

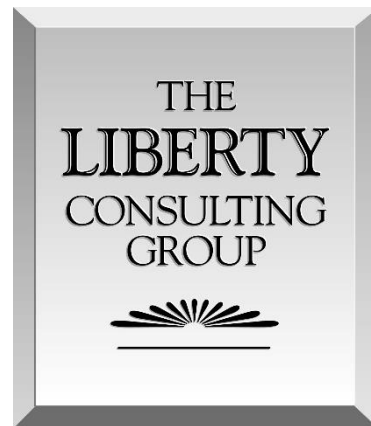
**Final Report
Central Maine Power's
Management Structure and
Affiliate Services**

EXECUTIVE SUMMARY

Presented to:
***State of Maine
Public Utilities Commission***



Presented by:
***The
Liberty Consulting Group***



July 12, 2021

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Executive Summary

Our Work Scope

The following report describes the results of our *Management Audit of Central Maine Power Company's Management Structure and Affiliate Services* (Management Audit), undertaken at the request of the Maine Public Utilities Commission. This audit sought to determine how management structure and services from Central Maine Power Company's (CMP) parent and affiliates have affected the interests of the Maine residents, businesses, and institutions CMP serves. We examined management structure and services beginning with the end-of-2015 acquisition of UIL Holdings, which produced the creation of Avangrid. Important areas our evaluation addressed included:

- Whether the management structure within which CMP operates has contributed to a decrease in the quality of CMP's customer service
- The effects of transferring personnel and decision-making from CMP to the Avangrid level
- The quality, effectiveness, and cost of services provided to or for CMP by affiliates
- Whether the cap on service charges allowed in rates should remain in its present form.

Answering this Audit's Overriding Question

Avangrid has managed the provision of electricity delivery service in Maine for the past five years using a comprehensive organization populated by dedicated personnel employing the kinds of processes, platforms, systems, and tools one should expect of a large, sophisticated utility. Like all organizations, it can improve, cares about doing so, and has taken efforts to get better. We did not find Avangrid a fundamentally or irredeemably flawed operation. Nevertheless, it has faced an unusual array of substantial and continuing difficulties in integrating the operating utilities brought together by the UI Holdings acquisition. Management's overemphasizing of cuts in and limits on resources as a means for closing gaps in meeting the earnings expectations of the equity investment community has sacrificed effectiveness in providing service. Actions begun in 2019 have restored resources and provided a greater focus on what is needed to ensure effective service delivery. However, it remains prudent to question the sustainability of the positive changes that have occurred. We found a number of structure and management contributors to service problems that CMP has experienced since 2016.

The organization of Avangrid, including that of its Networks subsidiary responsible for U.S. utility operations, has for too long remained too consumed by efforts to reach a steady-state way to operate following the large expansion produced by the acquisition of UIL Holdings. The persistence of change, driven significantly by leadership's overemphasis on closing earnings gaps, has produced staffing instability, first bringing cuts in service-affecting resources, followed more recently by substantial increases in those personnel, all in the context of organizational flux and rapid cycling of those holding senior management and executive positions. The major and frequent change in those positions have produced an unusually short-tenured leadership team. Networks has also experienced overly frequent cycling of personnel, many from offshore, through important positions held for unusually short periods of time overall.

These circumstances continued under an Avangrid governance structure that has not provided utility operations the type of board of director oversight more typical of U.S.-owned utility

operations. Avangrid operates as a holding company controlled in turn by another holding company - - 81.5 percent owner Iberdrola S.A. The Avangrid governance structure compares favorably with other sub-holding companies similarly situated. Nevertheless, a board with independence, engagement, breadth of experience, and focus on operations more typical of large U.S. utility operations would have proven better situated to identify and address the challenges faced in the past five years.

In summary, we believe circumstances like these, which form foundations of the structure in which CMP has operated and how Avangrid and Iberdrola S.A. have provided for its management, did have negative implications for Maine customers. We found significant, more recent efforts to increase focus on and resources for Maine. Those efforts have produced improvements. Nevertheless, caution about their sustainability remains in order, for three principal reasons addressed below:

- The history of Iberdrola S.A.'s U.S. utility operations
- Top-level personnel changes made or looming in 2021
- How objectives and motivation may change once pending and "game-changing" opportunities and like the New England Clean Energy Connect (NECEC) opportunity and the existential threat caused by franchise uncertainty reach resolution and no longer provide important drivers behind Avangrid and Iberdrola S.A. priorities, decisions, and actions.

CMP's Increasingly Small Part of a Vast Iberdrola Family

Iberdrola S.A.'s global scale of operations produced an immense valuation. Such large holding companies can effectively manage small parts of their overall enterprise, but it remains important to consider that CMP comprises a particularly small part of the Iberdrola S.A. family. The family's U.S. utility operations increased very substantially with the acquisition of UIL Holdings. A significant growth strategy continues through the present, shown most recently by the pending acquisition of PNM Resources, which has distribution utilities in New Mexico and Texas and a large generating fleet. Non-utility growth in the United States has also formed a core element of Iberdrola S.A.'s U.S. and global growth strategy - - reflected in the expansion of Renewables, whose operations, by many measures, roughly equal those of Networks. Avangrid also pursues a strategy to make major transmission investments, with NECEC comprising the most advanced but not the sole element of that growth strategy.

Headquartered in Bilbao, Spain, Iberdrola S.A. describes itself as a more than 170-year-old global energy leader, the world's largest wind power producer, and one of its largest electricity providers measured by capitalization, with subsidiaries delivering energy to almost 100 million people in multiple countries on different continents. Its total work force exceeds 35,000 and it employs assets valued at about \$140 billion. CMP delivers electricity to a small fraction of those numbers - - about 640,000 customers in southern and central Maine and a rate base of \$2.4 billion. CMP employs just over 900 persons. Maine comprises about 20 percent of U.S. utility operations, but just two percent or so of worldwide Iberdrola S.A. utility customers.

Avangrid's acquisition of PNM Resources would increase Avangrid's enterprise value and customer base by a third, making CMP an even smaller portion of the total enterprise. On a global

basis, Iberdrola S.A. has called the PNM acquisition the eighth “since the beginning of the COVID pandemic,” citing additions spanning France, Australia, Sweden, Japan, Scotland, and Brazil.

Distribution Network Issues

The existence of customer operations issues in Maine, some of which we have addressed in previous work, are well known. Unlike customer operations performance, the typical metrics for gauging distribution system performance take time to show the effects of under-commitment. Even the country’s less robust electricity delivery systems employ significant design, operations, and maintenance cushions. Declines in standard reliability metrics (measures of reliability **results**) provide one indicator of declining system performance, but the absence of perceptible declines in these metrics over a short period of years does not necessarily signal the opposite. Looking at the sufficiency of efforts to maintain system health over the short term requires attention to reliability **drivers**, such as the units of inspection, repair, and vegetation work designed to mitigate the causes of service problems.

We found declining levels of distribution network work level drivers, accompanied by indications of declining trends in performance. We did not see performance declines at levels threatening imminent service failures. However, continuation of the trends observed (since addressed through corrective actions) proved nevertheless concerning. The first years of our five-year review period saw reductions in Maine distribution system expenditures for field resources and vegetation management. Measures of work levels performed declined significantly, and had begun to produce negative trends in reliability performance. The measures management took and used to drive expenditure decisions focused on those having earnings or regulatory (sometimes performance penalties) implications. We found the over-focus on such metrics inconsistent with good utility practice, and it produced a lack of transparency on the causes of problems in performance. Actions begun in 2019, however, have produced a reversal, with significant additions to Maine distribution network resources and expenditures.

Advances in Customer Operations

An inability to integrate UIL Holdings efficiently and effectively and resource reductions contributed to the customer service troubles that became major public issues following the October 2017 rollout of a new customer information system at CMP. Staffing cuts impaired management’s ability to address resulting problems, producing a public crisis of confidence in management and widespread concerns about loss of control over billing accuracy. We found a substantial increase in focus on customer operations more recently, including the adding of resources and bringing important aspects of CMP customer service leadership and management back to Maine. Those changes have much improved customer service performance.

Difficulties in Integrating the UIL Holdings Utilities into Avangrid

Management under newly formed Avangrid continued, as it does through today, to rely heavily on centrally provided services for all its utilities, managed under Networks, and for the non-utility, renewable energy operations managed under Renewables. Efforts still continue, now into the sixth year after the UIL Holdings acquisition, to find an equilibrium in providing corporate or management services (provided by Avangrid Management Company to both Networks and Renewables) and operating or technical services (provided by Avangrid Service Company, but

only to Networks utilities). This now-long period of adjustment has produced continuing organization change, large swings in staffing levels in key functions, and a too-rapid cycling of senior management and executives into and back out of the United States.

Management ultimately failed to meet aggressive staffing reduction targets it set early for operations after the UIL Holdings acquisition. Its continued, forceful pursuit of them deprived CMP of needed customer service and field resources and leadership for much of the period we examined. Frequent movement of senior personnel from Europe or South America into Avangrid positions has often been followed by cycling them out again after short tenures. We found overall extraordinarily short tenures for senior positions in the Networks and service company organizations that guide much of what drives service performance in Maine.

Moreover, problems from senior position changes and aggressive actions to produce acquisition “synergies” currently risk magnification. A leadership that has yet to find an equilibrium for a group of transmission and distribution-only utilities operating in the U.S. Northeast may soon be facing a geographically distant acquisition whose operating characteristics differ substantially from the current Networks utilities. The acquisition of PNM, which operates utilities in New Mexico and Texas, will bring Avangrid’s first U.S. electric distribution operations far separated from the region now served. The resulting management challenges would become complicated by the need to address the operational and existential issues surrounding the western company’s large operated or owned fossil and nuclear fleet, many of whose units are well advanced in age.

Avangrid continues to need to complete efforts to establish a stable and effective organization, find ways to counter the disruptive effects of a possible acquisition of PNM, and to produce a stable of high-quality successors capable of providing a U.S. management and leadership team that will remain reasonably continuous, without the need for frequent cycling of resources, often from offshore, to fill senior positions on a short-term basis.

The Need for a Stronger Operations Focus from Leadership

Through much of the five-year period we examined, Avangrid has failed to meet the financial expectations it has helped to create for the investment community. Immediate-term efforts to close the gaps between earnings expectations and realities have driven service-affecting reductions in resources and in expenditures (both capital and O&M). This is not our first encounter with financial-results-driven measures at Iberdrola S.A.’s U.S. utilities. A decade or so ago, we saw similar measures, at that time driven by Spanish leadership’s overarching focus on controlling its New York utility financial results through pressure on reducing headcount and vegetation management expenditures and even on transferring core utility functions to a profit-making subsidiary.

The great change that has happened in the U.S. utility industry in ten years cautions against over-reliance on data from so long ago; but one thing that has not changed is the leadership focus we saw on these headcount and vegetation management as sources of cost cutting today. What makes them even more significant is the earnings pressure under which decisions about these resources got made during the period we studied. A lack of focus on a sufficiently broad set of operational

metrics, combined with apparent pressure to take action to mitigate earnings gaps, contributed strongly to undue resource reductions.

More recent actions to expand a focus on operations measurements, increase resources, and expand customer and field operations activities in Maine have brought improvement. Those improvements, which, however, bring increases in capital in O&M costs, have generally corresponded with the change to a Networks CEO who came into that position with career-long experience in electric utility operations, followed by the return of the former top CMP executive (who left that role 20 years ago). However, that Networks CEO left during the late stages of our audit work, only some 20 or so months following his June 2019 naming to the position. His replacement possesses impressive career, electric utility executive experience, and academic credentials, but developed through utility financial, regulatory, and stakeholder management experience, not infrastructure and customer operations.

Moreover, the returned former CMP CEO continues to be viewed as a bridge to rebuilding CMP's reputation and trust among customers and stakeholders, but only on a short-term basis. Networks has lost another seasoned voice recently as well. Networks has a separate board of directors, and it contains substantial (albeit minority) independent membership. That board recently lost as a member another former Maine president - - she served in that role for about 20 years before retiring and joining the Networks board in 2017. She was effectively replaced on the board by the Avangrid general counsel. Subsequent to these significant changes, we learned of yet another. The long-time President of CMP, who had a 35-year operations focused career retired; the same general counsel replaced him, acting on a temporary basis.

Caution borne of experience makes it appropriate to pay attention to how assiduously Avangrid will continue the increased emphasis more recently given to operations versus financial, regulatory, and stakeholder management concerns, particularly following resolution of the NECEC and franchise issues. Spanish leadership's long-term concentration on issues like controlling headcount and O&M expenditures, the dislocations caused by the pursuit of efficiencies through staffing cuts following Avangrid's acquisition of UIL Holdings, and the actual and pending loss of both operationally-and Maine-focused leadership give rise to legitimate concern about the sustainability of the improvements achieved in 2019 and 2020 in both customer and distribution system operations.

Leadership established a sound and credible path for sustaining recent improvements in Maine customer service in 2019 and 2020. To provide confidence in the sustainability of the customer and distribution system operations improvements made in the past two years, Avangrid needs to emphasize, when it comes to top leadership at Networks and CMP, candidates that have strong operations backgrounds. It also needs to give them the priority, accountability, authority, and resources to continue to emphasize operational excellence. Quick cycling of personnel and a lack of candidates with substantial experience in the environment in which CMP and the rest of the Avangrid utilities operate should greatly diminish.

Two-Ways of Examining the Strength of Avangrid Governance

We did not find governance a root cause of service-affecting problems - - or in fact, a problem at all in a structural sense. However, its nature and circumstances did contribute to a lessened opportunity to address those problems more timely and effectively. Avangrid operates as a holding company itself controlled by another holding company, Iberdrola S.A. From that perspective on Avangrid's stature, its governance compares well with similarly positioned entities. However, that comparison misses an essential point. Specifically, the operating utilities of U.S. holding companies generally receive oversight and direction from a parent board comprised almost entirely by independent directors reflecting a wide range of high-level U.S. business and other, diverse experience.

Avangrid simply does not have those characteristics at commensurate levels. Its board and that of its Networks subsidiary have substantial, but not majority (let alone overwhelming), independence. Moreover, the Avangrid board operated in recent years on a cycle of five or six regular meetings per year, at the minimum end of and well below the average for U.S. utility holding companies. Notably, and unfortunately in our view, its executive committee meets regularly, uncommonly often, and in lieu of the entire board - - also very anomalous for U.S. utility holding company governing bodies. That committee's membership, dominated in numbers by management, consists of Iberdrola S.A.'s Spain-based CEO, CFO, and chief development officer, Avangrid's CEO, and one independent director. Less detailed operating information and focus also distinguish the Avangrid and Networks boards from those typical of U.S. holding companies. We consider that information and focus particularly important for holding companies whose operations span a significant number of utilities.

The Iberdrola S.A. board does not make up for the lack of this more typical U.S. type of utility operations oversight. By design, and in practice, it does not engage in commensurately detailed oversight of U.S. utility operations at either the Avangrid level or at the level of its individual operating utilities. One can therefore fairly both commend Avangrid governance from the controlled holding company perspective, while finding it lacking in what one typically finds in oversight of U.S. utilities. We consider a lack of the more traditional sources and types of board oversight a lost opportunity in the governance structure under which Avangrid operates, however sound that structure may be from the controlled holding company perspective.

A more typical, U.S. holding company board structure, membership, engagement, and exposure to operational details would have better served the interests of CMP in addressing the issues it has faced since the UIL Holdings acquisition. A more typical governance structure and composition would have provided in the past five years and would provide going forward a more effective environment for surfacing and responding to the challenges that CMP has faced in the period we examined.

Executives and Management Stability

Changes in leadership positions, managed in frequency and for stability, prove common and generally supportive of enhanced effectiveness and efficiency. When occurring too often and when involving frequent cycling of "distant" personnel, however, they can produce confusion, impatience, disillusion, frustration, and even cynicism, which have significantly detrimental

effects on performance. Working under new leaders, digesting new methods and protocols, adapting to realigned priorities and targets, operating new systems, and relying differently on outside resources create challenges that frustrate measures to realign resource numbers and alignment, methods, and practices, all of which take time to reach a steady state operation.

We found striking the number and frequency of changes in personnel holding a very broad cross section of key senior manager and executive positions at Avangrid positions material to CMP's operations. We found equally troubling the numbers who have both come to and gone from Avangrid from geographically distant parts of the Iberdrola S.A. organization. Adding to the disruption occasioned by changes of this magnitude and pace were the lack of overall organizational stability and the continuing inability to achieve resource and cost savings goals following the UIL Holdings acquisition. Major changes were still happening as we drafted this report.

The unduly high level of turnover in key positions has contributed to problems in Maine. The electric utility operations organization and work groups have also experienced major change and exhibit some unusual locations of important functions. An unusually high level of employee dissatisfaction continued during the period of organization change and staffing disruption, contributing to performance effectiveness gaps. Employee attitudes about engagement with and enablement to perform their roles increased in 2020, but remain below norms that management uses to gauge them.

Avangrid should undertake a comprehensive program designed to stabilize its organizations dedicated to operations, develop resources capable of building and sustaining an organization that has greater depth of experience in U.S. utility operations, and promote substantially greater stability in senior management and executive positions.

Networks and CMP Planning and Results

Avangrid's lack of success in meeting forecasted financial results proved a strong driver of operational decisions and actions that adversely affected CMP during the period we examined. Long Term Outlooks intended primarily for the investment community formed a core of the Avangrid planning process, which occurred primarily at the Networks level. Capital budgeting should reflect a balance between financial goals and bottom-up analyses of expenditures needed to sustain effective service quality and reliability. While such earnings-related goals are not unusual for utility holding company planning, the effective balancing of such goals with reliable utility operations has not been evident at Avangrid (before 2020), especially in the case of CMP.

Avangrid has based continuing forecasts of earnings growth on rate base increases and aggressive management of O&M expenses. As management struggled to meet those forecasts, subsidiaries, functions, and work groups subject to continuing organization and function change experienced resource shortages, staffing reductions and limitations, and a resulting need to fill talent gaps. Networks experienced major overruns in external services costs in each year from 2017 through 2020 and smaller overruns in employee costs, despite continuous efforts to reduce employee counts and external expenses. The repetition and size of those gaps have driven decisions about resources, investments, and O&M expenditures that drive operational performance.

The Networks 2019 and 2020 strategic plans incorporated significant initiatives to improve CMP reliability and operating performance, replacing earlier plans that lacked specific initiatives or programs tied clearly to CMP reliability objectives. Planning specific initiatives for, and dedicating capital and operating resources to, reaching reliability objectives comprises an important aspect of maintaining and improving electric utility reliability.

Integration and Efficiency Improvement Programs

Efforts to integrate operations following the 2015 acquisition of UIL Holdings, intended in major part to produce greater efficiency, largely drove organization and staffing changes. Management's continuing inability to produce that efficiency contributed to the resulting organizational instability we observed and the undue resource cuts that characterized the first half of the period we examined. By 2019 and into 2020, continuing efforts to control costs have brought some success, which, if sustained, should produce annual savings in the range of \$13-15 million to CMP customers which will reduce revenue requirements or provide resources to commit to other operational needs without increasing revenue requirements.

Early 2017 witnessed the advancement of initiatives to increase efficiency and thus lower costs, improve current earnings, and create earnings growth opportunities. The initiatives of that time concentrated on reducing employees and external services. Continuing through late 2018, these efforts did not produce the levels of savings expected. Moreover, large staffing cuts made early gave way to substantial increases, particularly as service problems became evident. A new direction came as 2019 began and as Avangrid continued to fail to meet earnings expectations. Assisted by an outside consultant, new initiatives addressed management's goal of cutting costs, with a continuing emphasis on process improvements and staffing reductions.

Driven by an over-focus on closing earnings gaps, the earlier staffing reductions contributed to degradation in CMP operations and customer service and reductions in efforts to maintain its system. Responding in 2019 to improve operations, management initiatives to improve performance have added resources to Maine operations, producing improvements.

The Service Company Cost Cap

The cap on service company costs includable in CMP's rates should continue because:

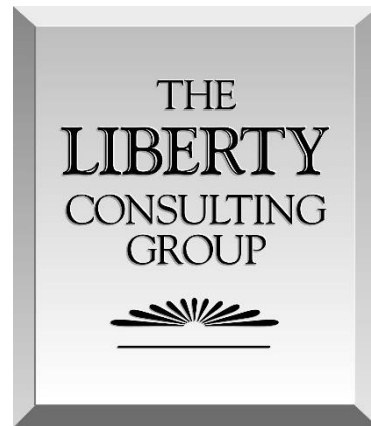
- Management has estimated that initiatives started at some point in 2019 and continuing through 2020 have produced reductions in costs to CMP in the range of \$15 million annually (combining direct CMP savings and its share of service company savings).
- Management continues to be unable to demonstrate that \$3 million or more in Iberdrola S.A. costs allocated to CMP each year do not constitute duplication of costs already borne by Avangrid; *i.e.*, costs for which Avangrid, itself an exchange-listed company, would have to make alternate arrangements were Iberdrola S.A. not to exist.
- Resource and cost instability have proven a continuing pattern ever since the UIL Holdings acquisition and it is clear that management is continuing efforts to optimize them, making further reductions in service company costs likely.

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I. Introduction

The Liberty Consulting Group (Liberty) performed a *Management Audit of Central Maine Power Company's Management Structure and Affiliate Services* (Management Audit) at the request of the Maine Public Utilities Commission. That request came via a Request for Proposals (RFP) to which we responded and after which we were selected to perform the Management Audit. Determining whether CMP's current management structure and management and other services from its affiliates are appropriate and in the interest of its Maine electricity customers comprised the Management Audits overarching objective. The RFP defined the scope of the work to serve this objective:

- Evaluating whether there are issues with or features endemic to the management structure of CMP and its affiliate parent, Avangrid, that may have contributed to a drop in the quality of CMP's customer service over the past several years
- Examining the effects of transferring CMP personnel and decision-making from CMP to the Avangrid level
- Examining the effects of such transfers on the quality of customer service provided by CMP
- Evaluating the quality, effectiveness and cost of the services provided to CMP by its affiliated service companies
- Assessing the continuation, modification, and elimination of the existing cap on the level of affiliated service charges allowed to be included in CMP's rates.

The work described in this report has addressed each of these areas. The RFP focused on customer service, which we examined closely. However, we found, as work progressed, substantial issues involving the management and operation of the distribution network across which CMP delivers service. We addressed those issues as well.

Our work took considerably more calendar time than anticipated. We found support from personnel from CMP and all of its affiliates, including senior leadership of parent Iberdrola S.A. However, producing data explaining and enabling the trending of costs over our study period proved very cumbersome and time consuming despite what we viewed as good faith efforts by the company, albeit requiring long durations. We undertook many efforts to secure information that would permit year-over-year assessments of cost developments and trends, as company accounting systems, organization structure, resource alignments and numbers, and work responsibilities changed following the acquisition of UIL Holdings. We ultimately had partial success in the effort to secure reasonable continuity and clarity in costs over the five-year period we examined, but not as much as we expected, given the size and sophistication of Avangrid, under which CMP operates. Management worked with us cooperatively in trying to gain a comprehensive and deep understanding of costs and their sources, although it sometimes took long periods of time and repeated efforts to secure information that would provide the comprehensiveness and clarity we sought. Ultimately, we would have preferred to have better cost information, but clearly, the far bigger impact on our work came in the duration it took to complete it.

We generated 190 data requests, to which we found management fully responsive, although it sometimes took multiple attempts and long durations to secure the requested information. We conducted 82 interviews. We received clear and complete answers to the inquiries we made at

those interviews. We have performed hundreds of engagements over the more than 30 years we have served regulators in the electric utility industry. Avangrid and Iberdrola S.A. face matters of large consequence in Maine, both opportunity-based (NECEC) and risk-based (franchise uncertainty). Despite those issues, management undertook the large efforts required of them and responded to our inquiries fully and openly.

