterly Hours available for work in a ComEd Full-time Schedule}}$$

Plus

$$\frac{\text{Total Number of Hours Worked and Funded by the Plan within Reporting Quarter for Contractors}}{\text{Quarterly Hours available for work in a Contractor Full-time Schedule}}$$

The numerator calculation is the same as above.

Quarterly Hours available for work in a ComEd full-time schedule is defined as 260 days in a year minus 13 paid holidays, 20 days average vacation, 3 average sick days, and 4 average other days (jury duty, funeral leave, etc.) for a net of 220 days per

year. This value is then converted to a number of quarterly hours using the following formula:

$$(220 \text{ days} * 8 \text{ hours per day}) / 4 \text{ quarters per year} = 440 \text{ hours per quarter}$$

Quarterly Hours available for work in a Contractor full-time schedule is defined as 2,000 hours in a year divided by 4 quarters per year.

Definition of FTE Job Categories

- Direct jobs includes employees of ComEd and its affiliates
- Contractor positions of ComEd or its affiliates includes non-employees, for example staff augmentation, project labor, outsourcing, consulting, physical craft contractors, clerical/administrative contractors, and construction of training facilities
- Induced jobs means jobs that are econometrically estimated using a statistical “jobs multiplier” of annual capital spending by program and actual Direct and Contractor FTE jobs created over time under this Plan. FTEs described above in each sub-part of the Plan, however, do not include Induced jobs. ComEd’s 2012 Energy Infrastructure Modernization Act Annual Jobs Creation Report, submitted on April 1, 2013, includes actual Direct, Contractor, and Induced FTEs for 2012.

Appendix B: Summary-Level Plan Information

FIGURE B.1: SUMMARY PLAN SCHEDULE

Project ID	Activity ID	Activity Name	Start	Finish	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021										
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		CIIP - Underground Residential Cable (URD) Injection & Replacement	01-Jan-12 A	28-Nov-17	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Manhole Assessment & Cable System Refurbishment	01-Jan-12	22-Dec-16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Mainline Cable Replacement	01-Jan-12 A	30-Jun-17	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Mainline Cable Testing	01-Jan-12 A	31-May-17	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Ridgeland 69kV Cable Replacement	06-Dec-11	15-Dec-15	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Training Facilities	20-Jan-12	18-Dec-16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Wood Pole Inspection, Treatment, & Replacement	31-Dec-11	30-Sep-16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Storm Hardening	01-Jan-12	20-Oct-16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Distribution Automation	01-Jan-12	20-Aug-16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Substation Micro-Processor Relay Upgrades	06-Dec-11 A	04-Jan-18	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		CIIP - Smart Meters	01-Jan-12 A	15-Dec-21	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Table B.1 presents a summary comparison of the revised estimated Plan capital budget to the estimated capital budget in ComEd's Plan by program; and Figure B.2 presents a comparison of the revised estimated total Plan capital budget to the estimated total capital budget in ComEd's Plan by year.

TABLE B.1: SUMMARY OF PLAN 10-YEAR CAPITAL COSTS BY PROGRAM

Program	Plan Capital Total (\$M)	2013 Update Capital Total (\$M)
<i>URD Injection and Replacement Program</i>	\$586	\$571
<i>Mainline Cable System Refurbishment and Replacement Program</i>	\$447	\$403
<i>Ridgeland 69Kv Cable Program</i>	\$28	\$26
<i>Training Facilities Program</i>	\$10	\$10
<i>Wood Pole Program</i>	\$43	\$75
<i>Storm Hardening Program</i>	\$200	\$201
Total Reliability-Related Investments	\$1,313	\$1,286
<i>Distribution Automation Program</i>	\$148	\$244
<i>Substation Micro-Processor Relay Upgrade Program</i>	\$77	\$77
<i>Smart Meter Program (10-year)</i>	\$1,077	\$950
Total Smart Grid Related Investments	\$1,303	\$1,271
Total Plan Investments	\$2,616	\$2,557

FIGURE B.2: PLAN TEN-YEAR CAPITAL COSTS BY YEAR

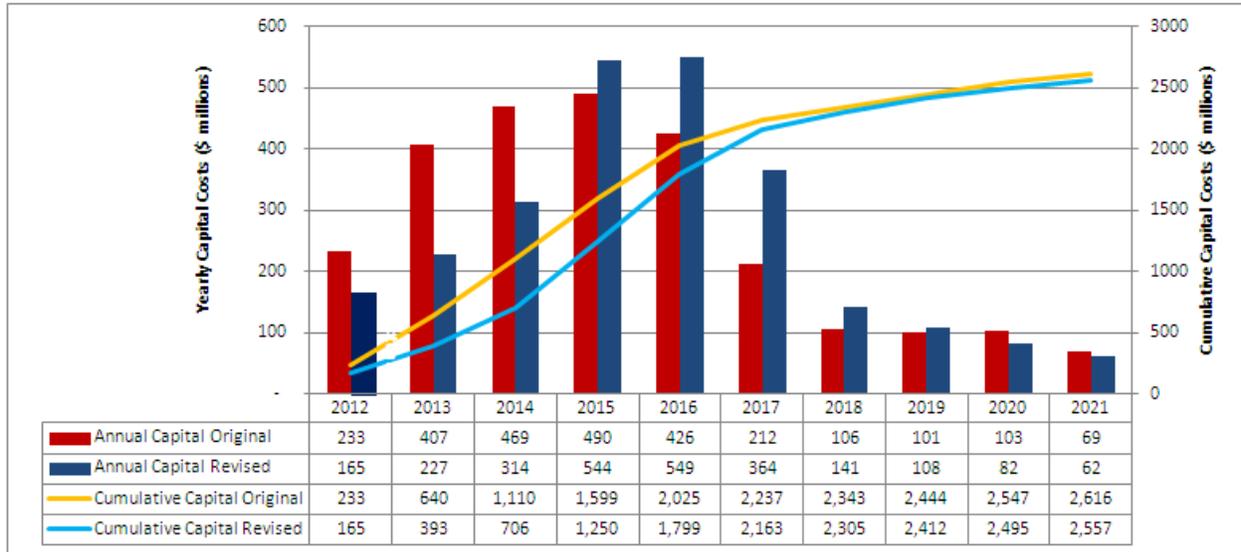


Figure B.3 presents the estimated Assigned FTEs and Support FTEs to execute the entire scheduled scope of work associated with the 2013 Annual Update. Estimates for Support FTEs in the 2013 Plan are based on the 2012 actual proportion of Assigned FTEs to Support FTEs. The estimated FTEs presented in this 2013 Annual Update include Direct jobs and Contractor positions; however, they do not include any Induced FTEs.

FIGURE B.3: PLAN TEN-YEAR FTES