II. CMP's Size in the Iberdrola Family

A. Chapter Summary

Ensuring sufficient attention and resource commitment to individual operating companies becomes more complex and difficult as a holding company expands. Iberdrola S.A. has proven a substantial acquirer of utility operations in the United States, from its late-2015 acquisition of UIL Holdings and its utilities (electric company United Illuminating chief among them). A significant growth strategy continues through the present, with the proposed acquisition of PNM Resources - the first U.S. utility acquisition outside the Northeast by the Iberdrola S.A. family of companies. PNM Resources operates two utilities in New Mexico and Texas. This acquisition would not only engage Avangrid with a new U.S. region, and more significantly first expose it to the operating challenges of a large fossil fleet and of nuclear generation ownership, made greater by the presence of many aging units.

Non-utility growth in the United States has formed a core element of Iberdrola S.A.'s growth strategy as well, reflected by Avangrid Renewables expansion and by a strategy to make major transmission investments; *e.g.*, New England Clean Energy Connect. Moreover, Avangrid's operations remain significantly dependent on contributions from Iberdrola S.A. executive leadership from other countries, where expansion has also continued.

CMP has thus become an ever-smaller part of the family of operations within which it operates, both Iberdrola S.A. more generally and Avangrid more specifically. Holding companies can continue to provide adequate focus on what become increasingly smaller operating units, but doing so requires special efforts to ensure continued focus, attention, and support at appropriate levels. Later chapters of this report discuss that focus more particularly. This chapter addresses the background, but important purpose of showing that such measures have become more critical as CMP has become a much smaller part of Avangrid and Iberdrola S.A. operations since 2015. As or more significantly, CMP stands poised to become less so with the acquisitions of PNM Resources and other operations across the United States and the globe.

Later chapters will examine specific aspects of oversight, resource allocation, and attention to CMP and how well opportunities have been exploited and risks mitigated. This chapter makes two defining aspects of that examination clear:

- CMP has leveraged that growing size to provide experienced resources and efficiency over a broader base of service users
- The changing structure and size of Avangrid's, and in turn Iberdrola S.A.'s operations create concern about ensuring proper attention to the needs of providing electricity service in Maine.

B. Background

This chapter addresses the reducing size of CMP as part of both the Avangrid and Iberdrola S.A. family of companies. It also provides an overall description of CMP's U.S. intermediate and Spanish ultimate holding company's corporate structures and businesses. It provides important background in understanding the context in which CMP has operated and will likely operate and in underscoring that CMP's ever falling size in relation to the full scope of affiliate activities have

material implications for the design and execution of plans and activities and for the provision of resources necessary to continue serving Maine electricity customers safely, reliably, effectively, and efficiently.

Determining whether issues or features of CMP and U.S. parent, Avangrid structures contributed negatively to CMP customer service in recent years comprises this engagement's overarching goal. The Commission asked that this evaluation address changes over those years in the location of those performing work for and making decisions affecting CMP, and examine services from service companies, AMC and ASC. Our examination focused on the period from acquisition of UIL Holdings and formation of Avangrid through the present. We also examined going-forward implications for CMP under continued stewardship from Avangrid and Iberdrola S.A.

The acquisition of United Illuminating began a series of major changes in these areas, first resulting in Avangrid's formation - - replacing Iberdrola USA as this country's sub-parent for a group of utilities ranging geographically from Maine to western New York. We studied the five years, beginning with 2016, during which United Illuminating's entities have formed part of Avangrid. Our examination considered the influences brought to bear by Iberdrola, S.A., the very large, global utility and energy holding company that owns 81.5 percent of Avangrid. The remaining shares of Avangrid trade on the New York Stock Exchange.

Rapid and large-scale industry consolidation in recent decades has led to the reinstitution of holding company structures. The new versions of these structures often place top leadership positions at the utility operating companies near the bottom of holding company executive hierarchy, leaving them with reduced authority over operating resources (*e.g.*, network planning and operations and customer service), and reorienting their priorities away from a focus on ensuring reliable and economical service and toward stakeholder management in their jurisdictions. Upcoming strong performers often see their best career paths as lying with the parent, with common corporate or operating service providers, or with non-utility affiliates, depending on the structure of the enterprise involved.

Iberdrola S.A. - - like other acquisitive enterprises - - has shown itself as one producing a growing family of companies in which each individual operating company becomes an ever smaller part of the total enterprise. This factor adds further complexity in ensuring that individual operating company needs get the right attention in their identification, in robustness in planning to meet them, in resources to execute plans, and in ongoing measurement of success and remediating gaps that may arise. An expanding scope and size of operations can also produce much more than ordinary resource "churn" as strong performers move quickly through the chain of entities and positions considered material to their development and elevation through the organization. The resulting growth and change can overly temper attention to, focus on, and commitment to local utility needs by managers induced (even if only tacitly) to see their futures dependent on the convenience of the parent as opposed to the success of the utility and optimum rates and service to the utility's customers.

Similarly, the level of support afforded to such managers by the managers of the parent has sometimes proven problematic. Clearly, leadership and senior management should encourage subsidiary employees to best serve the utility, but such an approach is far from automatic,

particularly when gaps in performance at higher organizational or parent levels lead to corrective measures that may address parent performance issues in ways that turn focus away from individual utility performance.

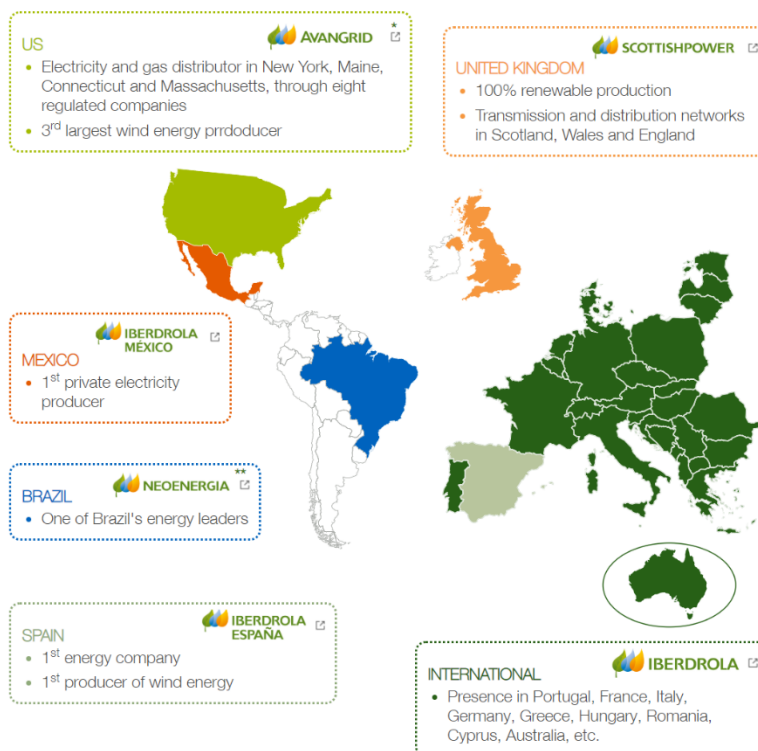
C. Findings

1. CMP, Avangrid, and Iberdrola Corporate Organization

CMP operates as part of a vast, geographically dispersed group of operations, ultimately owned or controlled by Iberdrola, S.A., headquartered in Bilbao, Spain. Iberdrola S.A. describes itself as a more than 170-year-old global energy leader, the world's largest wind power producer and one of its largest electricity providers, measured by capitalization. Its subsidiaries deliver energy to almost 100 million people in many countries (depicted in the next illustration), using a total work force exceeding 35,000 and employing assets valued at about \$140 billion.

Despite its size and importance in serving Maine's residents, businesses, and institutions, CMP comprises a very small part of the total Iberdrola S.A. enterprise. CMP provides about 9,000 GWh of electricity to some 640,000 electricity customers in a contiguous, 11,000 square mile area of southern and central Maine. A delivery network comprising about 3,000 miles of transmission lines, 23,000 miles of distribution lines, and 200 substations makes up most of CMP's rate base of \$2.4 billion. The Maine electric distribution utility employs just over 900 persons (roughly 600 of them bargaining unit members).

Iberdrola's World-Wide Operations

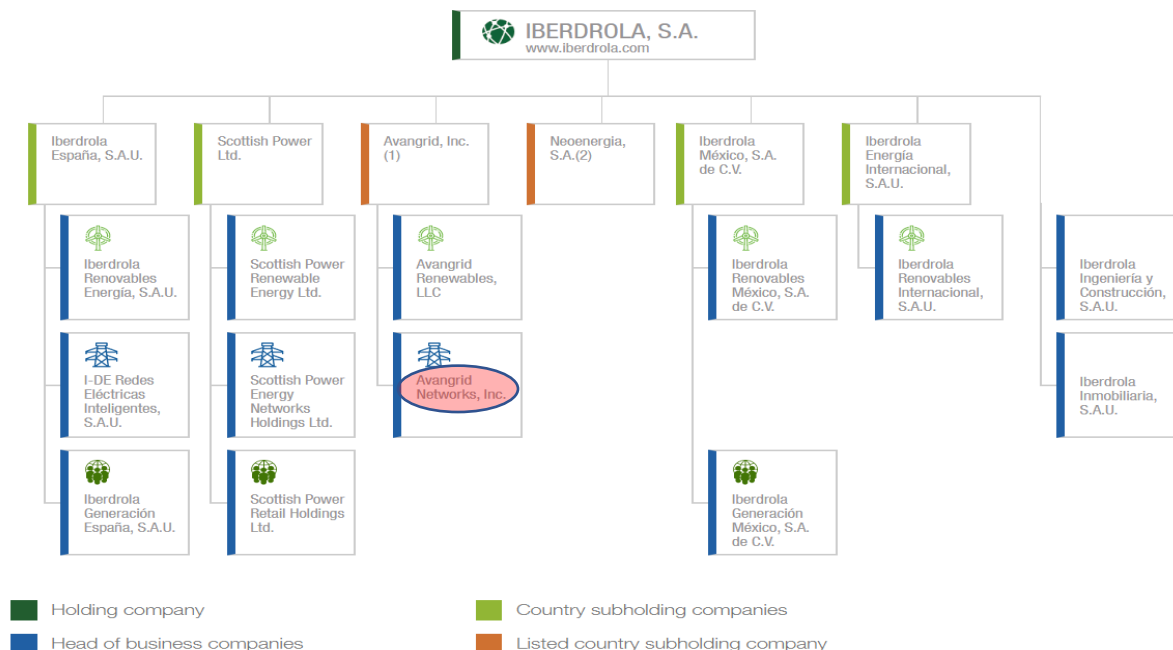


CMP operates within a U.S. utility and energy production business housed within Avangrid, Inc.

(Avangrid), an NYSE-listed company. Avangrid operates through two wholly owned, principal subsidiaries - - Avangrid Networks, Inc. (Networks) and Avangrid Renewables, LLC (Renewables). Renewables owns and operates 7.1 gigawatts of primarily wind electricity capacity located in 22 U.S. states.

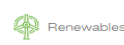
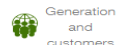
Large in its own right, Avangrid forms but a part of Iberdrola S.A.'s global operations. The next table shows the overall structure of Iberdrola S.A. including Avangrid.

Iberdrola Subsidiary Structure



¹ Avangrid, Inc. is 81.50% owned by Iberdrola, S.A.

² Neoenergia, S.A. is 50% + 1 share indirectly owned by Iberdrola, S.A.

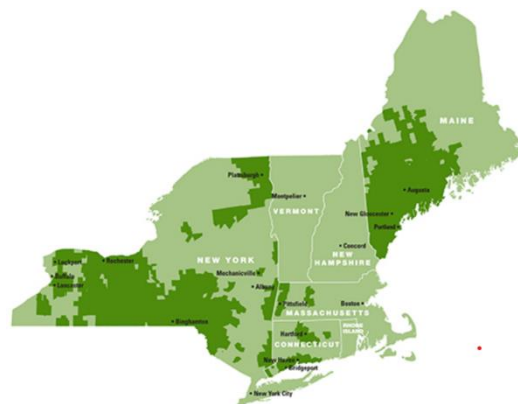


Networks, under whose ownership CMP operates:

- Is managed directly by Iberdrola S.A. sub-parent, Avangrid
- Acts at the third institutional level in the Iberdrola S.A. entity hierarchy
- Exists as part of one of eight separately identified Iberdrola S.A. lines of business stretching across the U.S., Mexico, Brazil, and much of Europe
- Owns and operates eight electric and natural gas utilities (before the PNM acquisition) that serve over three million customers in New York and New England.

The service territories of the Networks utilities extend from central and southern Maine down through Massachusetts and Connecticut and across most of upstate New York. CMP serves about 19 percent of Avangrid's 3.23 million utility customers. The UIL electric and three gas companies serve a marginally greater number of customers - - 23 percent of the Avangrid total, but only about half of the electric customers served by CMP. Ranked by customer number, these utilities consist of:

- New York State Electric & Gas Company (NYSEG), with 1,160,000 customers (894,000 electricity and 266,000 gas)
- Rochester Gas & Electric Company (RG&E), with 692,00 customers (379,000 electric and 313,000 gas)
- ***Central Maine Power Company, with 634,000 electricity customers***
- United Illuminating Company (UI), with 335,000 electricity customers
- Southern Connecticut Gas Company (SCG), with 197,000 gas customers
- Connecticut Natural Gas Corporation (CNG), with 177,000 gas customers
- Berkshire Gas Company (BGC), with 40,000 gas customers
- Maine Natural Gas Corporation (MNG), with 5,000 gas customers.



CMP formed what has proven a small subsidiary named MaineCom in 1995 (later moved to Iberdrola USA prior to the formation of Avangrid). MaineCom provides communications services that include dark fiber for resale, high bandwidth private transport to telecommunications carriers, and the building of private networks for Maine customers. It serves about 60 private network customers over 50 miles of fiber optic cables and employs another 80 miles of fiber to serve other customers. Its asset value is less than \$0.5 million. Its net income fell from \$800 to \$140 thousand from 2018 to 2020, as operating expenses fell from \$1.1 million to \$774 thousand over the same period. MaineCom has no employees, instead contracting with Tilson Technology to conduct its day-to-day operations.

2. CMP's Diminishing Contribution to Avangrid and Iberdrola Size

CMP has steadily become an ever-smaller portion of both Avangrid's and Iberdrola S.A.'s size, both financially and operationally, since our earlier Commission-sponsored reviews of them and utilities under them. We have performed for regulators a number of reviews of holding company, service company, and utility company operations involving NYSEG and RG&E, dating to before the formation of Energy East and then continuing through the current Avangrid era. Our reviews have included examinations of U.S. domestic and Spanish governance, executive leadership, service-company and other affiliate relationships and transactions, and management and operations both in Maine and New York.

Iberdrola S.A. acquired Energy East in 2008. This nearly \$9 billion acquisition (including debt acquired) brought U.S. assets to about \$20 billion - - the remainder largely invested in what was already the second-largest (2,000 MW) fleet of wind generation in the U.S. Iberdrola S.A. planned aggressive expansion of this fleet, seeking to reach about 7,000 MW within five years.

Today, Iberdrola S.A.'s operations include:

- Spain: 26.6 thousand MW of capacity and 10 million electricity and 1 million natural gas supply customers

- Brazil: electricity generation, transmission, trading, and distribution to about 14 million customers
- Scottish Power: operation of transmission and distribution networks and service to about 5 million electricity and natural gas customers in the United Kingdom
- Mexico: About 10,000 MW of generation (largely combined-cycle) and about 1,000 MW of renewables in operation or under construction
- Avangrid Renewables: 7,100 MW of renewable generation located in 22 U.S. states.

In an absolute sense, Avangrid operates a large U.S. utility business, but fuller context tempers that size observation:

- Renewables operations in this country by many measures are the equal of those of Networks
- CMP represents only about 20 percent of U.S. utility operations
- End-use customer numbers in the other three countries where they exist (Spain, United Kingdom, and Brazil) are all larger
 - U.S. utility customers are about 10 percent of the worldwide Iberdrola S.A. count
 - CMP customers are about 2 percent of that count.

Now down to about one-fifth of Avangrid's U.S. utility operations, CMP becomes even smaller in the context of Avangrid's large, nationwide business under Renewables. Iberdrola S.A. touts Renewables as measuring half of Avangrid's total business by some measures. CMP comprises a very much smaller portion of operations when measured against the world-wide business of Iberdrola S.A. Top leadership in Spain continues to play a central role in Avangrid's decisions and operations - - witness for example its extensive representation on the Avangrid board. the backgrounds of executives serving U.S. operations, and the results of our examination.

Moreover, the pace and breadth of change in the provision of management, corporate, support, and operations services provided in common to U.S. utility operations have continued at a rapid pace. Avangrid employs a complex structure, whose features have had the potential to affect CMP's customer-service quality. Over the past several years, transfers of personnel and decision-making authority from CMP (a focus area of the RFP) have occurred, accompanied by the emergence and persistence of customer-service concerns.

CMP now finds itself set to become an even smaller part of the Avangrid enterprise, with the October 2020 announcement of Avangrid's acquisition of PNM Resources for \$4.3 billion in cash. The transaction has an enterprise value of about \$8.3 billion considering debt and other factors. The transaction, a very large one for Avangrid, would increase its current enterprise value of \$25.7 billion by a third. Management expects the transaction to close in 2021. The acquisition of PNM would also:

- Bring an additional 790,000 electric customers in New Mexico and Texas - - a third more than Avangrid's current 2.3 million
- Increase Avangrid's assets to \$40 billion and its rate base to \$14.4 billion
- Add over 2,000 megawatts of fossil and nuclear generation from 10 different stations (two coal, six gas, one nuclear and one gas/oil), much of it in service for a period approaching or exceeding 50 years.

Iberdrola S.A. remains strongly acquisitive overall, with the PNM acquisition the eighth “since the beginning of the COVID pandemic” - - as Iberdrola puts it, with the others in France, Australia, Sweden, Japan, Scotland, and Brazil.

D. Conclusions

1. The large and continuing drop in CMP's size as a percentage of Iberdrola S.A. and Avangrid operations has challenged leadership in focusing on its needs.

CMP has come to comprise a much smaller share of the operations of Avangrid in the past five years. The many reasons consist primarily of the UIL Holdings acquisition, growth in the Renewables sector, and more recently a focus on entering the business of planning and executing electricity transmission projects. We do not consider that expansion as necessarily troubling, but it does impose important needs in ensuring that adequate attention, resources, and problem response to, for, and in Maine remain. Later chapters of this report explain a number of problems in Maine that we do attribute in major part to CMP's operation as part of the Avangrid and of the larger Iberdrola S.A. family.

2. CMP is poised to become an even smaller part of Avangrid, which now faces the need to address expansion into a far-distant U.S. region - - an expansion also bringing a new and fundamentally different set of management challenges.

Avangrid has struggled now for five years to reach organizational and resource alignment and sizing equilibrium following the UIL Holdings acquisition. As later chapters of this report explain, major challenges in doing so remain. The pending acquisition of PNM Resources now adds further complexity. Existing Avangrid operations concentrate on a fairly compact Northeast region, but PNM resources operate in different markets, under different regulatory structures, and in a distant geographic area.

More significantly, the acquisition will move Avangrid from operation in restructured markets that separate generation and distribution, and into circumstances that would require management and oversight to address a large generating fleet that involves significantly aged fossil and nuclear assets. The propensity for Iberdrola S.A. to engage its leadership in United States operations will, if it continues, present a major set of expanded and some completely new challenges.

Avangrid's history, the current, unsettled state of its organization and resources, and the distant location and new operational challenges it faces make the PNM Resources acquisition a significant risk for CMP. As we explain in Chapter III, a very new Avangrid top leadership team adds materially to those challenges.

III. Governance

A. Chapter Summary

Advancing corporate governance has for some time comprised a hallmark of Iberdrola S.A. The parent has adjusted board structure and membership and brought increasing clarity and focus to the operation of governance functions as U.S. operations have grown and changed. It has regularly measured governance performance, employing outside expertise to do so.

The influence of top Iberdrola S.A. executives has created a governance structure making the Avangrid board (and to a lesser extent the Networks board) - - not the parent holding company board - - the most direct sources of substantive direction and oversight for the U.S. utilities. Similar enterprises domiciled in the U.S. commonly employ at the holding company level a board comprised almost entirely of independent members and reflecting a wide range of business, institutional, and other experience. The roles of U.S. utility holding company boards typically include reasonably comprehensive and active oversight at the overall, line-of business and in many respects down to the individual utility level. U.S.-based holding companies also commonly employ a number of boards at individual utility, utility sub-group, sometimes non-utility, and even service-company levels. These lower tier boards generally consist mostly, if not entirely of managers and executives, but sometimes have some outside directors.

The Avangrid board has substantial independent membership, but not a majority. Iberdrola S.A. executives have held 5 or 6 of the 13 or 14 total seats, the Avangrid CEO another, with yet one more held by a non-management member who has not qualified as independent. The independent members have distinguished themselves in their individual fields, but do not as a group offer the breadth of experience that U.S. holding company boards generally demonstrate. Higher education, politics and government, and stakeholder relations provide most of the Avangrid outside board member experience, with the remainder focusing on finance.

The Avangrid board has held five or six regular meetings per year since 2018 (extrapolating from the end of our field work in 2020). The Executive Committee appears to have met regularly four times per year in 2018 through 2020 (extrapolating similarly). The number of regular board meetings falls at the low end of the range for U.S.-owned utility holding companies and far below the average among others we have examined. At the same time, the regular and frequent use of the executive committee is anomalous among U.S. holding companies. The Avangrid board's executive committee is dominated in numbers by management, with a majority of its members consisting of Iberdrola S.A. executives.

Strictly from the perspective of a second-tier holder of subsidiaries, we find the Avangrid governance structure commendable in the scope of board responsibilities and independent membership, undercut somewhat by the infrequent meetings and extensive reliance on the executive committee. Avangrid's Networks subsidiary also employs a board with lesser, but still significant, independent membership.

The perspective to apply in assessing Avangrid governance, however, must be broader to be effective in the context of this engagement. The question relevant to our engagement is whether

governance has contributed to service or cost issues affecting CMP. Board independence comprises a critical aspect in answering that question. What distinguishes Avangrid most significantly is the lack of an independent-member dominated board with a wider range of business and institutional experience that regularly and directly engages in oversight of operations at the operating company level. We have found that best practice among U.S. utility holding companies offer these distinguishing features.

The Iberdrola S.A. board does not make up for the lack of this more typical type of oversight of U.S. utility operations. By design, and in practice, it does not engage in commensurately detailed oversight of U.S. utility operations at either the Avangrid level or at the level of its individual operating utilities.

We also did not find the scope or depth of the Avangrid or Networks boards' focus on operational details at the utility operating level like what we have seen boards of U.S. utility holding companies. Whether a function of meeting frequency, a tendency to defer to the senior Iberdrola S.A. and Avangrid executives comprising the board's largest contingent, or the alternating meetings of the executive committee board, we did not see a typical level of board focus on matters affecting utility operations. The Avangrid and Networks boards and their members certainly pay attention to utility operations, including those of Maine, but not at levels we would expect were Avangrid a typical U.S. utility holding company.

We re-emphasize that we intend no criticism of the structure or membership of the Avangrid and Networks boards per se, recognizing that they operate at a holding company level in an enterprise ultimately governed largely from Europe. However, were Avangrid the top-level holding company, one would expect a different level of board oversight and composition. We cannot affirmatively conclude that these differences at Avangrid have contributed to service issues affecting Maine customers. However, we find high value in a strongly independent board that operates under a wide range of business and institutional experience, that has access to comprehensive, detailed, meaningful operations data, that meets frequently, and that does not rely routinely and frequently on a management-dominated executive committee to address the same matters that the board regularly does.

A more typical governance structure and composition would have provided a more effective environment for surfacing and responding to the challenges that CMP has faced in the period we examined.

B. Background

The complexity and coordination of governance at a corporate family like the one in which CMP operates can cause significant dilution of focus on utility operations, at any or all of the Networks, service company, and state-specific levels. A parent-level board operating with a strong predominance of independent members reflects the nearly universal approach in U.S. utility operations operating within large holding companies. The independent directors of large U.S. utility holding companies generally serve as strong leaders of their "home" businesses or institutions, giving them less propensity and need to be " beholden " to executive management of the boards on which they sit. They have an enhanced ability to oversee senior executive management, particularly the CEO, and to protect the interests not just of shareholders, but of other

stakeholders whose responsibilities, activities, and perspectives have bearing on those shareholder interest.

The centrality and importance of electricity service create in Maine, as elsewhere, a large community of stakeholders - - regulatory, customer, and a variety of other public interests and concerns. Using independent directors in increased, in fact dominant, numbers has become nearly universal in U.S. based holding companies. These boards have very few insider members, often only the CEO and perhaps one other executive.

Utility holding company boards so dominated by outsiders enhance the ability of the governance function not just to set direction, but to influence operations effectiveness and efficiency. Larger numbers of independent directors expand access to important and varied backgrounds, experience, and perspectives. Apart from the general benefits of such breadth, a varied group of experienced directors enables segmentation that enhances performance of specialized governance responsibilities.

U.S. utility holding companies also employ boards at the operating company level, often employing few if any independent members. This approach makes the holding company the primary if not the only source of board guidance and oversight benefitting from predominantly outside membership.

We examined governance from the Iberdrola S.A. down through the CMP level. Governing bodies have also existed at the Avangrid, Networks, and service company levels. The Avangrid board makes unusually large use of its executive committee, operating in the board's stead on close to an alternating meeting basis. Iberdrola S.A. executives play a large role in Avangrid governance; we examined how, from where, and how often they and the Iberdrola S.A. board have interacted with U.S. governance and top leadership representatives.

We interviewed the Avangrid and Networks directors seeking to identify how they individually and the boards collectively determined and addressed what they considered their main functions, responsibilities, and accountabilities. We discussed the activities by which the boards have executed their responsibilities, and their information needs and resources in doing so. We inquired into how they learned of, guided, and assessed management's views and plans, and monitored and evaluated key determinants of success. We addressed the boards' provision of overall direction and control over planning, budgeting, execution, and management. We asked specifically about member knowledge of and engagement with circumstances, needs, and issues specific to Maine, encompassing cost, service quality and reliability, and customer satisfaction generally and in Maine over recent years. Our examination addressed means for resolving competition for personnel, capital, expense, and other resources between utility and non-utility needs, and among the Avangrid utilities.

We applied the following criteria in examining governance at and for Avangrid and Networks:

1. The source of independent board oversight should be well informed about, regularly engaged in, and accountable for oversight of U.S. utility operations, including those of and supporting operations and customers in Maine.

2. The U.S. board should have sufficient authority to plan, budget, measure, and generally oversee U.S. operations.
3. Given the size and scope of Iberdrola S.A.'s U.S. utility operations, its board should have a substantial independent component and a broad range of corporate, business, operations, and stakeholder experience.
4. The U.S. board should regularly engage with executives and management responsible for utility operations.
5. The U.S. board should not substantially delegate its authority to its executive committee or substitute the committee's knowledge and engagement for its own.
6. The Spanish board should regularly receive substantial information about U.S. operations, including those in and affecting Maine.
7. The members of the U.S. board should exhibit substantial familiarity with the range of matters, circumstances, issues, and performance levels involving U.S. utility operations, both overall and specific to Maine.
8. It should be clear that the U.S. board has engaged substantially and on a timely basis on out-of-the-ordinary matters with the potential to substantially affect reliability, cost, and customer satisfaction in Maine.
9. The authorities and accountabilities of the U.S. board should be clear and appropriate to empowering it sufficiently to address fully, timely, and flexibly issues affecting service quality, cost, and customer satisfaction.
10. Vis-à-vis non-utility operations, it should be clear that sufficient priority is given to meeting U.S. utility needs generally and emerging major issues specifically.
11. Regular reports to the board should address all important aspects of overall utility financial, operating, and service performance, and provide sufficient detail to identify particular issues having disproportionate impact in Maine.
12. Issues having particular consequences or implications for Maine should be subject to prompt reporting, board questioning, and appropriate follow-up.
13. It should be clear that the U.S. board adopts a constructive, but sufficiently questioning role and attitude with executive management.
14. The U.S. board should have a clear, regularly employed, comprehensive set of methods for evaluating its performance in overseeing utility reliability, cost, and customer service performance.
15. That structure should assure that CMP secures a quality, level, and independence of board oversight not unduly diminished from what would apply to a stand-alone utility.
16. The structure should support consideration of Maine issues at a level that is in proportion with other utility operations, as well as non-utility ones.

C. Findings

We have previously examined governance by Iberdrola S.A. and Iberdrola USA (Avangrid's successor before the late 2015 acquisition of UIL). We did so in the context of New York utility operations, but their governance occurred under the same U.S. and Spanish structures that oversaw the other utilities in the corporate family. Our 2012 work disclosed important governance issues, particularly focused on remote governance from Spain, the limits on Spanish knowledge of and engagement with U.S. issues, and the lack of a source of sufficiently independent and broadly experienced U.S. governance, as compared with other large U.S. utility-industry holding companies.

The boards in Spain and in the U.S. have changed, warranting a fresh look - - not encumbered by, but certainly with recognition of this history. Questions today surround the sufficiency of structural and membership change, the level of consistency between the apparent and the actual authorities of the boards, and the nature and extent of their focus on utility operations in and affecting Maine.

Our board of director examination focused principally on the structure, responsibilities, and operations of the two boards pertinent to this examination - - the parent, Iberdrola S.A. and Avangrid boards. Avangrid is a “controlled” company, but that does not change the fact that board oversight like that described above should come from somewhere in the hierarchy of companies of which Avangrid forms part.

We addressed both the Iberdrola S.A. and Avangrid boards because they are the two who have sizeable independent membership. Other boards exist in the corporate family, but they use employee-constituted boards who address certain legally-required matters, but do not provide major oversight or strategic roles. The Iberdrola S.A. and Avangrid boards are the two that work with senior leadership to provide broad oversight of and guidance to management and operations generally. We have examined where and how the two boards have focused on matters affecting CMP safety, quality, continuity, reliability, cost, and success in meeting regulatory and stakeholder requirements and expectations. We did so recognizing that their effects on CMP can come from actions and decisions within CMP, at service companies, from Spain, or even from other Avangrid utilities serving or being served by CMP occasionally or on a recurring, planned basis; or within the senior executive leadership at Avangrid and, where relevant, Iberdrola S.A.

1. Iberdrola S.A. Board of Directors

a. Powers

The Iberdrola S.A. bylaws seek to focus the activities of the board of directors on:

- Defining and supervising matters that include definition and supervision of “policies, strategies, and guidelines” at the overall (“Group”) Iberdrola S.A. level
- Supervising general development of similar policies, strategies, and guidelines at the country sub-holding companies and by heads of the business companies
- Establishing means for exchanging and coordinating information among the Iberdrola S.A. companies
- Deciding matters of “strategic importance” at the Group level
- Designing and reviewing a Corporate Governance System that guides governance design operation, and control
- Approving Group statements of purpose and values and corporate policies
- Codifying guidelines governing company activities.

The bylaws also seek to delineate where the board’s direct responsibility ends and management’s begins:

- Leaving to management day-to-day administration and management of the businesses of the overall enterprise

- Entrusting the chairman, chief executive officers and senior management to disseminate, coordinate, and implement Group management guidelines.

b. Members

The Iberdrola S.A. board has 14 members, two of which served the parent as top executives, 10 of which are independent, and one of which the company titles as “Other External.”

- Executive
 - Chair/CEO (age 70; director since 2001)
 - Iberdrola S.A. Business CEO (age 63; director since 2017)
- Independent
 - Former CEO of Scottish Business in the Community, director of a group promoting sustainable economic development and independence for Scotland, and other issues and European Parliament economic & monetary affairs policy advisor (age 51; director since 2008)
 - Quality and excellence strategy positions in France, Germany, and Italy for a manufacturer of automotive interior parts (age 54; director since 2010)
 - Attorney and former U.S. Assistant Secretary of State for Economic, Energy and Business Affairs (age 65; director since 2015)
 - Chair of a Spanish naval design and engineering company and head of other Spanish enterprises; professor (age 67; director since 2015)
 - Chair of Spanish foundation promoting social and economic inclusion of persons with mental illness and bank board of trustees chair (age 48; director since 2016)
 - Former U.S. ambassador to the European Union, managing director of a London private equity firm based in London, and director of finance departments at Bank of America and GE Capital; attorney (age 57; director since 2018)
 - Basque economics professor and researcher and board member of a government company promoting Basque tourism (age 57; director since 2019)
 - Former senior-level British diplomat (age 63; director since 2020)
 - Senior positions at Brazilian and other Latin American operations of rating agencies and international banks (age 55; director since 2020)
 - Attorney and Spanish government official (age 53, director since 2020)
- Other External
 - Former chair of a Bolivian, state-owned municipal electricity supplier serving about 800,000 customers and of other gas and water utilities (age 65; director since 2006).

Spanish law classifies as other external directors those who have served within three years as a partner of the external auditor and those who serve as a director or senior officer at a company for which an Iberdrola director or senior officer serve as director. Iberdrola S.A. classifies as other external directors: those who do not meet independence requirements.

a. Committees

The Iberdrola S.A. board employs five committees:

- | | | |
|------------------------------|---------------------------|----------------|
| • Executive | • Appointments | • Remuneration |
| • Audit and Risk Supervision | • Sustainable Development | |

The Chairman/CEO chairs the Executive Committee, whose three other and independent directors (including the lead director) make for the smallest sized committee permissible. The Executive Committee can exercise all the full board's powers, excepting those not delegable by law or the company's Corporate Governance System.

2. *Avangrid Board of Directors*

a. Members

Avangrid, Inc. board-of-director membership from 2016-2018 remained the same; marginal changes have occurred since then. The accompanying table summarizes membership from 2018 through 2020. None of the four external members of the Networks board (three independent and one the former president of CMP) were among the independent members of the Avangrid board.

The Avangrid board now consists of 14 members - - less than a majority of them (six) independent. The remaining eight include six who serve as senior executives in Iberdrola S.A.'s Spanish corporate structure, the Avangrid CEO, and an outsider whose connections make him non-independent. The Avangrid board members include:

- Executives Serving as Non-Independent Members
 - Iberdrola S.A. CEO (serves as board chair)
 - Avangrid CEO
 - Iberdrola S.A. CFO
 - Iberdrola S.A. Chief development officer
 - Iberdrola S.A. Legal services director
 - Iberdrola S.A. Director of risk management
 - Iberdrola S.A. Director of human resources, general service & corporate security
- Other Non-Independent Member
 - Former Maine governor and U.S. House member (serves as board vice chair)
- Independent Members
 - Former New York lieutenant governor and mayor of Rochester
 - New England president and former federal and international affairs director for ATT; aide to U.S. senator from Massachusetts
 - Insurance company CFO and former international accounting firm audit manager
 - University professor and former President of a U.S. University
 - Dean of university college and former U.S. ambassador to Spain
 - President of Maine operations of major banking firms.

Avangrid Board Composition

Total Members	13 or 14
Yearly Departures	1 to 3
Yearly Gains	3 to 4
Independent Members	5 or 6
U.S.-Based	7 or 8
Backgrounds	Number
Sr. Iberdrola Executive	6
Avangrid CEO	1
Telecommunications	1 or 2
Higher Education	2 or 3
Politics/Government	2

The Avangrid board employs an executive committee, consisting of Iberdrola S.A.'s CEO and its CFO, the Avangrid CEO, and one independent member. The full board may delegate to the

executive committee all of its authorities save those of the Unaffiliated Committee (set up to ensure arm's-length transactions with affiliates) or the audit and compliance committee. The executive committee has met frequently. Its four meetings in 2017 match the minimum frequency set for meetings of the Avangrid board as a whole (the latter of which appears to have conducted regular meetings between five and six times from 2018 through 2020). The large proportion of Avangrid board members from Iberdrola S.A. and the extensive (in comparison to what we have seen elsewhere in the U.S.) use of this executive committee create a structure that permits an unusual degree of management influence over actions by the Avangrid board, despite the ability of the full board to review actions and decisions of the executive committee. The structure does accord with and compare favorably in terms of independence with enterprises operating as subsidiaries. The questions it raises concern where in the chain of entities of which Avangrid forms a part an independent board dominated by independent members exercises oversight. Here that can only be at the Iberdrola S.A. level.

In any event, a board largely independent of management comprises a core element of effective governance in the United States. The Avangrid board's structure and membership do not provide that element. Such independent governance as exists comes from Iberdrola S.A., based in Spain.

The Networks Board remained the same since Avangrid's formation until a 2017 change. The next table summarizes membership characteristics and changes in recent membership. Current Networks board membership consists of:

- Management Members
 - Director of Iberdrola S.A. Networks business
 - Avangrid Networks CEO
 - Avangrid controller
 - Avangrid general counsel
 - Director of Iberdrola S.A. distribution for Spain
 - Iberdrola S.A. global procurement director
- Independent Members
 - University president
 - President of a university college
 - Managing partner of a realty and investment firm.

A Networks board member retired in late 2020. From then through March 2021, the board added three members (all company executives). The first is the Director of Iberdrola S.A. distribution for Spain, who had served Iberdrola S.A. in power generation capacities until 2017. The second is the Avangrid General Counsel. The third is the new CEO of Networks. This very recently installed executive has a legal and corporate development background in the utility industry culminating as a state-level president for Duke Energy, with responsibility for managing rates, regulatory, government and community affairs, and state financial performance.

Networks Board Composition

Membership	2017	2018	2019	2020	2021
<i>Total Number</i>	7	8	9	8	9
<i>Membership Changes</i>	0	+1	-4/+5	-1	-2/+3
<i>Independent</i>	3	3	3	3	3
<i>U.S.-Based</i>	4	5	6	6	6
Backgrounds					
<i>Sr. Iberdrola Mgmt.</i>	3	3	3	2	3
<i>Networks CEO</i>	1	1	1	1	1
<i>Service Company Exec.</i>			1	1	2
<i>Former CMP President</i>		1	1	1	
<i>Real Estate</i>	1	1	1	1	1
<i>Higher Education</i>	1	1	1	2	2
<i>Politics/Government</i>	1	1	1		

The departures from the Networks board notably included the departing Networks CEO, who began in the utility industry as an engineer for UIL, eventually rising to the position of CEO of UIL and the former president of CMP, who served there for 30 years - - including 20 as its president.

3. Service Company Boards of Directors

A Board of Managers governs AMC. Its recent membership included three Avangrid officers (CEO, CFO, and General Counsel). This board has not met in recent years, instead providing approvals by unanimous consent for matters like appointment of officers and contract approvals. The board has not reviewed or approved AMC operating plans, budgets, or results for itself or any other Avangrid entity.

ASC's board has also consisted of a small number of officers. Recent membership consisted of the Networks CEO and Vice President of Electric Operations, and three AMC officers - - its Senior Vice President-Human Resources & Corporate Administration, its Senior Vice President, Assistant Treasurer & Controller, and its General Counsel. Its use of unanimous consent in lieu of meetings and the nature of the matters it has addressed parallel those of the AMC Board of Managers.

4. CMP Board of Directors

The CMP board has consisted of four members, the CMP president, the Avangrid CEO and its General Counsel, and a service company financial executive. CMP added to its board the Executive Chairman after his appointment in 2020. Apart from a pro forma annual shareowner meeting it met only two other times per year from 2018 through 2020. The meetings included an annual review of financial and operational performance.

D. Conclusions

1. The principal source of board oversight of CMP's operations comes primarily from the Avangrid board of directors and secondarily from the Networks board.

The Iberdrola S.A. board must provide guidance and oversight to a global collection of businesses that operate in different markets and in economic and regulatory environments that span much of the globe. Necessarily, it must leave detailed oversight of operations of even Avangrid, let alone CMP, to management. We found a lack of substantial interaction between the Avangrid and Iberdrola S.A. boards. Iberdrola S.A. management has created a structure that provides for boards of directors having substantial but not majority independent membership at the Avangrid level. Even though it operates as a subsidiary holding company, the Avangrid board has powers and exercises functions generally consistent with those of the boards at U.S. top-level holding companies.

Recognizing the differing business operations and environments of its utility and non-utility U.S. operations, Iberdrola S.A. has also provided for a separate board of directors for Networks, whose focus lies exclusively on electricity transmission and distribution (plus generation should the PNM acquisition close). The board of Networks also includes independent members, albeit in a lower proportion.

Despite the independent membership, Iberdrola S.A.'s placement of senior executives in numbers sufficient to provide a majority of the boards (more so in Networks' case) permits it to maintain control of Avangrid and Networks. To the degree that independent members may have views differing from those of the management members, important actions still take persuading at least some management members. The unusually low number of full board meetings and the extraordinary number of regular sessions of the Avangrid executive committee (comprised predominantly of executives) in lieu of the full board further enhances management control of the board.

Nevertheless, if the question of how governance may have affected service-related issues stopped there, we would conclude simply that the boards of Avangrid and Networks have commendably broad authority for second- and third-tier holding companies. That is, they have responsibility for multiple utility operations, including CMP. Other U.S. holding companies have independent members on their sub-holding companies, but the degree of such membership here is notable. Iberdrola S.A. continues, as it has in the past, to make corporate governance a major focus of leadership attention. Since our audit of its New York utility operations (completed in 2012), it has adjusted structure and membership as U.S. operation shave grown and changed. It regularly measures governance performance, employing outside expertise to do so.

Small numbers that include only management members comprise the boards of ASC, AMC, and CMP, but their meeting infrequency and our review of the documents surrounding their meetings indicate that they are not used as a strong source of guidance and oversight, but focus more on ensuring that pro forma corporate requirements get met.

2. Despite the strong contribution of independent members, Avangrid does not receive substantial oversight from a board distinguished by a predominance of independent membership.

Holding companies domiciled in the U.S. commonly employ at the holding company level a board comprised almost entirely of independent members. These boards very commonly reflect a wide range of high-level business, institutional, and other experience, and their activities typically include reasonably comprehensive and active oversight down to the individual utility, regularly engaged in establishing strategies, plans, and overall targets, and continually measuring performance against them.

The governance structure in which Avangrid operates differs in important respects:

- The Avangrid board has substantial independent membership, but they have never comprised a majority
- Of the 13 or 14 total members, senior Iberdrola S.A. executives have consistently occupied five or six seats and the CEO of Avangrid one, with one other non-management member who has not qualified as independent
- The remaining, independent directors have exhibited strong credentials in their fields of endeavor, but those fields cover a very much narrower breadth of experience, with higher education and politics and government accounting for most of them
- The Avangrid board meets much less frequently than is typical in the U.S. industry
- An executive committee of the board, dominated in numbers by senior Iberdrola S.A. executives meets both regularly and frequently, and in lieu of the entire board, and appears to address nearly the full range of matters within the purview of the whole board when it meets.

From a governance perspective, commending how Avangrid operates as a second-tier holder or Networks as a third-tier shepherd of Iberdrola S.A.'s U.S. utilities does not dispose of the larger question of how the structure within which CMP operates has been affected by the governance function as applied to it. That question turns fundamentally on where, if at all, the needs and operations of those utilities get the kind of independent oversight and direction that characterize the U.S. utility industry.

If it were operating in the more typical U.S. utility structure, CMP would have received a different (*i.e.*, significantly more independent) kind of oversight, using U.S. experience as a benchmark.

A key difference at Avangrid arises from the much more significant level of independence that characterizes the boards of U.S. utility holding companies. Moreover, while the outside members of the Avangrid and Networks boards have distinguished themselves in their individual fields, their membership collectively does not bring that breadth of experience seen at other large U.S. companies.

Of course, the Iberdrola S.A. board, operating at the top tier of the enterprise of which CMP forms a small part, is the more exact counterpart to U.S. utility holding company governing bodies. However, by design and in practice it does not engage in what one could describe as close oversight of U.S. utility operations at either the Avangrid level or at the level of its individual operating

utilities. Moreover, the Iberdrola S.A. board assigns that role to management and does not engage in significant interaction with the Avangrid or Networks boards or members.

3. The Avangrid and Networks boards pay substantial attention to their responsibilities, but the data and information that has been provided to them has not reached a scope or level that we find typical.

We did not find the scope or depth of the Avangrid or Networks boards' focus on operational details at the utility operating level commensurate with what we have seen at other boards, based on the material provided to us regarding their operations and on our interviews with each director. Whether a function of its meeting frequency, a tendency to defer to the senior Iberdrola S.A. and Avangrid executives comprising the board's largest contingent, or the meetings of the Executive Committee (regularly alternating with those of the full board), we did not see a typical level of board focus on matters affecting utility operations.

We did not find these boards collectively unaware of or unconcerned about utility operations, including those in Maine, but reviewing materials like agendas, minutes, presentations, and slide decks and interviews with each of them did not show an expected level of operations detail. Of course, their executive positions would make such information less critical to the executive members, who have access to it as part of their management positions.

4. Whether the differences in governance at Avangrid versus that more typical in the U.S. industry has itself adversely affected CMP is ultimately speculative, but we do conclude that more typical board structure and operation would have created a more suitable environment for addressing and responding to the issues that have faced CMP.

It is not possible to state directly that the differences at Avangrid have contributed to service issues affecting Maine customers. However, our experience leads us to place high value in a strongly independent board that operates under a wide range of business and institutional experience, that has access to comprehensive, detailed, meaningful operations data, that meets frequently, and that does not rely routinely and frequently on a management-dominated executive committee to address the same matters that the board regularly does.

Consequently, when examining the issues raised in the other chapters of this report, we do consider it correct to conclude that governance more typical of U.S. utility holding companies would have created a better environment for ensuring critical review of leadership's actions over the past five years or so. Unfortunately, it is also true that no better structure in the context of the kind of ultimate ownership necessitated by Iberdrola S.A.'s operations and needs would appear feasible. However, as other parts of this report describe more fully, a more nuanced balance between meeting operations and service needs, on the one hand, and striving to close gaps between financial results achieved versus expected by the investment community, on the other hand, would help.

The way that Iberdrola S.A. has struck that balance concerned us roughly a decade ago in looking at its New York utility operations, and has continued to concern us here, in examining a period where significant gaps of that type have existed. Restriking that balance will inevitably tend to reduce operations risks and enhance operations performance. It is difficult to see how it will not succeed as well in enhancing financial performance in the long run.

III. Organization and Staffing Changes

A. Chapter Summary

Changes in leadership positions, both executive and senior management, are inevitable and often support enhanced effectiveness and efficiency. However, when they become too frequent, particularly when they bring in “distant” personnel or for very short tenures, they can produce among the body of long-term resources responsible for activities in the functions involved impatience, disillusion, frustration, and even cynicism that can have significantly detrimental effects on performance. The negative effects of excessive change go beyond those occasioned by “softer” impacts on confidence, patience, and uncertainty of the employees involved. Working with new colleagues, learning new methods, adapting to realigned priorities and targets, operating new systems, relying differently on outside resources create challenges that take time to optimize. Even otherwise effective alterations in resource numbers and alignment, methods, and practices need time to mature, lest they change again too rapidly to support effective operation.

As we conducted interviews with a very broad cross section of key senior managers and executives, the number and frequency of changes in those holding the positions proved striking. Not only did the number and pace of change prove surprising - - so did the numbers who have both come to and gone from Avangrid from geographically distant parts of the Iberdrola S.A. organization. Circulation of international personnel has included, just for example, a Vice President of Customer Service, who came from Iberdrola S.A.’s European operations and remained for only two years, including the period during which CMP experienced large-scale customer service and confidence issues in 2019. We considered these changes surprising and concerning in their own right, we concluded ultimately that they had even more impact, given two other circumstances we observed - - a lack of overall organizational stability and a continuing inability of Avangrid to achieve resource and cost savings goals following the UIL Holdings acquisition. The changes did not slow following our interviews; major ones occurred as we drafted this report.

We believe that an unduly high level of turnover in key positions contributed to problems in Maine across the period we studied. Moreover, stability continues to prove elusive, given changes in the two most senior executive positions (one at Avangrid and one at Networks) that have just occurred. Other changes occurring as well indicate that Iberdrola S.A. uses progressive assignment across a range of its operating entities as a means of development. This practice can contribute significantly to instability and inconstancy in organization and resource design, methods, and practices.

The organization responsible for electric utility operations has also experienced major change and it exhibits some unusual locations of important functions. An unusually high level of employee dissatisfaction continued during the period of organization change and staffing disruption, necessarily contributing to performance effectiveness gaps. Employee attitudes about engagement with and enablement to perform their roles increased in 2020, but remain below norms that management uses to gauge these factors. Therefore, gains made must not only prove sustainable, but further improvement is in order.

We also observed that Iberdrola S.A. has not made electric operational experience a significant priority in the chief executives at Avangrid and Networks top leadership. Since the UIL Holdings

acquisition, the only top level Avangrid or Networks executive with electric operations as a core experience element came and left within a period of less than two years. The overvaluing of finance, regulatory, and stakeholder experience for the two top executives has not served CMP well in ensuring continued electric operations in an efficient and effective manner.

We found a material insufficiency in another staffing area as well. Our direct experience in examining the management and operations of Iberdrola S.A. showed that, as long as a decade or more ago, Spanish leadership overfocused on staffing reductions as a means for improving immediate term U.S. utility financial performance. That focus remained in the period following the UIL Holdings acquisition and it produced staffing cuts large enough to prove service affecting. Those cuts came without sound analysis of operating factors, particularly as to field resources, proven by the decision not only to stop, but to reverse them.

Those efforts have more recently been reversed, and with strong instigation from leadership inserted at CMP recently. That reversal has had beneficial impacts and its continuation will have more. However, the decade-long overfocus on staffing reductions, their connection to more recent efforts to generate short-term earnings improvement to meet gaps in investor expectations, their likely connection to countering the existential threat of a takeover of Maine operations, and uncertainties about the long-term role and continuity of Maine leadership make their continuation, while hoped for, far from assured.

B. Background

Overall stability in key positions plays a central role in providing continuity important in ensuring a medium- to long-term perspective in carrying out important programs and initiatives and in providing consistency in directing resources toward fulfilling key objectives and meeting operational targets. Transitions certainly should happen in large and complex operations like those characterizing Avangrid's business as it affects Maine customers. Moreover, the existence of a large and varied talent pool possessing multiple perspectives provides important opportunities for enhancing effectiveness and efficiency by introducing new approaches and methods.

Nevertheless, when change in key positions becomes too frequent and particularly when it centers on high level positions across a wide range of responsibilities, it can produce significant disruption, among long-term resources who can become confused about priorities, frustrated by accommodating frequent methods and practice changes, and disillusioned about following new paths likely to change again as managers and executives cycle through leadership of the functions and activities involved. Changes that new leadership and management may see as breakthroughs, those responsible for the work before and after leadership changes can become prone to a "this too shall pass" perspective - - diminishing enthusiasm, and even support, for what can begin to appear as regularly shifting resource numbers and alignments, responsibilities, methods, practices, targets, and accountabilities.

C. Findings

1. Electric Operations Experience of Top Executives

Iberdrola S.A. has focused on financial and regulatory, as opposed to electric operational experience, in filling the top executive positions at Avangrid and Networks. At the time of the UIL

Holdings acquisition, the same person occupied the positions of chief corporate officer at Iberdrola USA and CEO of its Networks subsidiary. Avangrid describes his long company experience as involving finance, treasury, and investor relations. As we had found in an earlier audit of the New York utilities, the COO (an engineer with significant operations experience) appeared in effect to be the second ranking officer addressing utility operations. He left shortly after the UIL Holdings acquisition and has continued serving in top-level operating officer positions in the electric utility industry.

The former CEO of UIL became the CEO of newly formed Avangrid at the time of the UIL Holdings acquisition. He too had a financial background, having served as CFO of a number of gas and electric utilities, as CEO of MISO, and, earlier, with an oil and gas company. The former top officer of Iberdrola and its Networks subsidiary continued as the CEO of newly formed Avangrid Networks.

A new Networks CEO came in June 2019, having served (and continuing to serve) as CEO of UIL Holdings and its operating gas utilities. He had a more than 30-year career at UIL, beginning as an assistant engineer and moving through department leadership positions. He holds multiple bachelor's and master's degrees in engineering and business management. A number of operationally focused initiatives and changes began under his tenure, which ended in March 2021 - - less than two years later. His replacement served as head of a Florida operating utility owned by Duke Energy. Beginning with degrees in law and government, Avangrid credits her with "more than 25 years of legal and financial experience." Her role as head of Duke's Florida utility included responsibility for financial performance, state and local regulatory and government relations, community affairs, and rate and regulatory initiatives.

Avangrid also recently changed CEOs. With no successor determined, Avangrid announced in March 2020 the pending retirement of its CEO on a named date - - July 23, 2020, the date following the annual meeting of shareholders. After completing what proved an unsuccessful search for an internal replacement, Avangrid brought in a former Sempra executive as its new CEO. His experience also centered on finance, but he did serve as CEO of a large Sempra-owned natural gas distribution company.

2. Tenure of Senior Managers and Executives

We found on the whole very short tenures in senior Networks positions. The acquisition of UIL in 2015 brought a new Avangrid CEO. Four different people have held the position since December 2015, with the latest coming on board in March 2021. The next table highlights the rapid pace of change. It summarizes tenures in current positions as of October 2020 - - about the time we began interviews. The yellow highlights show tenures of less than five years and the red highlights show tenures of two years or less, as of early 2021. "Long-Term" means an extended tenure at an affiliated U.S. utility operation of Iberdrola S.A.

Changes in Senior Avangrid Positions

AVANGRID, INC.			
Position	Start	Prior US Utility Industry Time.	Predecessor
CEO	7/20	Other Utility	<5 years
Deputy CEO & President	6/20	Long-Term	New position; long-time officer
SRVP & CFO	7/18	Long-Term	<3 years
SRVP & Chief of Staff	3/19	5/16	New position
AVANGRID NETWORKS or SERVICE COMPANY			
Position	Start	Prior US Utility Industry Time.	Predecessor
CEO	6/19	Long-Term	<5 years
	3/21	Other Utility	<1 year
COO	6/19	6/19	<3 years
CMP Executive Chairman	2/20	Long-Term	New Position
CMP President/CEO	1/18	Long-Term	19 years
VP Internal Audit	1/10	Long-Term	Long-Term
SRVP HR/Corp. Admin.	1/18	None	3+ years
SRVP Corporate Development	1/14	None	New Position
VP Corp. Communications	3/19	None	<3 years
VP General Services	4/18	None	<5 years
	3/21	10/17	3 years
Chief Information Officer	1/17	None	<1 year
SRVP/General Counsel	6/12	Long-Term	Long-Term
SRVP, Planning/Regulatory	1/20	Long-Term	New Position
VP Regulatory Strategy	8/20	Other Utility	Long-Term
VP Asset Mgmt. & Planning	4/18	Long-Term	<5 years
Director Investment Planning	7/20	None	<1 year
VP Purchasing/Insurance	8/20	None	<3 years
VP Customer Service	3/20	Long-Term	<3 years
VP Business Development	6/11	Long-Term	Long-term
VP Business Development	2/19	None	New Position
VP Process & Technology	11/19	None	1+ year
VP Networks Transformation	3/20	None	New Position
Director. Performance/Budgets	5/20	6/13	New Position
VP Projects	11/18	Long-Term	<2 years
VP Electric Operations	4/18	Long-Term	2+ years
VP, Controller, Treasurer	8/17	Long-Term	1+ year
VP, Treasurer, Controller	1/07	Long-Term	Long term
SR Director ETD Bus Services	1/13	Long-Term	Long term
Director Electric Supply	7/10	Long-Term	Long term
Dir. Govt /Community Rel.	4/19	7 Yrs. Ending 2002	New Position

Only 9 of 31 had held their positions for more than three years; most of those who did not had held them for less than two years. Well over half of their predecessors had held their positions for more than five years. One-third had no prior United States experience prior to taking their then-current positions. By contrast, senior executives at the parent level have much longer tenure:

- Chairman & CEO - - since 2006
- Chief Financial Officer - - since 2003
- Networks Business Director - - since 2016
- Business CEO - - since 2014.

The Networks Business head replaced a retiring predecessor and the Business CEO position appears to have been created in 2014.

3. Changing Organization Alignment of Resources

Chapter V explains continuing efforts since the UIL Holdings acquisition at the end of 2015 - - efforts on producing economy and effectiveness improvement. Those efforts have focused much more on producing savings. Consolidation, rather than functionally realigning resources, has proven the more significant change in many areas, like corporate and customer services, although there have been some significant top-level changes; *e.g.*, executive responsibility for customer service in Maine. Chapter VI addresses customer service more broadly.

There has been greater functional realignment of the organization and work groups responsible for planning, design, and operation of the delivery system. Change at the organizational and structural level has come with large, fairly sudden changes in total resources and in fast cycling of executives and managers, many of them moving into and out of the U.S. from the other global regions service by Iberdrola S.A.

The next table shows how rapidly and substantially resources have moved, with some of them now residing in atypical locations. For example, performance of vegetation management does not reside with the work groups responsible for other distribution line maintenance, instead reporting to a Process and Technology group. Planners who identify system reinforcement and expansion needs report not to a senior executive of a technical or operations organization, but to a lead executive whose other responsibilities include capital investment planning and regulatory affairs. Smart Grid activities have moved around in the operations organization and now find themselves split among several groups, one of which also reports to that same executive. The head of the operations organization (the Networks COO) and leadership and many of the resources in the Networks Transformation and Process and Technology groups have come to Networks, mostly recently, from Brazil, where Iberdrola S.A. has large electricity supply operations, but in a fundamentally different economy, terrain, and climate.

We cannot say that organizational decisions like these have been driven by notable or atypical factors we have otherwise observed or sensed at Avangrid and Iberdrola S.A. but they are consistent with them. Those factors include:

- A seeming lack of confidence in U.S. resources versus those who have operated in other parts of the Iberdrola S.A. global footprint
- Continuation of a Spanish leadership concern we observed a decade ago about the level of costs in managing vegetation in the climatic and vegetation conditions of upstate New York and New England
- The primacy of financial and rate recovery considerations in determining system expenditures.

The next chart shows changes in the numbers and organizational assignments, using Avangrid's nomenclature for the groups shown. Clearly a significant part of the changes in numbers assigned functional groups arose from the gradual inclusion of UIL personnel into the Networks structure. However, many of the functional relocations resulted from a continuing series of organization changes, over a period of significant leadership change in the functions shown. We could not prepare a clear depiction of the evolution of organization and staffing of these functions. We began our work with a request for organization charts for 2016 through 2020. Management responded in

part that, “All headcount information is maintained by HR [*Human Resources*], however, the Company does not maintain a repository or database of prior organizational charts.” We next sought to use interviews with current executives and management responsible for Networks work groups and functions. However, that process did not succeed either, due primarily to the short durations (discussed elsewhere in this chapter) of the persons holding the positions at the time of our interviews. The table contains summaries (the shaded rows) we prepared, but they are very likely not fully accurate. However, when viewed in total, the table shows that a very large number of positions did not merely become folded into existing work groups but moved, sometimes more than once, to other existing or to newly formed groups. The table, showing our functional categorization of work groups, thus confirms what we learned through interviews, which is that the functions shown have changed locations frequently, with those changes affecting large groups of employees.

Networks Operations Function Staffing Changes

Network Business	2016	2017	2018	2019	2020	Δ
Electric T & D	1,542	1,418	1,872	1,980	2,106	564
UIL - Electric System Operations	394	361				-394
UIL - Electric Transm&Dist	41	41				-41
UIL - Transmission	17	16				-17
Electric T&D	1,994	1,836	1,872	1,980	2,106	112
Asset Management & Planning	77	71	92	100	95	18
Performance & Budgets					13	13
Planning & Investment			10	7	6	6
AM, Planning, Budgets, Performance	77	71	102	107	114	37
Engineering & Delivery	200	142				-200
Projects			162	165	178	178
UIL - Engineering/Prj Excellence	148	146				-148
Engineering and Projects	348	288	162	165	178	-170
Operational Smart Grids					185	185
Smart Grids			173	176		0
Smart Grids Innovation					12	12
Ops Technology; Business Transformation	133	128				-133
Operational Excellence					13	13
Process & Technology		107	146	140	149	149
OT, Smart Grids, Excellence	133	235	319	316	359	226

4. Staffing Level Stability

Controlling U.S. utility operations headcount comprised a dominant focus of Iberdrola S.A. leadership at the time of an audit we completed in 2012 of then-Iberdrola U.S.A. New York utility management and operations. We found that focus essentially a top-down source of control; *i.e.*, not driven by substantial, bottom-up analysis of operating needs. Controlling headcount either remained or returned as a focus in the wake of the acquisition of UIL. The next table summarizes late-2017 (*i.e.*, nearly two years after the UIL acquisition) staffing reduction plans and status in executing them. Staffing assigned directly to Renewables operations had already increased by more than 113 (20 percent) with a plan to increase it by 93 more in 2020.

Staffing of Networks operations staffing and of the corporate functions supporting them show an opposite trend. Combined, plans as of the date showed an 11 percent drop between 2015 and 2020, excluding gas operations, which showed no change. The planned drop was more severe in personnel assigned directly to Networks operations, with 11.3 percent planned for 2020 with 322

already achieved and 249 to go. The corporate resource drop was slated at a more modest 8.4 percent, with most of that reduction already achieved by the end of 2017.

Avangrid December 2017 Staffing and Projections

	Act 2015	Act 2016	Dec Act	REV3 '17	Bud '18	Plan '19	Plan '2020
NETWORKS	5116	5070	4794	4862	4827	4663	4545
RENEWABLES	568	614	681	687	723	745	774
GAS	76	79	74	76	76	76	76
REGULATION	4	3	4	5	5	5	5
TOTAL BUSINESS	5764	5766	5553	5630	5631	5489	5400
GENERAL SERVICES	196	193	175	186	180	177	162
HEALTH & SAFETY	45	44	46	48	52	52	52
HR	108	110	97	104	100	98	92
INSURANCE	6	5	5	5	5	5	5
INVESTORS RELATIONS	5	6	6	5	5	5	5
IT	243	229	217	229	217	206	206
PURCHASING	32	33	32	33	33	33	33
SECURITY	44	40	39	40	40	40	40
RISK	16	15	13	14	14	14	14
TREASURY	16	16	13	14	14	14	14
FINRE TOTAL	711	691	643	678	660	644	623
ADMIN	55	52	57	56	56	56	56
CONTROL	166	170	157	159	154	154	154
TAX	37	42	39	39	39	39	39
CONTROL/TAX/ADMIN TOTAL	258	264	253	254	249	249	249
AUDIT	22	22	22	22	22	22	22
CEO OFFICE (CF)	2	5	6	5	7	7	6
COMMUNICATION	15	14	12	14	14	14	14
COMPLIANCE	2	4	4	5	5	5	5
DEVELOPMENT	2	2	3	3	3	3	3
LEGAL / SEC GEN	33	33	32	35	35	35	35
CORP OTHERS TOTAL	76	80	79	84	86	86	85
TOTAL CORPORATE	1045	1035	975	1016	995	979	957
AGR TOTAL	6809	6801	6528	6646	6626	6468	6357

The cuts actually made were unsustainable and the targets for 2020 unachievable by a wide margin. The next chart shows cuts well ahead of plan through 2018, with a strong reversal thereafter. Plans from late 2017 showed continuing reductions, but staffing actually grew in 2019 and then again in 2020. Five years after the acquisition of UIL, total staffing has actually increased and staffing net of Renewables has remained flat, as the following table shows. The table show numbers at year-end through 2019 and second quarter for 2020. Management has sought staffing reductions through this period, reflecting its focus on consolidating management and services after the UIL acquisition and on identifying best practices.

Avangrid Staffing Since 2016

Cost Source	2016	2017		2018		2019		2020		2016-2020	
	No.	No.	% Δ	No.	% Δ	No.	% Δ	No.	% Δ	No.	% Δ
CMP Internal	855	846	-1.1%	816	-3.5%	875	6.7%	918	4.9%	63	7.4%
Avangrid Service Co.	377	358	-5.0%	400	11.7%	466	14.2%	516	10.7%	139	36.9%
Avangrid Mgt. Co.	228	267	17.1%	292	9.4%	351	16.8%	369	5.1%	141	61.8%
United Illuminating	755	695	-7.9%	670	-3.6%	644	-4.0%	620	-3.7%	(135)	-17.9%
Southern CT Gas	332	311	-6.3%	301	-3.2%	306	1.6%	308	0.7%	(24)	-7.2%
CT Natural Gas	334	324	-3.0%	313	-3.4%	322	2.8%	332	3.1%	(2)	-0.6%
Berkshire Gas	141	132	-6.4%	126	-4.5%	120	-5.0%	126	5.0%	(15)	-10.6%
Maine Natural Gas	18	19	5.6%	20	5.3%	21	4.8%	19	-9.5%	1	5.6%
UIL Holding Company	327	280	-14.4%	260	-7.1%	154	-68.8%	152	-1.3%	(175)	-53.5%
<i>First Subtotal</i>	<i>3,367</i>	<i>3,232</i>	<i>-4.0%</i>	<i>3,198</i>	<i>-1.1%</i>	<i>3,259</i>	<i>1.9%</i>	<i>3,360</i>	<i>3.1%</i>	<i>(7)</i>	<i>-0.2%</i>
NYSEG	1,801	1,718	-4.6%	1,722	0.2%	1,771	2.8%	1,861	5.1%	60	3.3%
RG&E	796	727	-8.7%	698	-4.0%	696	-0.3%	695	-0.1%	(101)	-12.7%
<i>Second Subtotal</i>	<i>2,597</i>	<i>2,445</i>	<i>-5.9%</i>	<i>2,420</i>	<i>-1.0%</i>	<i>2,467</i>	<i>1.9%</i>	<i>2,556</i>	<i>3.6%</i>	<i>(41)</i>	<i>-1.6%</i>
Avangrid Renewables	731	796	8.9%	831	4.4%	871	4.6%	883	1.4%	152	20.8%
Total	6,695	6,473	-3.3%	6,449	-0.4%	6,597	2.2%	6,799	3.1%	104	1.6%
Avangrid, Inc.	-	-	-	-	-	-	-	-	-	-	-
Avangrid Networks, Inc.	-	-	-	-	-	-	-	-	-	-	-

¹ Actual through June

* Rev 1

**2016 Budget numbers are unavailable

Totals above represent year end figures

Totals above include Business & Corporate

The table shows that CMP internal personnel have grown by seven percent since 2016. Measured by its share of Service Company costs (as the following table shows), the numbers of Service Company resources effectively assignable to CMP has also grown.

CMP Internal + Effective Service Co. Headcount

Measure	2016	2017	2018	2019	2020
Service Co. Total	377	358	400	466	516
CMP Share	18.4%	21.2%	19.8%	16.4%	22.0%
CMP Equivalent	69	76	79	76	114

Changes in yearly work requirements can influence each utility's share of Service Company charges. Note, however, that since 2016, even the annual percentages borne by CMP have not fallen. Even in their lowest year (2019), CMP effectively accounted for more Service Company personnel than it did in the year (2016) when integration of UIL entities into the common services structure began. Efficiency gains through the spread of common services over a larger number of benefitting entities should produce net reductions for CMP. Note, however, that its internal resources have increased since 2016 as well, generating a net increase in effective CMP-used headcount for its internal resources and those of Service Company combined. The preceding two tables show steady yearly and substantial total reductions in UIL resources at both its utility and other entities, as it became ever more integrated into Avangrid. The same did not happen at CMP or the two New York Avangrid utilities.

5. Overtime

Excessive overtime frequently results from systemic understaffing. A high level of storm recovery work can inflate overtime hours. We charted electric transmission and distribution and customer service overtime hours for the Avangrid companies from 2018 (when staffing cuts reached or approached their maximum levels) through 2020. These two categories account for a predominant share of utility staffing cuts, as well as overtime levels. We identified those months with extremely high levels, using instead of their actual overtime hours the average numbers for the remaining months of the year. The next chart shows the resulting hours and the number of full-time equivalent employees they represent. We used 1,800 hours per year per employee as the base for calculating those equivalent employees.

Networks Electric Operations and Customer Service Overtime

OpCo	Function	2018 Overtime		2018 Staff	2019 Overtime		2019 Staff	2020 Overtime		2020 Staff
		Hours	FTEs		Hours	FTEs		Hours	FTEs	
CMP	T&D	204,195	113	515	171,016	95	558	224,396	125	576
	CustSer	25,466	14	124	10,381	6	137	11,112	6	160
NYSEG	T&D	329,007	183	Available Not	319,651	178	Available Not	355,895	198	Available Not
	CustSer	49,602	28		40,922	23		53,390	30	
RGE	T&D	96,220	53		96,273	53		96,933	54	
	CustSer	21,198	12		21,210	12		12,877	7	
UI	T&D	155,048	86	390	155,134	86	378	154,483	86	372
	CustSer	19,935	11	336	19,946	11	321	7,009	4	310

The CMP levels for electric operations have remained at uncharacteristically high levels throughout this period, during which management first continued resource cutting and then began to restore resources.

As employee reductions reached their height, the equivalent number of transmission and distribution (T&D) employees amounted to 22 percent of headcount. Even customer service overtime hours indicated a greater than 10 percent level. Given the adjustments we made to normalize months of especially high levels, the table lends credence to the view that resource cuts for operations and customer service work were too steep, producing the work inefficiencies and high costs that come with overuse of overtime. Before those adjustments, for example, 2018 T&D overtime hours translated to full time equivalents corresponding to 27 percent of headcount. Across the Avangrid companies, operations overtime, particularly for electric T&D, have been high, even after adjustments that moderated highest-month values.

6. Enabling and Engaging Employees

Avangrid has undertaken since 2018 an annual employee engagement survey that has employed a single outside firm and common structure. These surveys have sought to learn the views employees have of their “day to day work experience. The 2018 results show a disappointing percentage of positive responses across all Avangrid Networks and Corporate functions. Three categories stood out in particular for their low rates of positive responses: Confidence in Leaders, Work Structure and Process, and Collaboration. Surveys continuing through 2020 and showed some improvement, but overall results still fell below industry comparable measures used.

The results of the 2018 employee engagement survey led management to focus particularly on three specific “opportunities,” defined by management as “those dimensions that our employees were less positive about and that represent lower scores when compared to the external benchmark.” Management has deemed confidential the specifics of the surveying, including percentages of positive responses to survey questions at the individual and categorical level. Disclosing them overall, exemplified by extraordinarily low favorable responses to the following specific questions from the three broader categories noted above would make clear that characterizations like “opportunity” and “less positive” comprise understatements of the depth of the employee engagement and empowerment challenges Avangrid faced.

Collaboration	Q7: <i>There is effective sharing of ideas and resources across different departments</i>
Work Structure & Process	Q42: <i>The Company is effectively organized and structured</i>
Confidence in Leaders	Q11: <i>The Company is effectively managed and well run</i>

The extreme level of employee dissatisfaction underscores the significance of the effects of the changes and disruptions addressed in this report.

D. Conclusions

1. Iberdrola S.A. has emphasized financial and regulatory experience over operational experience in staffing the top executive positions at Avangrid and at Networks.

Through late 2015, the person acting in essence as the second-level executive at Iberdrola USA and as lead executive over utility operations had engineering training and substantial operations experience. He left shortly after the UIL Holdings acquisition at the end of 2015, leaving individuals with financial backgrounds (complemented certainly by senior utility executive experience) as the top-level executives. Avangrid did bring in a Networks CEO with substantial operating experience for a short time beginning in 2019, during and after which Networks was (as other chapters of this report explain) addressing organization and resourcing issues that had affected operations in both Maine and New York, particularly. His tenure ended in less than two years early in 2021, with replacement by an executive whose background has focused on law, regulation, and stakeholder management.

All of these individuals who did not spend significant parts of their career in technical and operations positions are certainly well educated, professional, and successful in their careers. However, the clear preference that Iberdrola S.A. has shown for personnel without operations-centered backgrounds appears consistent with the primacy over the years it has shown for financial performance, particularly in more recent years as it has struggled to meet the expectations it has created for and communicated to the investment community. We believe that the best approach for strong long-term financial optimization lies in optimizing operational performance efficiency and effectiveness. Permitting short-term financial improvement to constrain fulfillment of operations needs tends to produce operating deficiencies, failed regulatory and stakeholder expectations, and ultimately service degradation that perpetuate financial underperformance more than promote financial improvement.

The period since the UIL Holdings acquisition shows both frequent top-level changes and a preference for those whose backgrounds appear to make them more apt to focus on managing financial matters, regulatory initiatives, and stakeholder expectations than on finding means to improve operating effectiveness and efficiency. Results over this period support the general lack of effectiveness that management has shown in establishing a stable and well populated alignment and level of resources - - it continues to struggle to do so, even as it faces the potential new challenge of integrating a distant utility acquisition with a large fossil and nuclear fleet.

Unfortunately, the one major effort to bring in a top executive with significant operating experience during a time of focus on operational change and enhancement had a very short duration, followed by a return to more financially oriented leadership, with a focus also on shepherding regulatory initiatives.

We believe that the weak focus on operational experience at the top has contributed to service-related problems and any optimism we may have had based on initiatives under the recently departed Networks CEO must give way to a “show me” approach to demonstrating a long-term commitment to give operations change a sufficient counterweight to a long-standing pattern of overemphasizing the meeting of immediate investment community expectations.

Another example, albeit at a lower executive level, shows the overweighted influence that financial and regulatory considerations have over operational ones. The group that undertakes crucial capital investment planning activities (identifying, assessing, and prioritizing system reinforcement and addition needs) reports, oddly and in our view inappropriately, to the finance and regulatory organization, headed by the Senior Vice President Planning & Regulatory.

This structure appears to confirm that financial performance and rate recovery concerns lead operational considerations. Certainly, those aspects of system investment should have a place at the table when allocating capital resources, which have limits in the flushest of companies. However, operational considerations do not get to that final table uncompromised - - they come to that table already managed, allocated, and (when final decisions must be made) represented by a financial and regulatory group, not an operational one. It is telling that financial and regulatory filtering come not only in top-level review of plans and budgets by senior leadership, but in their strategic planning for and initial development. How a senior executive team or a board of directors comes to understand what those responsible for operations feel is needed in such a system is not clear.

If operations needs require sacrifice or delay for financial or regulatory reasons, knowledgeably addressing them requires less pre-filtering of the operations perspectives that are relevant. Placing capital investment planning under a financial and regulatory executive evidences the imbalance that gives undue weight to financial and regulatory (presumably pre- versus post-operating rate recognition) considerations in deciding what and how much to invest in Maine infrastructure.

2. Avangrid's high level of organizational and leadership discontinuity has produced priority and focus shifting, contributing to the impairment of operational effectiveness and efficiency.

The pace of organization change and the rapid and extensive cycling of executives and managers through high-level Avangrid positions, particularly in Networks, has proven extraordinary, even recognizing the need for changes following the UIL Holdings acquisition. Moreover, very many of the new entrants into key operating positions have come from offshore. Iberdrola's operations in Brazil have particularly contributed to changes in operational leadership and management, making the backgrounds, experience, and perspectives of the personnel from those operations particularly important in efforts to change the Networks organization, resource numbers and alignment, methods, practices, and systems central.

In the abstract, the extent and pace of change, the distant work experience of so many of the new incumbents, and the inability to find and sustain long-term local leaders and senior managers raises concern. September 2020 observations by the still-new CEO indicate that stable, effective leadership has caused problems for Networks. Communicating to the Avangrid board's Executive Committee, he made a number of observations about phenomena that the need for frequent leadership and senior management tend to produce (quoted below, with emphasis added):

- While matrix model can be successful, *organization & leadership lack clarity on roles & responsibility*
- *Role of utility Presidents not aligned with success*
- *Need for succession planning and bench strengthening*

He also made an overall observation about utility performance - - an observation that appears connecting with the three preceding ones:

- *Consistent underperformance at certain utilities due to unfavorable regulatory decisions and operational execution*

Management's assessment of its weaknesses, undertaken to support development of the 2020 Networks Strategic Plan (discussed more fully in Chapter IV of this report) confirmed key elements of the new CEO's assessment, noting a lack of agility resulting from a bureaucratic structure and restraints on the ability to make decisions, affecting process and efficiency. The listed weaknesses also showed the effects of swings in and limits on resource adequacy, noting staffing constraints and problems in recruitment and filling of open positions.

3. Efforts to adjust staffing have failed to produce a reasonably stable level of resources, with cuts later required to be reversed contributing to service problems.

For a decade or more, staffing cuts have proven a major focus of efforts by Iberdrola S.A. and Avangrid to bring the financial performance of its U.S. utilities into line with expectations management has created for investors. Significant cuts in the period since the UIL Holdings acquisition have coincided often with major gaps between actual earnings performance and the expectations that management has communicated to the investment community.

Our review found that cuts in the period immediately following the UIL Holdings acquisition did not result from sound operational analysis. Instead, it appears that improving earnings to meet expectations created for investors drove them.

Chapter V describes the overlapping and continuing initiatives that have had staffing reductions as a major objective. Those efforts have produced cuts not consistent with maintaining effective operating and customer performance. More recent efforts have focused on restoring resources, particularly those engaged in field activities, and clearly including CMP as a major source of staffing increases.

Nevertheless, many factors make it sound to question the permanence of efforts to focus on staffing to meet operational versus immediate-term earnings performance:

- Iberdrola S.A.'s at least decade-long overfocus on staffing reductions as a quick earnings "fix"
- Very recent limitations imposed on filling U.S. utility positions during periods of financial underperformance
- The existential threat that a takeover of CMP operations imposes and the resulting value of exhibiting attention to operations issues
- The desire to develop and maintain goodwill in connection with a major transmission project
- The return to a top executive structure that does not include electric utility operations experts and veterans
- The rapid and widespread cycling of personnel, a majority of them without substantial U.S. utility experience, through key senior management and executive positions
- The strong reliance place on resource from a single non-U.S. source for enhancing U.S. operations.

We concluded that undue staffing cuts have contributed to service problems in Maine. Efforts to restore staffing have been productive and leadership in Maine has appropriately urged those additions. The more difficult question to answer is how sustainable an apparently different approach will prove. We do not conclude that it is not sustainable, but that the factors itemized above make concern about sustainability the prudent course.

4. Overtime levels have exceeded levels generally considered efficient and effective and they reflect a normal consequence of reducing staffing levels too much.

Management has cited storms as a principal cause of high overtime levels, noting the contribution made not just by major storms, but by smaller ones, presumably those that do not justify exclusion from reliability performance data (*e.g.*, outage durations and frequencies). However, after we adjusted overtime to normalize levels where storms appear to have had a large effect, we still found overtime levels comparatively high. To the extent those adjustments did not capture months with high "non-major" events, we observe that normal planning for staffing includes restoration for more minor events - - although not without some need for overtime.

Accordingly, we found the high overtime levels corroborative of the fact that staffing cuts left CMP with less than an optimum level of resources to perform normal work, which includes a material level of restoration work and outside contractor expense in response to non-major weather events.

5. Rapid changes in the organization and those leading key parts of it have produced significant lapses in employee engagement and enablement.

Surveying of employee views since 2018 confirm the significant adverse consequences that have resulted from the failure to produce a Networks organization well-focused and stable enough to support constructive employee attitudes and effectiveness. Staffing has moved up and down precipitously and changed organizational locations, and those giving direction and signals to employees have changed rapidly, coming into Networks-related positions without prior substantial engagement in the organization, and often leaving so quickly as to give employees reason to doubt the lasting nature of what new leadership seeks to create or change. The poor engagement and enablement results shown by employee attitudes as Avangrid went through change after change amid high-level concerns about earnings performance both resulted from in major part and demonstrate in clear ways the inability of Avangrid to drive change in ways that preserved enough continuity and employee confidence to mitigate the disruption that accompanies change. That some of those changes were unduly driven by too strong an absorption with earnings concerns makes them more unfortunate.

We found encouraging the improvement measured in employee views of their engagement and enablement in 2020. Like 2020 advances we observed in other chapters, sustaining those improvements becomes a material question. Added importance here comes from the fact that, using management's own comparators, further improvement must occur to bring these drivers of effective employee performance to levels consistent with norms.

IV. Planning and Results

A. Chapter Summary

Avangrid develops Long Term Outlooks intended primarily for the investment community. The earnings targets of these outlooks drive utility planning, which occurs primarily at the Networks level. Therefore, the ensuing Avangrid planning for CMP does not support development of or give sufficient weight to reasonably unconstrained bottom-up views of what the operating companies (or even Networks as a whole) believe they need to do, instead requiring Networks and CMP planning to begin from an expectation of the utilities' contribution to meeting Avangrid financial expectations created for the investment community. Balancing of earnings goals with reliable utility operations has not been effective for CMP.

Forecasted rate base increases and aggressive management of O&M expenses through a series of initiatives have formed essential elements in Avangrid's continuing forecasts of earnings growth. Resource shortages grew in the wake of continuing organization and function change, staffing reductions and limitations, and a resulting need to fill talent gaps. As a result, plans for 2020 called for Networks to "establish critical resource plans," noting attrition, critical skills shortage, the duration required to develop skills, excessive overtime, and increasing staffing needs.

Networks has experienced major overruns in external services costs in each year from 2017 through 2020 and smaller overruns in employee costs. These increases have come despite continuous efforts to reduce employee counts and external expenses. As a result, Networks experienced significant gaps from forecasted net income (*e.g.*, 25 percent in 2019 and 13 percent in 2020). The repetition and size of those gaps have driven decisions about the resources that drive operational performance.

The Networks 2019 and 2020 strategic plans incorporated a Resiliency Plan and 1Networks initiatives to improve CMP reliability and operating performance, but earlier plans lacked specific initiatives or programs tied directly to reliability objectives. Planning specific initiatives for and dedicating capital and operating resources to reaching reliability objectives comprise an important aspect of maintaining and improving electric utility reliability.

B. Background

Strategic planning starts at the Avangrid level with the development of a Long-Term Outlook (LTO), with the investment community as a primary audience. The Avangrid LTO sets earnings and earnings growth targets that its Networks and Renewables subsidiaries in turn use to develop supporting strategic plans. The planning for and measurement of financial results for CMP has occurred primarily at the Networks level.

Using the targets set by the Avangrid LTO, Networks develops a strategic plan that includes the operations of all eight of its utilities, including CMP. Networks executives first set a purpose, mission, vision, values, and define key issues facing the businesses. They then develop long-term goals to pursue the vision, supported by objectives and initiatives that allow achievement of the goals. Implementation of the strategic plans includes the development of support plans, including workforce, regulatory, and business development individual plans. Capital investment and funding

plans comprise inputs into the LTO and complete the Networks strategic plans. Implementation also includes the building of Key Performance Indicators (KPIs) and performance scorecards and of budgeted financial statements. Leadership measures Networks and CMP financial results and performance to budget on quarterly and annual bases.

Capital expenditure plans and their results comprise a key component of the Networks and CMP strategic plans. The development, approval and funding of capital plans can have both immediate and long-lasting impacts on the quality and reliability of CMP's electric service. CMP requires effective capital planning and execution to maintain sound operating and reliability performance, including maintaining and upgrading asset health as required. A Networks management Reliability Plan developed in 2018 sought substantial improvement in CMP, NYSEG, and RGE electric system resiliencies to storm damage and improvement in network reliability performance. A CMP Resiliency Plan later developed in response to recurring interruptions in electric service caused by storm damage comprised a central capital expenditure program.

C. Findings

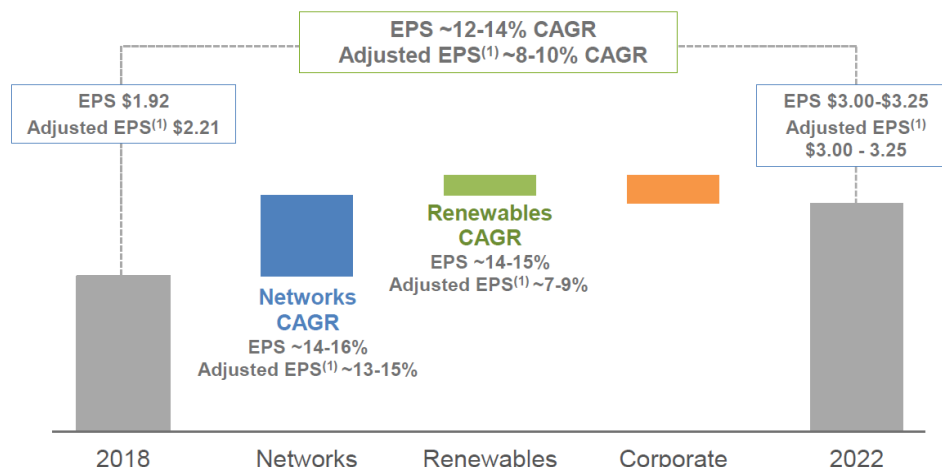
1. Avangrid Long-Term Outlooks

The Avangrid strategic planning processes set high-level financial goals and objectives for all of the holding company's businesses, leading the planning processes of its subsidiaries, including the operating utilities. The Avangrid LTO has for many years provided a five-year financial forecast presented to equity market investors. The versions prepared from 2016 through early 2020 have a very similar structure and direction, especially in the high-level goals set for Avangrid. For example, Avangrid included its Long-Term Outlook earnings goals (shown below) in February 2019 investor meetings, clearly stating the financial objectives for Avangrid through 2022, focusing on earnings per share (EPS) and compound annual growth rate (CAGR).

Avangrid Earnings Growth Goals

Long-Term Outlook Earnings Drivers

Revising EPS and Adjust EPS⁽¹⁾ CAGRs – '22 EPS



(1) See Appendix for calculation of Adjusted EPS and reconciliation to EPS.

Avangrid management has described this slide as showing the highest-level financial goals of the holding company, serving as a foundation, with subsequent planning for all the Networks companies developed to support achieving these goals at the Avangrid level. Management developed this LTO in late 2018 and presented it to investor groups in early 2019. A goal of 8 to 10 percent Compound Annual Growth Rate (CAGR) in Avangrid earnings has remained consistent since 2016. The “EPS” growth targets shown above represent GAAP earnings per share; “Adjusted EPS” removes the cost reduction expectations of its Forward 2020 programs, addressed in Chapter V (*Integration and Efficiency Improvement Programs*).

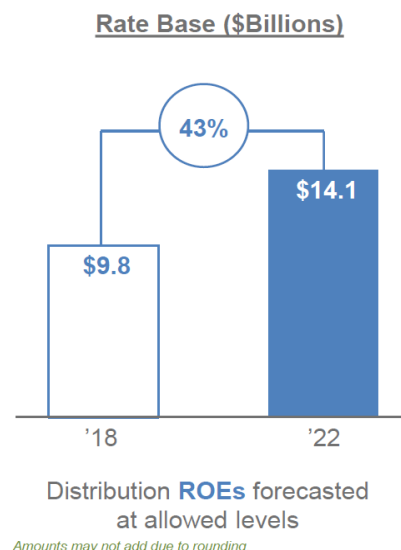
Avangrid recently revised and started its annual LTO process earlier, presenting the 2021-2025 LTO to investors in November 2020. The 2021 LTO includes more focus on improving safety and reliability in Networks, and emphasizes the importance that improving reliability has in enabling overall earnings growth.

The growth in rate base at its Networks utilities forms the most important earnings driver for Avangrid. The earnings growth shown above depends on a high (about nine percent) growth rate in Networks rate base, and assumes achievement of forecasted utility returns on equity, as shown in the following chart.

Networks Rate Base Growth

Networks Highlights

Rate Base CAGR ~9% ('18-'22)



Operating Highlights

Rate Base

- ↑ Investments
- ↑ Return of excess deferred tax assets per regulatory requirements (determined in next rate cases for NYSEG, RGE, UI, SCG & CMP),
- ↓ Depreciation

Also impacted by:

- Lower capital spending in '18 than expected
- Excess deferred income taxes (tax reform impacts)
- Lower spending assumptions on Brightline NERC requirements

An agreement reached in rate cases for its New York utilities serves as a major driver of large Networks rate base increases. Avangrid also announced in early 2019 a comprehensive Networks Resiliency Plan designed to “make our New York and Maine electric grids safer, more reliable and more storm resistant.” Avangrid announced related additional capital spending of \$2.0 billion and additional vegetation management spending of \$500 million over 10 years. CMP included costs for the initial Resiliency Plan in its 2018 rate case filing. Beyond rate base increases, Avangrid has also sought to support earnings goals by aggressively managing O&M expenses through initiatives like its Forward 2020+ programs.

2. Networks Strategic Plans

Strategic planning for the Networks utilities, including CMP, follows the Avangrid LTO process. The Networks strategic planning process begins with “stakeholder objectives” from the Avangrid Long-Term outlook, which management gears toward attaining earnings growth commitments to the investor community, as noted above. Defining Networks contributions to Avangrid long-term earnings goals forms the cornerstone of strategic planning for the utilities, including their capital allocation.

Networks developed its 2020 Strategic Plan to provide leadership with a view and plan for the business ahead of the annual budgeting process. That plan focuses primarily on the next three to five years. Networks began building the 2020 Strategic Plan using the existing 2019 Strategic Plan, applying to it an assessment of the business, validation of business goals, identification of strategic and tactical objectives and initiatives required for development of the financial and operational plans. Avangrid established the following, common “Purpose” for 2020:

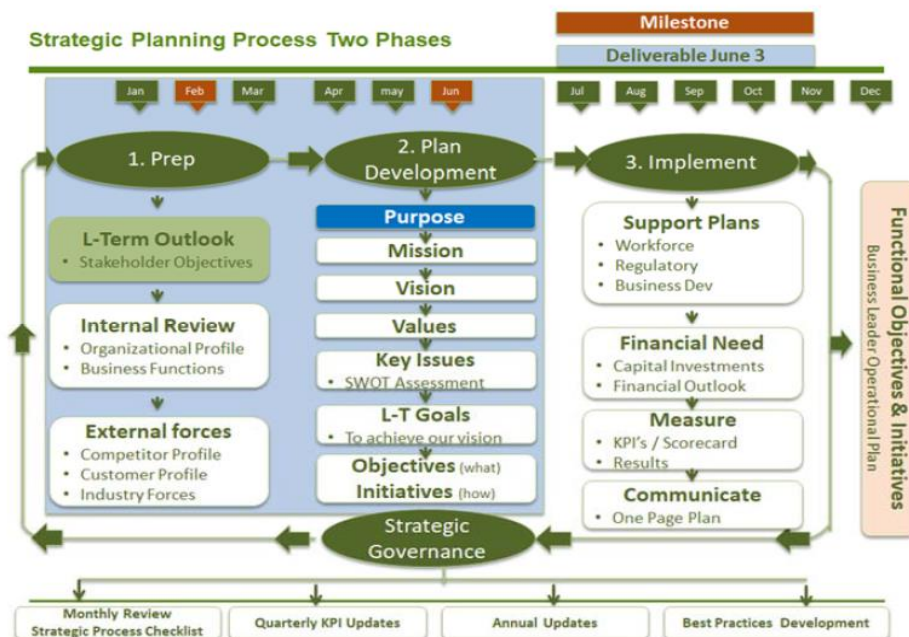
AVANGRID Purpose: Working together to deliver a healthier, more accessible clean energy model that promotes sustainable communities every day.

The Strategic Plan describes the performance of an assessment of Networks strengths, weaknesses, opportunities, and threats (SWOT analysis). The Strategic Plan also establishes in the company's words the following key strategic objectives over the next three to five years:

- *Enhancing the Resiliency of our system*
- *The Forward 2020+ Project: Reach a comparable level of operational efficiency as our top peers in the utility sector, thereby becoming a best in class utility*
- *Grid of the Future: Enabling the ongoing evolution of the utility industry and allowing for the efficient integration of Distributed Energy Resources (DER), net metering and other technology and regulatory mandates*
- *Develop growth initiatives that enable de-carbonization of the economy*
- *Smart Customer Solutions: Create sustainable value for our customers through innovation and technology*
- *Develop and Optimize resource plans.*

The following graphic depicts the 2020 Networks planning process from the LTO earnings goals to internal SWOT gap analysis to Networks goals/objectives/initiatives to the actual plans and implementation.

2020 Networks Planning Process



Executives performed a SWOT analysis of key issues from Networks' stated Purpose, Mission, Vision and Values. The SWOT assessment resulted in a rating and ranking of the Network's perceived status in each area, measured as the "importance rating" times the "gap to attain rating" for each topic. The most important topics identified by the executive group in each area, listed as highest impact gap first, were as follows:

- Strengths

- Brand image, Customer Trust, Global Brand (shareholder expectations)
- Regulatory Relationships (shareholder expectations)
- Dedicated Workforce (resources)
- Ability to Execute Vision (process/efficiency)
- Ability to Earn Returns (shareholder expectations)
- Weaknesses
 - Procurement not keeping pace, lack agility & rigidity in process (process/efficiency)
 - Lack of Agility - bureaucracy and ability to make decisions (process/efficiency)
 - Staffing Constraints (resources)
 - Recruitment and filling of open positions (resources)
 - Technology Platform (process/efficiency)
 - Aging Assets: Infrastructure and Workforce (reliability)
- Opportunities
 - Workforce Plans - create workforce of the future (resources)
 - Additional Transmission Investment (growth)
 - Mold Regulation
 - Resiliency Investments (reliability)
 - Talent Pipeline Growth (resources)
- Threats
 - Availability, Attraction & Retention of Skilled Resources (resources)
 - Political and Regulatory Atmosphere, State/Federal (stakeholder expectations)
 - Increasing Customer Expectations (stakeholder expectations)
 - Storm Performance (brand issue)
 - Technology, Cyber Security, Pace of change and ability to adapt (process/efficiency)
 - Customer/Regulator Willingness to pay for Network of Future (stakeholder expectations).

The SWOT assessment provided an overall view of areas for focus and set the stage for the development of the 2020 Objectives & Initiatives designed to achieve the high-level Strategic Objectives. The executive team developed ideas for mitigating the gaps identified in the SWOT analysis, setting the foundation for the creation of new initiatives for 2020 as well as validating the ongoing multi-year initiatives. The list of objectives and supporting initiatives developed also included the Forward 2020+ Mid-Period Assessment and 1Network initiatives, as shown below:

Networks 2020 Objectives and Initiatives

1. *Net Income Earnings Targets*
 - 1.1 *Successful Execution of Investment Plan/Net Operating Expenses*
 - 1.2 *Improve Federal and State Regulatory Relationships and outcomes*
 - 1.3 *Increase Pipeline of growth projects*
 - 1.4 *Formalize Process to increase understanding of competitive markets*
2. *Meet Customer Expectations at the lowest possible cost*
 - 2.1 *Implement Mid-Period Assessment and 1Networks (21 initiatives)*
 - 2.2 *Implement Continuous Improvement Initiatives*
3. *Meet Sustainability Objectives*
 - 3.1 *Support Avangrid Sustainability goals, objectives, programs*
4. *Top Quartile Customer Satisfaction*

- 4.1 *Improve Customer Experience - provide innovative new products and services*
- 4.2 *Optimize Resources in preparation to emergency response*
- 4.3 *Improve Stakeholder Communications before, during and after emergency events*
- 4.4 *Develop Customer Journey metrics through business processes; customer service, electric operations and gas operations (new service, field service work, outage management, etc)*
- 4.5 *Improve Customer First Focus through employee engagement plan*
- 5. *Create Workforce for the Future*
 - 5.1 *Optimize organizational structure and staffing including internal / external resources*
 - 5.2 *Attract, retain and develop key talent*
- 6. *Be a respected Corporate Citizen*
 - 6.1 *Utilize corporate sponsorships and donations*
 - 6.2 *Leverage and support employee volunteer efforts and prog*
 - 6.3 *Engage and develop key employees through participation in forums where they can be influencers representing Avangrid brand*
 - 6.4 *Leverage and Partner with Avangrid Foundation to support the communities we serve*
- 7. *Top Quartile Health and Safety Performance*
 - 7.1 *Integrate Avangrid H & S approach, programs and systems*
- 8. *Modernization of the Electric and Gas Networks*
 - 8.1 *Improve System Performance through automation and technology*
 - 8.2 *Enhance Gas safety and performance through the use of technology*
 - 8.3 *Enabling Customer Choice for distributed generation*
 - 8.4 *Electrification of the Economy - transportation, storage etc.*
- 9. *Top Quartile Reliability Metrics*
 - 9.1 *Reduce Asset Health Risk through the execution of the investment portfolio*
 - 9.2 *Execute Transforming Energy Resiliency Plan through the execution of the investment portfolio*
 - 9.3 *Decrease Contingency Risk*
 - 9.4 *Execute Process Enhancements to improve quality measures across gas business*

Management then further developed the key Strategic Objectives for Networks through 2022 to shape all strategic plans to meet the objectives. Management described the Resiliency Plan as an incremental \$1.9 billion, ten-year investment (subject to regulatory approval) to allow its infrastructure better to withstand severe weather and recover quicker from its impacts. Specific targets included replacement of 75,000-100,000 poles, installation of up to 2,000 miles of tree wire, selective undergrounding of up to 250 miles of existing overhead lines, increased distribution circuit automation and configuration, and significant vegetation management program and trimming specification enhancements.

Management also described its Forward 2020+ Vision and 1Networks programs noting a 2019 “Mid-Period Assessment” of progress in reaching its 2021+ vision. That assessment included two major components:

- Finding ways to deliver efficiency improvement in all identified areas to secure “substantial pre-tax benefits to align results with 2020 earnings outlook”
- Implementing “sustainable performance improvement and targeted earnings growth” and tracking toward “best-in-class operational efficiency, service, safety and reliability.”

Leadership formalized in late 2019 the 2020+ business transformation efforts into the 1Networks Project. This multi-year project employed a governance process and dedicated resources securing business transformation through seven projects.

Work in developing the 2020 Networks strategic plan also addressed “Enabling the Grid of the Future,” which involved support for and investment in “decarbonization” opportunities through enabling and adopting emerging technologies and non-wires alternatives. This enablement program also included measures to give customers greater control over energy usage and bills, and to integrate system planning functions and optimize operational decisions. Specifically identified areas of initiative included: energy storage, electric vehicles project, beneficial electrification, transmission growth, intelligent grid operations and centralized support services.

“Smart Customer Solutions” provided another focus of plans developed for 2020. Calling for increased focus on customer needs, this area of focus cited new products and services and using the technology platform to provide real-time customer data to “reinforce customer relationships.”

Apparently recognizing the resource issues that had grown in the wake of extended organization and function change, staffing reductions and limitations, and resulting need to fill talent gaps, the plans for 2020 also called for Networks to “establish critical resource plans.” This area of focus cited an aging work force, attrition, critical skills shortage, the duration required to develop skills, excessive overtime, and increasing staffing needs to support rate base growth demand and to execute recently developed programs supporting growth initiatives.

3. Networks and CMP Financial Results

The long-term planning processes at Networks described above includes CMP planning, annual budget planning, and monitoring of financial results. Networks’ measurement of financial results at the Networks and CMP levels compare actual results to annual budgets, and explains large variances from budgeted financial results.

Networks planners seek specific information from CMP managers in the annual budgeting processes, and operate under specific guidelines for developing budgeting by expense type. In general, the budgeted expense level for each of the Networks utility companies approximates the expense dollars approved in rates by state Commissions. For CMP, management tends to budget expense levels at the allowed levels in rates from the Maine Commission. Avangrid management advised that it based CMP Distribution expense levels on a 2012 rate case test period until March 2020, when new rates became effective.

Networks bases its budgeting processes on earning each utilities’ allowed return on equity (ROE), and budgets accordingly to meet these levels. To the extent that planners anticipate a failure to meet allowed ROEs, they address the deficit by introducing “unallocated efficiencies” that target the level of expense reductions required to conform expected to actual ROE. From 2017 through

2019, management used these unallocated efficiencies amounts to target cost reduction efforts associated with Forward 2020, and later Forward 2020+ (see the Integration and Forward 2020 Chapter for details).

The following table shows annual variance reports for Networks for 2016 through 2020 with the approved budgets, actual results, and variances from budgets.

Networks Variances to Budgets 2016-2020

	2016			2017			2018			2019			2020		
	Budget	Actuals ¹	Variance %	Budget	Actuals	Variance %	Budget	Actuals	Variance %	Budget	Actuals ¹	Variance %	Budget	Actuals	Variance %
Gross Margin	\$3,219,638	\$3,005,476	-6.7%	\$3,220,333	\$3,191,450	-0.9%	\$3,110,005	\$3,223,282	3.6%	\$3,254,750	\$3,213,057	-1.3%	\$3,430,066	\$3,516,905	2.5%
Operating Expenses															
Personnel	\$1,004,139	\$ 941,612	6.2%	\$ 963,914	\$ 999,730	3.7%	\$ 966,903	\$1,005,401	4.0%	\$ 929,160	\$ 953,133	2.6%	\$1,002,394	\$1,034,355	3.2%
Capitalized Staff Costs	\$ (232,124)	\$ (262,345)	13.0%	\$ (275,316)	\$ (281,396)	2.2%	\$ (248,569)	\$ (244,782)	-1.5%	\$ (249,126)	\$ (263,761)	5.9%	\$ (288,553)	\$ (274,218)	-5.0%
External Services	\$ 506,850	\$ 496,169	2.1%	\$ 517,063	\$ 610,057	18.0%	\$ 566,466	\$ 692,210	22.2%	\$ 606,181	\$ 724,673	19.5%	\$ 659,804	\$ 814,317	23.4%
Other Oper Revenues	\$ (56,691)	\$ (86,146)	52.0%	\$ (60,100)	\$ (106,218)	76.7%	\$ (103,559)	\$ (116,300)	12.3%	\$ (108,883)	\$ (117,567)	8.0%	\$ (100,742)	\$ (93,453)	-7.2%
Other Taxes	\$ 481,023	\$ 462,883	3.8%	\$ 514,606	\$ 484,615	-5.8%	\$ 516,319	\$ 512,935	-0.7%	\$ 521,937	\$ 525,522	0.7%	\$ 540,439	\$ 543,010	-0.5%
Net Oper Expenses	\$1,703,197	\$1,552,174	8.9%	\$1,660,167	\$1,706,788	2.8%	\$1,697,560	\$1,849,464	8.9%	\$1,699,269	\$1,822,000	7.2%	\$1,813,342	\$2,024,011	11.6%
Depreciation & Amort	\$ 588,772	\$ 568,055	3.5%	\$ 625,497	\$ 594,160	-5.0%	\$ 615,004	\$ 638,308	3.8%	\$ 640,396	\$ 698,887	9.1%	\$ 740,373	\$ 743,925	0.5%
Operating Income	\$ 927,669	\$ 885,247	-4.6%	\$ 934,669	\$ 890,502	-4.7%	\$ 797,441	\$ 735,510	-7.8%	\$ 915,085	\$ 692,170	-24.4%	\$ 876,351	\$ 748,969	-14.5%
Income Taxes	\$ 292,065	\$ 289,644	0.8%	\$ 319,811	\$ 303,763	-5.0%	\$ 163,860	\$ 171,366	4.6%	\$ 194,251	\$ 154,479	-20.5%	\$ 206,904	\$ 175,974	-14.9%
Net Finance Expenses	\$ 154,304	\$ 116,067	24.8%	\$ 95,965	\$ 90,856	-5.0%	\$ 70,781	\$ 86,635	22.4%	\$ 101,325	\$ 74,274	-26.7%	\$ 42,245	\$ 27,485	-34.9%
Net Income	\$ 481,300	\$ 479,536	-0.4%	\$ 518,893	\$ 495,883	-4.4%	\$ 562,800	\$ 477,509	-15.2%	\$ 619,509	\$ 463,417	-25.2%	\$ 627,202	\$ 545,510	-13.0%

Overall Networks results show major overruns in external services of between 18 and 22 percent in each year from 2017 through 2019, followed by a 23.4 percent overrun in 2020. More modest personnel cost overruns between 3 and 4 percent annually occurred in each of these years. This growth in both internal and external costs came despite Forward 2020 efforts that sought significant reductions in Networks employee counts and external expenses. As a result, Networks experienced significant gaps from forecasted net income, with their amounts 25 percent under budget in 2019 and 13 percent in 2020.

The following table shows the income statements for CMP Distribution for 2016 through 2020, comparing budgeted and actual results. The chart excludes CMP Transmission - - treated as a separate line of business.

CMP Distribution Variances to Budgets 2016-2020

	2016			2017			2018			2019			2020		
	Budget ¹	Actuals	Variance %	Budget	Actuals	Variance %	Budget ²	Actuals ³	Variance %	Budget ⁴	Actuals ⁵	Variance %	Budget	Actuals	Variance %
Gross Margin	\$ 289,438	\$ 254,885	-11.9%	\$ 265,853	\$ 293,289	10.3%	\$ 255,742	\$ 260,844	2.0%	\$ 266,399	\$ 270,082	1.4%	\$ 254,091	\$ 329,135	29.5%
Operating Expenses															
Personnel	\$ 103,164	\$ 93,045	-9.8%	\$ 88,532	\$ 100,549	13.6%	\$ 86,394	\$ 97,532	12.9%	\$ 94,874	\$ 89,808	-5.3%	\$ 92,192	\$ 112,512	22.0%
Capitalized Staff Costs	\$ (30,150)	\$ (30,975)	2.7%	\$ (30,272)	\$ (27,955)	-7.7%	\$ (25,924)	\$ (28,951)	11.7%	\$ (28,850)	\$ (32,415)	12.4%	\$ (39,141)	\$ (35,821)	-8.5%
External Services	\$ 76,785	\$ 67,542	-12.0%	\$ 72,497	\$ 100,011	38.0%	\$ 76,334	\$ 94,588	23.9%	\$ 68,527	\$ 94,679	38.2%	\$ 59,230	\$ 143,729	142.7%
Other Oper Revenues	\$ (22,646)	\$ (31,106)	37.4%	\$ (31,364)	\$ (39,631)	26.4%	\$ (34,126)	\$ (36,420)	6.7%	\$ (30,168)	\$ (34,210)	13.4%	\$ (31,747)	\$ (32,669)	2.9%
Other Taxes	\$ 39,566	\$ 23,619	-40.3%	\$ 22,688	\$ 26,359	-16.2%	\$ 23,640	\$ 29,333	-24.1%	\$ 31,260	\$ 32,417	-3.7%	\$ 34,510	\$ 33,998	-1.5%
Net Oper Expenses	\$ 166,719	\$ 122,125	-26.7%	\$ 122,081	\$ 159,333	-30.5%	\$ 126,318	\$ 156,082	-23.6%	\$ 135,643	\$ 150,278	-10.8%	\$ 115,044	\$ 221,749	-92.8%
Depreciation & Amort	\$ 44,148	\$ 61,015	38.2%	\$ 63,846	\$ 52,849	-17.2%	\$ 61,005	\$ 68,343	-12.0%	\$ 63,202	\$ 68,772	-8.8%	\$ 75,779	\$ 75,432	-0.5%
Operating Income	\$ 78,571	\$ 71,745	-8.7%	\$ 79,926	\$ 81,107	1.5%	\$ 68,419	\$ 36,419	-46.8%	\$ 67,554	\$ 51,031	-24.5%	\$ 63,268	\$ 31,954	-49.5%
Income Taxes	\$ 24,032	\$ 18,220	-24.2%	\$ 30,015	\$ 15,114	-49.6%	\$ 2,724	\$ 8,343	-206.3%	\$ 10,214	\$ 4,623	-54.7%	\$ 14,432	\$ 2,436	-83.1%
Net Financing Costs	\$ 13,597	\$ 12,119	-10.9%	\$ 7,259	\$ 6,970	-4.0%	\$ 10,300	\$ 8,344	-19.0%	\$ 11,818	\$ 14,103	19.3%	\$ 6,288	\$ 2,890	-54.0%
Net Income	\$ 40,942	\$ 41,406	1.1%	\$ 42,652	\$ 59,023	38.4%	\$ 55,395	\$ 19,732	-64.4%	\$ 45,522	\$ 32,306	-29.0%	\$ 42,548	\$ 26,628	-37.4%

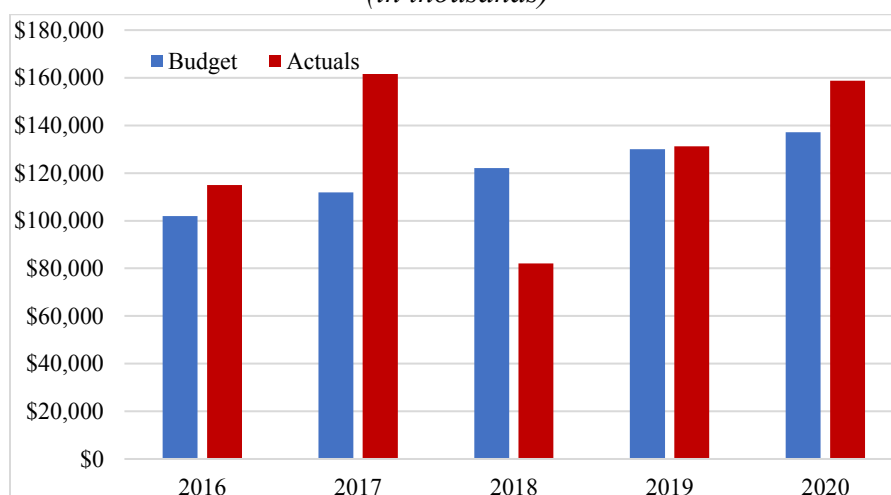
CMP has experienced expense overruns larger than those of Networks as a whole in external services (38 percent in 2017, 24 percent in 2018, and 38 percent in 2019). In 2020, CMP had extreme external service cost overruns of 143 percent. CMP's internal personnel cost overruns well exceeded those of Networks as a whole (13 to 14 percent in 2017 and 2018, and 22 percent in 2020). Clearly, Avangrid's Forward 2020 efforts to significantly reduce employee count were

not producing the hoped-for contributions to CMP net earnings. CMP's overruns in personnel and external costs primarily drove negative net income variances of 64 percent in 2018 and 37 percent in 2020.

4. Networks and CMP Capital Expenditures

The Networks investment planning (IP) group manages planning for CMP capital expenditures. This Networks group develops long-term capital expenditure plans for each Networks' eight utilities. The group separates planning for transmission and distribution capital expenditures at CMP. The following chart shows the budgeted and actual capital expenditures for CMP distribution from 2016 through 2020.

CMP Distribution CAPEX
(in thousands)



Large variances from CMP-budgeted amounts occurred in 2017 and 2018. Management reports the October 2017 storm event as producing \$32.2 million of unplanned capital investment applied to repair broken poles and transformers, and to address other storm damage. This unplanned investment amount represented about 65 percent of the CMP distribution variance for 2017. In addition, CMP re-classified about \$7 million of capital expenditures from transmission to distribution for 2017, further contributing to the distribution spend above budget.

A 2018 Maine Commission order allowed recovery of \$9 million of the 2017 storm costs as a deferred expense. CMP underspent the 2018 budget for betterment (\$4 million), distribution line inspection (\$6 million), and distribution lines (\$11 million), as it flowed expenditures to needs created by the October 2017 storm. Much of the 2017 storm work produced temporary repairs to restore power to customers as quickly as possible. Management devoted both internal and contract resources to making permanent repairs. Management also delayed a "Spectrum" project by approximately \$3 million in 2018 due to vendor contract issues, and highway projects requested by municipalities were less than budgeted, creating a further under-spend of \$3.6 million.

2020 capital spending, shown in the preceding chart, reflects a significant increase in budgeted capital expenditure levels to \$137.1 million. Avangrid management advised that it revised the

original CMP 2020 capital expenditure budget, and that actual spending through the end of the year reached \$158.8 million.

Networks IP prepares long-term capital expenditure plans for each Network utility, including them in strategic plans. Capital plans for the past several years extend across a 10-year horizon, divided into “Ongoing CAPEX” and “Growth CAPEX” components. The next two charts show the same Networks 10-year forecast for capital expenditures (each including AFUDC) included in the 2019 and 2020 Networks strategic plans. The first of the charts addresses the Ongoing category.

Networks “Ongoing” CAPEX

Company (Ongoing CAPEX)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	CAGR (2017 - 27)	2019 Investor Day (2018 - 27)	2018 Investor Day (2018 - 27)
NYSEG - Electric	279	370	365	261	284	299	398	435	462	471	436	4.6%	3,781	3,352
NYSEG - Gas	74	91	89	114	96	104	101	100	97	100	100	3.1%	993	806
RG&E - Electric	218	216	264	310	228	242	208	219	190	168	138	-4.5%	2,184	1,863
RG&E - Gas	84	80	68	94	99	76	80	83	80	86	83	-0.1%	831	794
CMP - Distribution	162	103	112	112	101	91	93	94	94	96	97	-4.9%	993	980
CMP - Transmission	88	98	123	85	58	79	63	47	40	51	59	-4.0%	703	591
CMP - Mepco	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TransCo/NECEC	-	-	-	-	-	-	-	-	-	-	-	-	-	53
MNG	3	6	6	7	6	6	6	6	6	6	7	7.5%	61	0
Corporate ASC	(22)	(18)	5	5	5	5	5	5	5	5	5	-	30	1,017
UI - Distribution	103	106	105	124	103	92	81	91	81	80	78	-2.7%	941	757
UI - Transmission	73	51	45	73	88	97	55	80	79	94	80	1.0%	740	485
Connecticut Natural Gas	70	55	49	52	52	50	48	49	50	51	52	-3.0%	505	710
Southern Connecticut Gas	53	65	72	82	75	74	73	74	76	77	78	4.0%	746	152
Berkshire Gas Company	18	18	18	19	21	14	21	15	15	15	16	-1.5%	172	408
Corporate UIL	35	36	57	44	55	51	39	52	41	26	30	-1.3%	432	-
Total	1,238	1,277	1,379	1,381	1,270	1,279	1,271	1,350	1,316	1,327	1,260	0.2%	13,111	11,968

CMP distribution ongoing capital expenditures amounted to just over \$100 million in 2019, decreasing to about \$97 million per year by 2027. These plans generally include the approximately \$100 million of annual capital expenditures built into CMP rates.

The next chart shows forecasted “growth investments” by the Networks distribution utilities through 2027. CMP distribution counts two types of growth distribution investments within this category: Brightline investments starting in 2020, and Resiliency Plan investments also starting in 2020. NYSEG and RGE Resiliency investments began in 2018, but CMP did not start until 2020. The Resiliency category accounts for most of CMP’s forecasted growth dollars - - growing from \$8 million in 2020 to \$37.4 million in 2024 and after. However, CMP Resiliency capital spending later decreased significantly in the 2020-2025 capital forecasts, from \$166 million to \$101 million in the most recent forecast.

Networks Distribution "Growth" CAPEX

PROJECTS TOTAL (M\$)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2019 Investor Day (2018-27)	2018 Investor Day (2018-27)
NY - AMI	6.8	12.5	0.0	93.7	187.4	145.3	92.2	0.0	0.0	0.0	0.0	531.0	526.5
NYSEG Electric	5.5	5.7	0.0	48.2	96.4	76.2	47.8	0.0	0.0	0.0	0.0	274.4	279.6
NYSEG Gas	1.3	2.1	0.0	11.9	23.7	18.7	11.6	0.0	0.0	0.0	0.0	68.1	58.2
RGE Electric	0.0	3.3	0.0	24.0	48.0	35.9	23.6	0.0	0.0	0.0	0.0	134.9	136.8
RGE Gas	0.0	1.3	0.0	9.6	19.2	14.4	9.1	0.0	0.0	0.0	0.0	53.7	51.9
DSIP \ Resiliency	0.0	28.9	56.4	98.3	163.0	168.9	186.0	185.7	186.8	188.2	194.8	1457.1	392.5
NYSEG Electric	0.0	23.9	45.3	77.5	121.7	127.3	141.3	140.9	142.1	143.5	148.2	1111.6	353.4
NYSEG Gas	0.0	0.2	0.8	0.4	0.7	0.1	0.0	0.0	0.0	0.0	0.0	2.1	0.0
RGE Electric	0.0	4.6	10.0	20.3	40.6	41.5	44.8	44.8	44.8	44.8	46.6	342.6	39.1
RGE Gas	0.0	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
CMP-D Resiliency	0.0	0.0	0.0	8.0	16.0	32.0	35.2	37.4	37.4	37.4	37.4	240.8	1.1
CMP-D Brightline	0.0	0.0	0.5	1.9	1.8	4.6	5.1	11.1	9.5	0.0	0.0	34.5	0.0
TOTAL	6.8	41.4	56.9	201.9	368.2	350.8	318.5	234.1	233.7	225.6	232.2	2263.4	920.1

DSIP - Distribution System Implementation Plan (NYSEG - Renewing the Energy Vision)

5. CMP Resiliency Plan

Examining Networks capital expenditure forecasts from 2016 through 2019 showed no CMP distribution dollars dedicated to growth programs (or DSIP/ Resiliency). By contrast, NYSEG and RGE capital plans included substantial growth program dollars for AMI, DSIP/Resiliency and "new growth" before 2019. Networks had established during 2018 a Networks Resiliency Plan, specifically to address storm-related operating issues. Storm issues had affected NYSEG and CMP particularly, contributing to significant operating and customer-service problems.

A formal resiliency program did not extend to CMP until 2020, and the company did not categorize projects as resiliency-related prior to this date. Management did execute some "system betterment" projects having resiliency benefits, but the system-betterment budget category covered more broadly-defined system enhancements.

Management developed a CMP resiliency plan during 2019, seeking to reduce the numbers of customers experiencing outages and the time to restore service following them. The scope of the plan covers all outages, storm-related or not, and it extends to storm events of all designated magnitudes ("tiers"). The CMP plan has a ten-year cycle and operates on a circuit-by-circuit basis, prioritizing worst-performing circuits. Management considers tree contacts (including falls of "hazard" trees located off CMP's rights-of-way) as the primary outage cause.

Two of the CMP plan's activity types (enhanced vegetation management and hardening existing infrastructure) seek to reduce outage frequency. The third, network reconfiguration, accompanied by automation, seeks to accelerate restoration (but some can also reduce frequency). These are classically employed outage frequency and duration mitigation measures, which utilities have employed for many years. Prioritization according to worst circuit reliability performance has also characterized outage electric utility mitigation programs for a long time. CMP reported that its Resiliency Plan applied prioritization based specifically on circuit resiliency performance during storm events, as opposed to total performance under all conditions.

CMP's enhanced vegetation management (an operating expense) involves "ground-to-sky" tree trimming and more aggressive targeting and removal of hazard trees. Another outage frequency mitigation measure involves capital expenditures to harden distribution equipment (e.g., poles, crossarms, wires) using more robust construction practices and materials and following a new Avangrid Distribution Resiliency Guide. This guide also addresses the use of "tree wire," which substitutes covered conductors capable of withstanding temporary contact with tree branches for more commonly used bare primary conductors.

Reconfiguration and automation change circuit topology using circuit-specific combinations of actions to reduce line lengths and customer numbers at risk of an externally caused outage. These capital dollars can go, for example, to upgrading and adding more circuits and lines, increasing ties between circuits, and upgrading or adding substations. Accelerating automation investments (e.g., SCADA, tie switches, and reclosers) permit automatic isolation of circuit segments to reduce numbers of customers affected by outages and their duration.

CMP's Resiliency Plan initially developed a plan for each of the 101 worst-performing circuits, considering the best blend of all available mitigation measures. The work for 2019-2020 covered 12 worst-performing CMP circuits. CMP's rate request from its 2018 case requested a \$6.2 million increase in the 2020 operations and maintenance budget for vegetation management work on these 12 circuits. CMP also proposed to invest \$25.7 million (\$8.2 million in 2019; \$17.5 million in 2020) in hardening, automation, and topology for the initial twelve circuits.

The Commission declined to provide additional funding for the Resiliency Plan, but directed CMP to proceed with the specific resiliency measures developed to resolve customer complaints in the Jackman region - a test region that will support assessment of the benefits of such measures and the value of similar resiliency measures in the rest of the CMP distribution system. CMP reduced its 2020 budget for resiliency investments from \$16 million to \$8 million, and the number of circuits addressed to four after this decision.

As of December 2020, CMP reported actual spending of about \$1.5 million on the Resiliency Plan in 2019, spending of \$9.8 million in 2020, and an additional planned \$8.9 million in 2021, as shown below.

CMP Resiliency Plan 2019-2021

Resiliency Project	2019 Actuals	2020 11 month Actuals + 1 month Forecast	2021 forecast	Portion of 2021 Forecast Carried Over	Project status
Alfred - 687D1	\$1,084,350	\$1,236,738	\$37,500	\$37,500	Project essentially complete
Alfred - 667D2		\$982,272	\$1,454,375		Phase one completed in 2020 Phase 2 planned 2021 completion
Dover - 834D2		\$891,404	\$2,660,000		Phase one completed in 2020 Phase 2 planned 2021 completion Phase 3 planned 2022 completion
Farmington - 466D1TIE471D1		\$1,870,133	\$1,200,000		Phase one completed in 2020 Phase 2 planned 2021 completion Phase 3 planned 2022 completion
Skowhegan - 823D2	\$419,941	\$4,845,114	\$3,581,250		Phase one completed in 2019 Phase 2 planned 2020 completion Phase 3 planned 2021 completion
Total	\$1,504,291	\$9,825,661	\$8,933,125	\$37,500	

The 1Networks program to improve electric operations was initiated later in 2019, and is a related set of initiatives that is described in the Integration and Forward 2020 chapter.

D. Conclusions

1. Strategic planning and budgeting for capital expenditures and expenses has occurred at Networks, and is not sufficiently focused on CMP operations.

Strategic planning for CMP, including capital allocation, is driven by earnings-growth goals set by Avangrid holding company parent. Through its annual LTO process, Avangrid sets earnings goals for all of its businesses, including the Networks utilities and Renewables. The Avangrid LTO displays a five-year financial forecast presented to equity market investors annually. The Avangrid LTO processes have consistently set high-level financial goals of 8 to 10 percent compound earnings growth during the 2016 to 2020 period. The high-level financial goals of the holding company precede and set targets for Networks planning, which in turn are built to attain these goals.

Capital budgeting should reflect a balance between financial goals and bottom-up analyses of expenditures needed to sustain effective service quality and reliability. We found Avangrid's process unduly weighted toward meeting financial goals, with that imbalance both adversely affecting bottom-up analysis and overweighting final budget decisions toward financial goals. While such earnings-related goals are not unusual for utility holding company planning, the effective balancing of such goals with reliable utility operations has not been evident at Avangrid (before 2020), especially in the case of CMP.

Notably, growth in rate base at the Networks utilities comprises Avangrid's main earnings driver. LTO plans between 2016 and 2020 have forecasted annual Networks rate base growth at between 7 and 9 percent. The New York utilities have proven a stronger draw on Networks capital allocation in recent years than has CMP, primarily driven by New York rate case decisions. Capital investment results strongly suggest that rate case decisions tend more to lead than follow capital allocation among the Networks utilities.

2. Networks and CMP did not focus strongly on initiatives or programs to accomplish reliability objectives prior to 2019.

The Networks 2019 and 2020 strategic plans incorporated a Resiliency Plan and 1Networks initiatives to improve CMP reliability and operating performance. However, prior to 2019, Networks did not have specific initiatives or programs tied directly to reliability objectives from its strategic plans. We consider planning specific initiatives for and dedicating capital and operating resources to reaching reliability objectives an important aspect of maintaining and improving reliability at CMP, like all utilities.

The Networks strategic plans for 2017 and 2018 included general values of "Reliability and Quality," with associated long-term goals of deploying a fully modernized distribution network producing top-quartile reliability metrics. Networks and CMP did not appear to operate under specific initiatives or programs to achieve these long-term goals. We found significantly clearer

efforts to reduce costs driven by the achievement of strategic plans focusing on earnings goals. Significant reliability, customer service, and resiliency issues arose in 2017 and 2018, particularly at CMP and NYSEG.

The Networks strategic plan in early 2019 included goals, objectives and initiatives related to reliability, following the outline of a comprehensive “Resiliency Plan” developed in 2018. The Resiliency Plan was to “make our New York and Maine electric grids safer, more reliable and more storm resistant.” Avangrid announced related increased capital spending of \$2.0 billion and additional vegetation management spending of \$500 million over 10 years. The plan set an overarching goal of “Top Quartile Reliability Metrics,” with specific objectives and initiatives to achieve.

The 2019 reliability objectives, and initiatives included the following, noting their connection to investment (*i.e.*, rate base growth with emphasis added):

- Reducing “Asset Health Risk through the execution of the *investment portfolio*”
- Developing and announcing a “10-year distribution resiliency *investment plan*” to improve system safety and reliability
- Implementing a “Transforming Energy Resiliency Plan through the execution of the *investment portfolio*”

The 2020 Networks strategic plan added three initiatives developed to meet the same reliability goals and objectives:

- “SAIDI/SAIFI/CAIDI”
- Improve asset health and resiliency by prioritizing investments based on the results of semi-annual asset health assessments
- “Transformation Plan” (1Networks).

Avangrid measures “top quartile reliability metrics” using the traditional measures of SAIDI, SAIFI, and CAIDI. The goals and performance scorecards for reliability vary by operating company and by the specific state being measured. However, Avangrid management considers the first quartile reliability metric “aspirational” - - and difficult to attain using aging electric systems like those it says it operates in Maine and New York. The then Networks CEO observed that operating and reliability objectives, initiatives, and metrics were not met from 2016 through 2018. The New York and Maine electric systems remained vulnerable to weather events, both major and not.

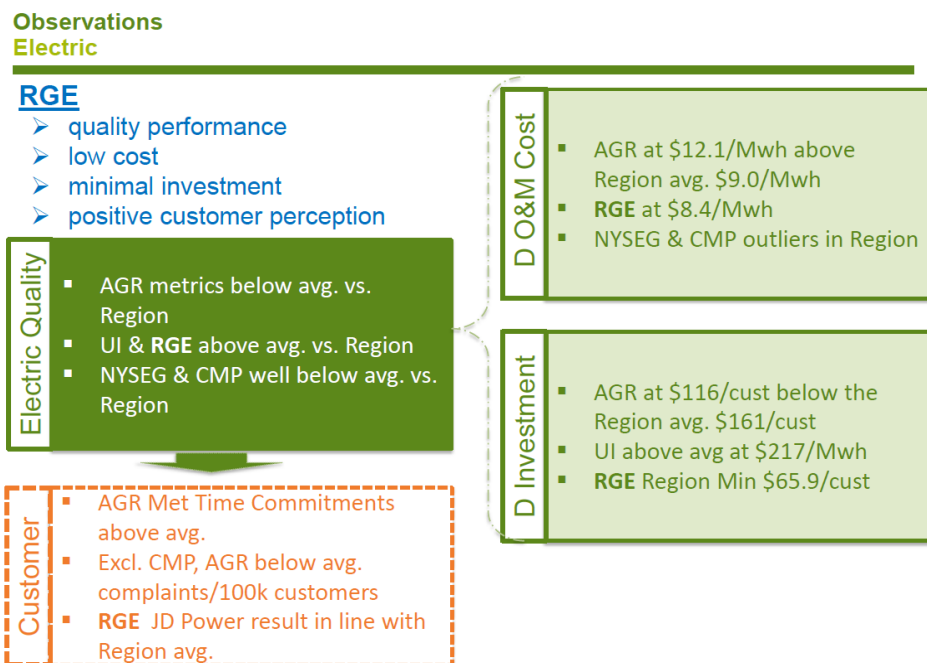
Avangrid management says that it developed the Resiliency Plan in response to storms and other interruptions and their effect on reliability, specifically for the New York and Maine assets. UIL developed a 10-year resiliency program starting in about 2005 focusing on asset condition and aging assets. The current Resiliency Plan used the UIL program as a model.

3. The CMP distribution system has long experienced investment shortfalls.

The Iberdrola CEO, the Networks CEO, and other Networks managers have acknowledged that under-investment has contributed to persistent reliability issues at Networks, including CMP. Avangrid asset managers also acknowledge under-investment in distribution assets over more than

the last five years, identifying CMP and NYSEG infrastructure as aging. An internal Avangrid Networks benchmarking study from November 2019 compared investment, expenses and various types of operating and customer service performance of each operating utility against other regional and national utilities, using 2018 annual data. The next illustration summarizes the results.

November 2019 Electric System Benchmarking

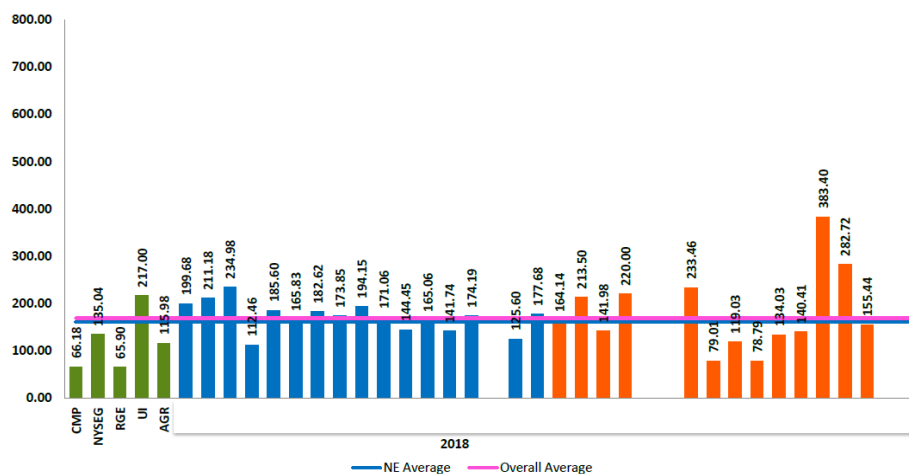


The benchmarking “observations” about service quality place NYSEG and CMP below both other regional utilities and affiliates UI and RGE. That observation is underscored by further observations placing distribution investment and O&M expenditures at comparatively very low levels as well. This slide also shows that electric quality issues have caused customer service issues, especially at CMP.

The following slide shows Avangrid’s benchmarking analysis of depreciated investment levels on a per megawatt basis for each of its electric utilities and compares them with other regional and national utilities. CMP and RGE at about \$66/MWh have the lowest investment levels of any of the regional, national or Avangrid utilities benchmarked. Distribution utilities have different geographic, density, demographic, and other differentiating characteristics; however, such a measure can identify outlying investment levels, as is the case for CMP.

Distribution Capital Investment Benchmarking

D Investment \$ / Customer - External A
Electric

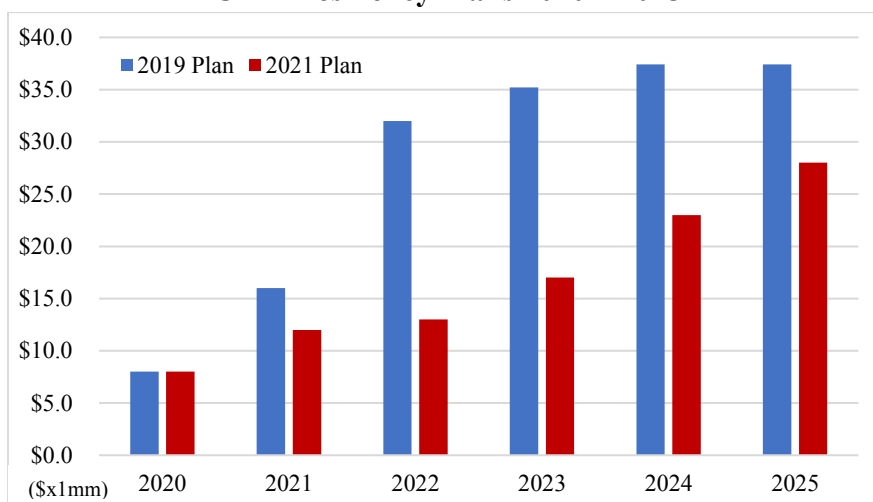


The aging infrastructure in certain of the Avangrid utilities is a problem that provides the “worst of situations for reliability,” according to the Networks CEO. However, Avangrid management also notes that improving the under-invested status depends on regulatory support, as customers must be able to absorb additional investment costs. The aging asset base at CMP is also acknowledged to lack resiliency to storm damage, causing high levels of overtime and external contractor cost overruns that have been an ongoing issue for CMP and Networks.

4. The CMP Resiliency Plan has had low levels of capital expenditure spending through 2020, and has reduced spending levels in future years after a rate case decision.

Prior to 2019, CMP did not employ a formal resiliency plan or categorize spending as resiliency-related. The first, 2019 plan developed for CMP included capital spending beginning at \$8 million in 2020, \$16 million in 2021, and later growing to over \$35 million annually in 2023 through 2025 (see the following chart).

CMP Resiliency Plans 2020 – 2025



The blue bars in the chart show initially planned resiliency capital spending of \$166 million for 2020-2025. Introduced in its 2018 distribution rate case filing, management supplemented it in rebuttal testimony to address an initial 12 circuits, proposing to spend \$25.7 million over an initial two-year period. Following a February 2020 Commission rate decision that did not pre-approve the expenditures, CMP reduced its 2020 budget for resiliency investments from \$16 to \$8 million and the number of circuits addressed to four.

December 2020 updates show CMP spending of about \$1.5 million on the Resiliency Plan in 2019, with an expected \$9.8 million in 2020 and another \$8.9 million in 2021. The latest Networks strategic plan (for 2021-2025), shown in the red bars in the preceding chart, incorporates reductions from \$166 million to \$101 million as compared with the original CMP Resiliency Plan.

5. Networks' multi-state organization structure for Investment Planning has disadvantaged CMP in securing capital allocations.

Comparisons with regional and national providers support a conclusion of underinvestment in the CMP distribution system, which management has acknowledged. The organization structure and capital allocation process performed in common for all the Avangrid utilities in the ASC Networks Investment Planning group has contributed.

Investment Planning directly reports to the VP of Asset Management and Planning, headed by a career employee with many decades of hands-on infrastructure-related experience. That VP reports to the Networks Senior Vice President-Regulatory (who does not have such experience) - - unusual for a service unit responsible for planning needed network facilities and for allocating the capital needed to develop and execute them. Significant differences among the states in ratemaking processes for capital investments contribute to CMP's disadvantage. The New York process employs forecasted and pre-approved test periods for capital expenditures, which addresses lag in rate recovery for projects and expenditures approved in rate cases. The more traditional and prevalent Maine approach has used historic test periods to address capital expenditures in Maine, based on an "attrition method" that effectively produces a 3- to 5-year historical average.

The discrepancy in regulatory treatment of incremental capital expenditures makes investments in the New York electric utilities to be much more financially attractive for Avangrid than that for CMP and Maine utilities. The disadvantage has heightened given the primacy of Avangrid's focus on earnings (and ongoing inability to meet the investor expectations regarding them).

Avangrid management recognizes the challenge that Maine's regulatory structure imposes in comparison to New York's, noting that "CMP is always chasing the money," and that "CMP is put in a bad spot due to capital recovery issues." Clearly, CMP is at a competitive disadvantage compared to the New York utilities regarding capital allocation. For example, CMP distribution in 2020 has a one-year rate order with about \$100 million of capital expenditures in rates, with no incremental capital expenditures for the Resiliency Plan, meaning that CMP will not get immediate capital recovery in 2020 for every dollar above \$100 million.

Strategic plans before 2020 showed no dollars for CMP "growth projects" beyond base, ongoing capital expenditures for distribution. At the same time, the NYSEG and RGE electric and gas units had "business growth programs" including DSIP, AMI and Brightline initiatives with significant capital commitments starting in 2018. Later, the 2019 Networks strategic plan included NYSEG and RGE investments in DSIP/Resiliency Plan starting in 2019; CMP resiliency spending was not planned until 2020.

Avangrid management has noted that "we would like to see double the 2020 CMP resiliency spending, or at least \$16 million where only \$8 million is planned."

There has recently been a positive change. Investment Planning initiated in 2020 a new capital planning processes, reportedly based on the "best practices" of Scottish Power. As of the end of October 2020, CMP – Distribution capital expenditures were expected to be \$151.2 million in 2020, although Avangrid estimated recovery in rates of only \$96.2 million in the 2020 rate case decision. CMP planned to spend \$55 million more than its allowed capital recovery in current rates, a significant departure from previous capital allocations from Networks IP.

Another positive development in 2020 came in the planning process's inclusion of more input from CMP executives in the capital budget decision-making. Representatives from Investment Planning and CMP operations held several working sessions to analyze budget requests and prioritize project work. An additional review by key CMP executives followed; notably it included the interim CEO and other executives. This prioritization process resulted in a reduction from the original business area capital requests of \$194.5 million to \$150.0 million, but still a large increase over previous, restricted capital spending levels, especially those of 2018. Increased involvement of CMP employees and executives in the capital planning and allocation process for 2021 resulted in more beneficial focus on operations and reliability.

Even if sustainable, in answering the central question of this audit, it remains fair to conclude that, to date, the Avangrid organization, methods, and results that produce distribution investment plans for CMP have contributed to operating and service problems. While hopefully sustainable, optimism that the changes will continue requires tempering by the recognition that Avangrid:

- Made them under an existential threat to its ability to continue operating in Maine
- Did so at a time when a transformational transmission opportunity lay in the balance

- Has for a period of a decade shown a strong tendency for major course changes in how it plans, organizes, and executes its utility business, with not all those changes beneficial to customers, or for that matter, to shareowners as well.

6. CMP distribution and Networks have consistently performed poorly regarding operating expenses, primarily due to storm damage and response.

Networks and CMP distribution have consistently overspent budgeted operating expenses from 2017 through 2020. In each year, storm-related system damage and interruptions have contributed to large cost overruns resulting from contractor and employee overtime use.

Each utility's allowed return on equity (ROE) drives the budgeting processes, which seeks to produce expenditures that will meet those return levels. The level of operating expenses allowed in rates for each major O&M category generally form the basis for expense budgeting by category. To the extent that planners anticipate a gap between that actual and allowed ROEs, budgets include "unallocated efficiencies" to target the gap for planning and budgeting. The ability to reduce operating expenses by the amount assigned as unallocated efficiencies provides a theoretically available means for CMP and the other Networks utilities to earn their allowed ROEs. From 2017 through 2019, cost reduction efforts associated with Forward 2020, or later Forward 2020+ (Chapter V addresses these initiatives), served to attack those gaps.

Networks results show major cost overruns in external services in the 20 percent range overall from 2017 through 2019. Overtime comprised the primary source of 3 to 4 percent personnel cost overruns during this period. At this time, the Forward 2020 initiative sought significant reductions in employee count within Networks. Excessive overtime proves a common result of overly aggressive staffing reductions. The significant external and overtime expense overruns primarily drove Networks negative net income variances from budget of 25 percent in 2019 and 13 percent in 2020.

Networks has continually tried to reduce operating costs since the UIL merger, but has had only limited success to date. Avangrid management reports significant storm costs (both major and minor) in 2019. The lack of success in achieving cost reductions proved essentially total in 2019 - measured on management scorecards at 0 percent performance ratings for each of net income, reliability, and net operating expenses.

Networks results for 2020 appear little improved, with external services 23 percent above budget and producing continuing expense and financial results gaps. Management considers net income results improved over those of 2019, noting rate increases secured. However, overruns in net operating expenses in 2020 have proven similar to 2019, with Networks leadership deeming lower operating expenses as "not doable with the existing aging system".

CMP experienced external services expense overruns of 38 percent in 2017, 24 percent in 2018, and 38 percent in 2019. In 2020, the CMP external services overrun was 143 percent. Its personnel cost overruns amounted to 14 percent in 2017 and 13 percent in 2018, despite Avangrid's Forward 2020 efforts to significantly reduce employee count. These sources proved the primary drivers of negative variances in net income of 64 percent in 2017, 29 percent in 2019 and 37 percent in 2020.

7. Weak CMP and Networks financial and operating results have continued through 2020, despite the Resiliency Plan, 1Networks, and Forward 2020+.

Operating and financial results for Networks and CMP continued to significantly lag budgets and expectations in 2020. The Resiliency Plan to improve electric system reliability kicked off in 2019 for CMP, NYSEG and RGE. Despite these efforts, major storm-related interruptions occurred at CMP in the first quarter of 2020, serving to extend the operations and related financial issues that have been plaguing the Networks companies for years.

Avangrid hired a new CEO from outside the company in the middle of 2020. Addressing chronic shortfalls in financial and operating results proved a first priority for the new executive. Actions included a “100 Day Plan” intended to improve results before the end of the year. Each senior executive received specific challenges and opportunities to guide performance improvement by the end of 2020. For instance, the Avangrid CFO explained that his control team has five major challenges by the end of 2020; the first challenge was to update the year-end 2020 forecasts to eliminate large variances for the Avangrid investor day presentation in November 2020. The CFO is also revamping the 2021 budget and the long-term plan (LTO) presented to investors with challenging but achievable 50 percent and 90 percent probability ranges of outcomes, with different risk levels for each. Another immediate challenge is the monitoring of fiscal year 2020 financial results to have more control, a focused challenge for the control team. For the Networks CEO, the 100 Day Plan number one challenge is improving 2020 operational and financial performance, including improving on the Networks performance scorecard.

Improving the Networks and CMP financial and operating performance is definitely a “work in progress” at the end of 2020. While significant improvement is being directed and is expected by the new Avangrid CEO, the current efforts come in the wake of a series of programs that have not gained sufficient operating traction during the past five years.

V. Integration and Efficiency Improvement Programs

A. Chapter Summary

Efforts to integrate operations following the 2015 acquisition of UIL Holdings have largely driven organization and staffing changes and resulting instability addressed earlier in this report. For a long time, those efforts also failed to produce expected cost savings. However, by 2019 and into 2020, those efforts did begin to show success, which, if sustained should bring material savings to CMP customers. Management's estimates indicate reductions in:

- Internal CMP costs of \$8.8 million annually; and
- Service company and corporate costs borne by CMP of an additional \$6.8 million annually.

Avangrid embarked in 2016 on integration of the two groups of companies. The first integration phases focused on merging utility operations. By early 2017, efforts began to address efficiency in order to lower costs, improve earnings, and create earnings growth opportunities. Management addressed cost efficiencies through a program it called "Forward 2020." The resulting initiatives concentrated on two primary cost-reduction elements - - full-time employees and external services. The Forward 2020 initiatives continued from early 2017 through late 2018, when management completed what it termed "Phase 3." The initiatives produced varying degrees of success in attaining some of management's goals, but did not reduce costs to the degree expected.

Following limited success under the Forward 2020 initiatives, Avangrid sought a new direction as 2019 began and as the company continued to underperform in meeting earnings expectations. Management retained Deloitte Consulting to provide a fresh look at opportunities for changes in operations and practices in ways that would produce lasting cost reductions, with the objective of increasing earnings. Avangrid began to implement new initiatives resulting from the consultant's "Mid-Period Assessment" from 2019 through the present.

The overriding focus of both Forward 2020 and the Mid-Period Assessment turned out to consist of cost reductions, including reductions in staff, with less emphasis on improving the operations of the Networks utilities, including CMP. Driven by an overfocus on closing earnings gaps, the reductions contributed to degradation in CMP customer service and reductions in efforts to maintain its system. In response to these operational problems, management initiated a program in late 2019 to improve operations. This "1Networks" program has continued through the present. Avangrid has committed added resources to Maine operations, producing improvements, but Iberdrola S.A.'s now long history of making short-term sacrifices in providing those resources warrants continued attention to their sustainability.

B. Background

Acquiring UIL Holdings at the end of 2015 produced expected, significant efforts to permit operation in a new corporate structure, and then to promote efficiency and effectiveness by practice sharing and resource consolidation. This chapter reviews efforts that began in 2016 and, in effect, continue today, through changing programs and initiatives.

C. Findings

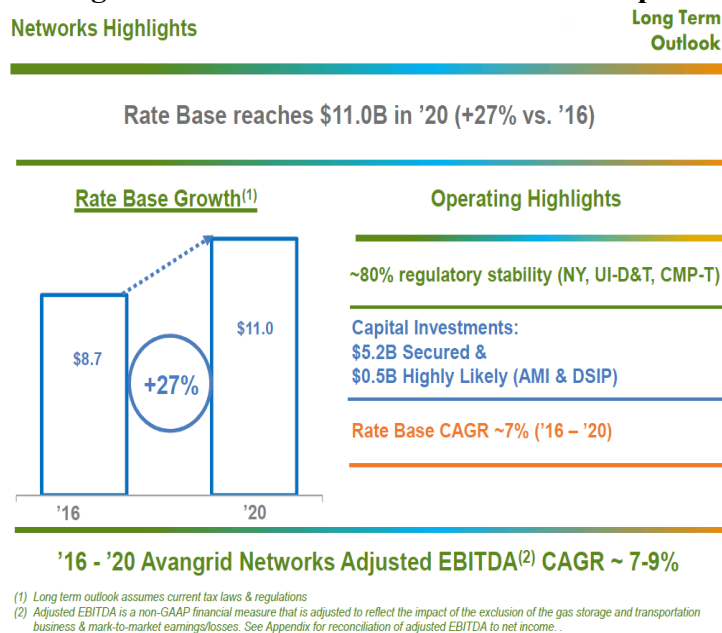
1. Avangrid Objectives and Drivers

Forward 2020 initiatives began in early 2017. The long-term outlooks (LTOs) Avangrid performed for corporate planning purpose identified Forward 2020 initiatives as key in reaching the long-term earnings and earnings per share (EPS) growth expectations holding company leadership set for the investor community. For example, a February 2017 investor presentation projected earnings growth from 2016 through 2020 at an 8 to 10 percent compound annual growth rate (CAGR). This presentation presented the primary drivers of the AGR earnings growth as:

- Rate base growth in Networks utilities
- Renewables earnings growth from new projects
- Forward 2020 process optimization and best practices, resulting in cost efficiencies.

The next slide depicts the contribution of projected rate base expansion to earnings growth. Management projected Networks rate-base growth at a compound annual rate of 7 percent from through 2020, producing growth in utility earnings (EBITDA) at a 7 to 9 percent CAGR.

Earnings Growth from Networks Rate Base Expansion



Management advised that the Forward 2020 initiatives, largely connected to Networks utilities' operations, would produce "improved efficiency" that would reduce costs, measured by what management termed Net Operating Expense (NOE) reductions. Initiatives management originally described in Forward 2020 materials included:

- Site consolidation (e.g., of corporate headquarters) and fleet optimization
- Grid automation and digitization (e.g., AMI), improving system efficiency
- Standardization and consolidation of systems (conversion to SAP financial systems)
- Targeted hiring of skills for the "utility of the future" and to manage attrition.

Avangrid targeted \$162 million annually in O&M expenses (NOE) from these initiatives through 2020 - - expected to generate improvement in a key financial metric used by management (NOE/Gross Margin, or NOE/GM) from 37 percent in 2016 to 28 percent in 2020. Avangrid described this metric as an “efficiency ratio,” originally using it as a benchmark to compare its costs with those of a small group of other utility holding companies. Management determined a 28 percent measure as best in class in the utilities sector. Considered aggressive when adopted, management considers it, in retrospect, unachievable for older utility systems such as those operated by Networks.

The Forward 2020 initiatives comprised a central component in meeting corporate earnings expectations, which typically form the highest-level goals of strategic planning in a utility holding company. Management continued to emphasize the importance of the NOE/GM metric in achieving the large cost reduction objectives of the Forward 2020 initiatives.

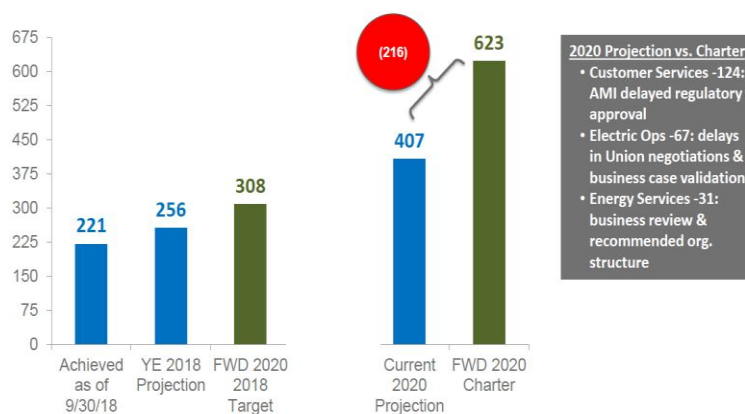
2. Forward 2020 Initiatives and 2016 to 2018 Results

Specific Forward 2020 program objectives for Networks targeted reductions in employees (FTEs), external services costs, and a number of General Services measures, described as follows:

Objectives: *focusing on managing O&M to achieve best in class operational efficiency as we grow the business and mitigating rate impacts of the capital investment plan*

- **Headcount** – *reduce headcount 12% through specific initiatives that support the consolidation of work and increased productivity by implementing best practices in strategic outsourcing of certain activities.*
- **External Services** – *reduce business net manageable external services and overall NOE by 12% through efficient management of non-reconcilable costs and net of other operating income growth*
- **Other – General Services** – *reduce fleet by 10%, closure of nine buildings, explore outsource or sale of services for 22 garages, increase capitalized labor to 31.5%.*

Management identified 13 Networks work streams as sources of reductions, formulating 20 action plans to address them. Management managed and measured the Networks work streams through late 2018 - - the end of Phase 3 of the program. Management targeted employee reductions of 308 through 2018, and 623 through 2020. The next slide shows staffing reductions (measured in FTEs) through late 2018. This end-of-Phase 3 depiction shows that Networks had cut employees by 221 through September 2018, with the expectation that the total would rise to 256 by year end

Networks FTE Reductions as of October 2018**FTE Efficiencies – Status & Summary****FORWARD
2020**

August Headcount 163 Positions Below YE 2018 Target due to higher attrition and retirements beyond efficiency initiatives

Targeted reductions in electric operations and customer service initially represented 523 of those 623 planned reductions. However, through September 2018, these two areas produced only 167 reduced FTEs. Management attributed these less-than-targeted levels to delays in a New York AMI project (delaying elimination of customer service positions) and union negotiations (preventing electric operations position reductions).

At about this time, management reduced the target of 623 reductions by 2020 to 407. However, a “re-focusing” of the program made that target less relevant. Management re-evaluated its plans for 2019 and beyond. A 2019 Deloitte Consulting engagement took a fresh look at the Forward 2020 objectives, initiatives, and employee reductions. CMP and NYSEG faced significant pressure from storm response and customer service issues. Those issues contributed to a decision that Networks could not achieve planned electric operations and customer service FTE reductions.

In summary, leadership found itself well into UIL merger integration, but still engaged in a search for material efficiency improvements three years later, as 2018 ended. Management believed that it had already picked the “low hanging fruit” and it recognized that some gains would not prove feasible (*e.g.*, for operational or bargaining reasons). It sought a new direction for Forward 2020.

3. Mid-Period Assessment Initiatives and Structure

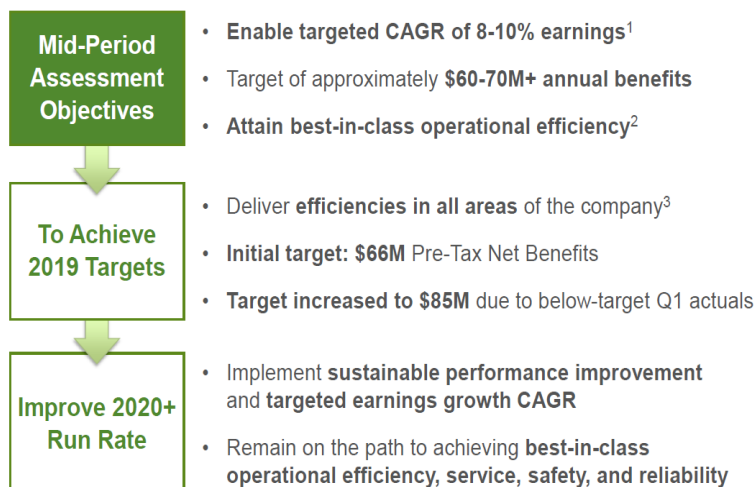
Avangrid contracted with Deloitte Consulting in early 2019 to conduct the additional engagement noted above. This “Mid-Period Assessment” of Forward 2020 sought to apply best practices from other companies. The consultant performed an organizational review across Networks, Renewables, and corporate services, identifying cost, process, and other sources of operational efficiencies. Management initially contracted for a three-month effort, performed in conjunction with company subject matter experts. Two subsequent contract extensions in mid- 2019 sought to facilitate implementation of 2019 changes seeking sustainable long-term improvements. The next

slide summarizes management's objectives and targets, with the figures encompassing all of Avangrid - Networks, Renewables, and the corporate functions that supported them.

Initial Mid-Point Assessment Objectives and Targets

Business Objectives

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¹ Using 2018 as baseline

² Avangrid 2017 Annual Report

³ News Release: AVANGRID Reports Fourth Quarter and Full Year 2018 Earnings Results and Provides 2019 Earnings Outlook



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Management has continued to execute (with adjustments) the actions that arose from the original consultant/company efforts and extensive follow-on efforts by management. Achieving a long-term compound annual growth rate of 8 to 10 percent in Avangrid earnings has remained the goal. In 2019 alone, management targeted \$66 million to \$85 million of savings, with further reductions planned for 2020 and after. Management's plans pursued specific initiatives in the Corporate, Networks, and a third "Rapid Launch" category. A charter for each of the three categories listed specific initiatives, their expected 2019 savings, and an ongoing run rate for 2020 and thereafter. In April 2019, toward the end of its initial contract period, the consultant delivered a progress report to a senior management steering committee, outlining current findings, recommended areas of opportunity across six areas, and initiative implementation timelines.

Management reports that it considered the savings targets aggressive, but required to meet investor expectations of large annual cost reductions. Reductions of this magnitude would allow Avangrid to meet its stated long-term earnings objectives, including an 8 to 10 percent compound growth rate in EPS. Management prepared an estimated "Run Rate" (2020 and after) showing savings at the targeted levels, divided by their source category.

4. Forward 2020+: 2019 Results

A set of cost savings initiatives retitled as "Forward 2020+" followed the Mid-Period Assessment, with some allowing rapid launch implemented in 2019. Longer-term, ongoing cost reduction opportunities were identified for the Networks utilities, and for ASC and AMC. The Networks

category included savings in CMP internal costs. Management reported substantial levels of committed and forecasted savings through the end of 2019.

5. *1Networks Project*

Networks, including CMP, has experienced increasing issues with its electric operations performance and reliability since 2017. Forward 2020 and Forward 2020+ projects focused on improving cost efficiency and corporate processes, but management did not design them to have a positive effect on electric operating performance, which declined. Consequently, the need for focused efforts to improve electric operations performance led to a search for solutions at Networks.

Management established the “1Networks Project” and its initiatives through an internal assessment of operational performance. The project began in July 2019 with a task force that brought contributions from some 45 employees, 66 meetings, and more than 720 hours of interviews. The task force identified areas and processes warranting focus in 2020. Initially, the task force identified 111 opportunities - subsequently prioritized and transformed into 28 1Networks initiatives. The project formally commenced in February 2020, with a kick-off meeting presenting the initial assessment results and the prioritized 1Networks initiatives.

1Networks initiatives have focused on improving seven different aspects of business operations:

- Asset Management, Resiliency and Reliability: Use analytics to improve decision making on asset management; develop specific programs focused on improving reliability at specific electric circuits
- Processes Improvement and Standardization: Deliver simpler, standardized, and reliable processes through enhanced technology use
- Contracting Model: Improve contractor performance by reviewing contracting model and focusing on key strategic partners. Implement pay-IDs (as opposed to time and material contracts)
- Cost Management and Efficiency: Implement a culture of continual review of processes by business area; improvement of budget management process (implementation of improved controls and review of budgeting process)
- Structure Review: Implement synergies across the business
- Resources Plan: Improve productivity and better use resources using a thorough resource plan evaluation and implementing productivity controls
- 1Networks: Implement actions focused on aligning and communicating business strategy to all organization levels; improve clarity of and reporting on targets; improve operational governance.

The following list identifies the 28 1Networks initiatives established for pursuit through 2022.

- 1Networks
 - Operational KPIs and Information Cascading
 - Business Performance, Reporting, Review, and Improvement
 - Business Units
 - Networks Governance Improvement
- Structure Review

- Organization Structure Opportunities
- Resources Plan
 - Materials Planning
 - Work Force Shift Analysis
 - Work Force Capacity Evaluation
 - Resources Business Plan
 - Operational Logistics Improvement
- Asset Management
 - NY Grid Enhancement
 - Grid Model Enhancement
 - Improvement of Maintenance Planning
 - Construction Mode and Standardization
 - Automation Planning Process
- Processes Improvement & Standardization
 - Electric Operational Performance Management
 - Operational Divisions Benchmark (Results)
 - Operational Divisions Benchmark (Action Plan)
 - Field Planner Process Review
 - Work Execution Mobility
- Contracting Model
 - Efficient Contracting Model
 - Contract Management and Budget Availability
 - Purchasing Governance Improvement
 - Procure to Pay
- Customer Service
 - Energy Control Centers
- Cost Management and Efficiency
 - Storm Response
 - Improve Budget Governance
 - Allocation of Efficiencies.

Although not specified in the initiatives shown above, Networks launched a related “Interruptions War Room” initiative in late March 2020. CMP experienced an increase in the number of non-storm interruptions (number of electric outages excluding major storms) in early 2020 - - 95 percent above the target level. The War Room’s objective was to reduce the number of electric interruptions across the Network utilities.

A War Room “CMP Action Plan” dated June 20, 2020 had three primary components:

- Animal Guard Program – Install 13,974 device guards in overhead network equipment on the 14 worst-performing circuits starting in July 2020 and completed by January 2021 (with additional capital expenditures of \$3.7 million)
- Vegetation Management – Change the existing vegetation management plan to immediately trim the circuits causing interruptions in 2020; noting an “urgent need to improve vegetation management specifications to reduce exposure to trees outside the right of way” (an additional spend of \$24 million)

- DLI Execution – Prioritize execution based on worst-performing circuits and circuits with higher customer exposure; eliminate the backlog of level 2 and 3 deficiencies; inspect single-phase portion of circuits with high numbers of affected customers.

The 1Network project reports to Networks senior management (CEO, presidents, and vice presidents) and to the Networks Board of Directors. Monthly reports go to the executive management group, focusing on operational details, such as the new interruptions War Room, overtime, the capitalized labor processes, change management, asset management, and budget management and governance. Quarterly reports to the board take a higher-level view, focusing on overall operational performance, reliability performance metrics (like SAIDI and SAIFI), and storm response. The reports to the Networks board have addressed operational problems at the Networks electric utilities, including CMP and NYSEG in particular.

6. Forward 2020+: 2020 Results

Management included initiatives identified for Forward 2020+ in the budgets and planning for calendar year 2020 for Networks and for corporate activities. Management added 1Networks initiatives with significant cost saving potential to the Forward 2020+ list of initiatives it monitored during the year, adding to the potential cost savings it sought to realize. The following chart depicts management's view of the details of the Networks initiatives, savings targets, and savings actually achieved through the end of 2020.

Forward 2020+Network Cost Savings in 2020

Savings Scorecard: Networks

Networks as of 01.20

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Status	Initiative Name	ID	Category	Initiative Lead	Executive Sponsor	Targets		Forecast P&L		Achieved
						\$M (Initial)	\$M (In Budget)	\$M (Annual)	\$M (vs. Budget)	
Complete	Field Planning Review (Opt./Automate Engineering & Field Planner Work)	N06	2020	Flavio Andrade	Thiago Bigi	1.0				
Complete	Efficient Contracting Model	N12	2020	José Orellana	Giancarlo Vassao	3.6		3.5	3.5	3.5
Complete	Resource Plan	N23	2019 / 2020	Flavio Andrade	Giancarlo Vassao			0.8	0.8	0.8
On Track	Storm Response	N31	2020	Flavio Andrade	Giancarlo Vassao			1.6	1.6	1.6
Complete	Interruptions Reduction	N32	2020	Flavio Andrade	Giancarlo Vassao					
Delayed	Work Shifts Analysis / Overtime	RL04-N2	2019 / 2020	Flavio Andrade**	Giancarlo Vassao		7.1 ¹		-7.1	
1Networks						4.6	7.1	5.9	-1.2	5.9
Complete	Org. Redesign/ Restructuring	N01	2019	Kevin Donnelly	Anthony Marone	0.4	0.6	0.6		0.6
Delayed	Workforce Optimization / Rebalance***	N02	2020	Joe Chernak	Giancarlo Vassao	3.2				
Delayed*	Optimize Asset Management and Planning	N03	2020+	David Bratt	Christian Bliccheck	0.0				
Delayed*	Asset Performance Management	N04	2020	Bill Ransom	Christian Bliccheck	2.4				
Delayed	Scheduling Optimization for Field Planner Resources***	N07	2020	Kern Theriault	Chuck Eves	0.6	0.6		-0.6	
Delayed	Electric - Scheduling Opt. for Field / Technician***	N08-E	2019 / 2020	Kern Theriault	Chuck Eves	1.5	1.1		-1.1	
Delayed	Gas - Scheduling Opt. for Field / Technician***	N08-G	2019 / 2020	Joe Chernak	Giancarlo Vassao	4.2				
Delayed	Optimize Intraday Work Execution***	N09	2020	Chuck Eves	Giancarlo Vassao	0.8				
Delayed	Automate Work Execution & Closure	N11	2020	Gregory George	Anthony Marone	1.3				
Complete	Consolidate Customer Service Centers / Call Centers	N13	2020	Tracey Pelella	Scott Baker	0.5		0.2	0.2	0.2
Delayed	Customer Care Technology Opt.	N14	2019 / 2020	Tracey Pelella	Scott Baker		0.4	0.2	-0.2	0.2
Complete	RPA for Customer Service	N15	2020	Scott Baker	Scott Baker		0.0	0.6	0.6	0.6
Delayed*	Outsource or Consolidate Back Office Activities (e.g., Billing)	N16	2020+	Scott Baker	Anthony Marone	0.4				
Delayed*	Chat Bots / Web Chat	N17	2020	Scott Baker	Anthony Marone	0.2				
Delayed*	Agent Assist	N18	2020	Scott Baker	Anthony Marone	0.6				
Delayed*	Consolidate System Operations Control Centers	N19	2020+	Chuck Eves	Anthony Marone	0.6				
Delayed*	Automate Trouble Dispatch	N20	2020	Chuck Eves	Anthony Marone	0.2				
Complete	Avangrid Self Service Model – Admin Eff.	N21	2019	Laurie Lombardi	Doug Stuver	0.4	0.7	0.7		0.7
Complete	Sundry Billing	N22	2019 / 2020	Pam Kelly	Giancarlo Vassao		1.0		-1.0	
Complete	EHS Organization - Networks	N30	2019	David Labelle	Anthony Marone		0.3	0.3		0.3
Complete	Performance Review / Spans & Layers / Other	RL02-RL03-N	2019	Kyra Patterson	Peter Church		2.2	2.2		2.2
At Risk	Capitalized Labor	RL04-N1	2019 / 2020	T. Bigi / D. Hilton**	Giancarlo Vassao	6.2	21.1	2.3	-18.8	2.3
Retired	Report Optimization	RL05	2020	Laurie Lombardi	Doug Stuver	0.8				
Complete	CCNC	RL07	2019 / 2020	Laurie Lombardi	Scott Tremble	3.2	1.3	1.4	0.1	1.4
Complete	Sourcing Events	RL08-N	2019 / 2020	Peter LeVullo	Anthony Marone			0.1	0.1	0.1
Subtotal						32.0	36.3	14.4	-21.9	14.4
On Track	Spend/Budg. Red. & Unalloc. Eff. (exc. Minor Storm/Trouble)	RL05-N1	2019 / 2020	T. Bigi / D. Hilton**	Giancarlo Vassao		39.9	34.1	-5.8	34.1
On Track	External Spend for Minor Storm / Trouble	RL05-N2	2019 / 2020	Giancarlo Vassao**	Anthony Marone			-12.2	-12.2	-12.2
Total						32.0	76.2	36.3	-39.9	36.3

* Indicates projects with implementation (or viability assessment) actions undertaken in 2020, but no financial impact anticipated until 2021 or beyond

** Business owner is responsible for achieving savings; Control (Debra Hilton) is responsible for monitoring & providing required information for Charter updates

*** These initiatives remain under discussion and have not been officially confirmed as part of the 1Networks project

¹ Work Shifts Analysis budget reflects only Minor Storm & Trouble Overtime. Per Control, performance of total OT vs. budget is -\$15.2M (YTD Dec; preliminary)

Networks budgeted \$76.2 million of savings in 2020 from these initiatives, but achieved only about one half of them (\$36.3 million). Major reported causes of savings shortfalls included capitalized labor (\$18.8 million), minor storm external spending (\$12.2 million), and work shifts overtime (\$7.1 million). Management cited significant 2020 storms in New York and Maine.

The preceding chart shows a number of initiatives labeled “initial targets” are shown in the chart as “retired,” “at risk,” or “delayed.” These initial targets represent Deloitte initiatives identified in 2019 and officially adopted by management for implementation. Retired initiatives indicate those no longer considered feasible, with their pursuit halted. At-risk initiatives include those whose indicated savings management did not believe it could achieve in 2020. Delayed initiatives indicated those at risk for an extended period, or those forecast to fall \$2 million or more behind projected savings levels. For instance, work shifts analysis/overtime represents one of the delayed initiatives. Management has found its implementation more complex and lengthier than originally thought. Under the capitalized labor initiative, management’s goal was to return to historic labor capitalization levels; however, it achieved only \$2.3 million of the \$21.1 million budget due to the nature of capital work evolving in 2020.

The next slide shows reported Forward 2020+ results for corporate services through the end of 2020.

Forward 2020+ Corporate Services Savings in 2020

Savings Scorecard: Corporate Services

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Corporate Services as of 01.20

Status	Initiative Name	ID	Category	Initiative Lead	Executive Sponsor	Targets		Forecast P&L		Achieved \$M (To Date)
						\$M (Initial)	\$M (In Budget)	\$M (Annual)	\$M (vs. Budget)	
Complete	Tax Operating Model Transformation	CS01	2019	Steve Stiles	Doug Stuver	4.2	3.4			3.4
Complete	Reduce Audit Fees	CS02	2019 / 2020	Andrea Van Luling	Scott Tremble	3.2	3.0	3.3	0.3	3.3
Complete	Parking Space Optimization	CS03	2019	Ross Henderson	Peter Church	0.4	0.3			0.3
Complete	Training Cost - Phase I (Training Gov.)	CS04	2019	Elissa Sikora	Carla Gregory	0.3	0.2	0.2		0.2
Complete	Training Cost - Phase II (Training Strat.)	CS06	2019 / 2020	Raquel Mercado	Carla Gregory	0.5	0.2	0.2	-0.1	0.2
Delayed	Finance Outsourcing	CS15	2020	Scott Tremble	Scott Tremble	8.8				
Delayed	Cognitive Automation to reduce DSO	CS17	2020	Howard Coon	Doug Stuver	4.8				
Retired	Supplier & Contract Mgmt – Purchasing	CS18	2020	Brian Ewing	Doug Stuver	6.8				
Complete	Portfolio Opt. Holistic Strat. – Gen. Serv.	CS19	2020	Ross Henderson	Peter Church		0.3	0.3		0.3
Retired	Outsource Purchasing	CS23	2020	Brian Ewing	Doug Stuver	1.0				
Delayed	Operating Model - Corporate Services	CS24	2020	Carla Gregory	Peter Church	5.4				
Delayed	Fleet Optimization	CS26	2019 / 2020	Ross Henderson	Peter Church	0.2				
Complete	RE&FM Service Delivery	CS27	2020	Ross Henderson	Peter Church					
Complete	Travel Consolidation	CS28	2020	Ross Henderson	Peter Church	0.4		0.4	0.4	0.4
Retired	Strategic Sourcing	CS29	2020	Pablo Iglesias	Doug Stuver	5.6				
Complete	EHS Organization - Corporate	CS30	2019	David Labelle	Peter Church	1.9	0.4	0.4	0.0	0.4
Retired	Infrastructure Outsourcing	IT02	2020	Sergio Merchan	Peter Church	1.9				
At Risk	Capitalized Labor / OT	RL04-C	2019 / 2020	Jose Luis Gutierrez	Scott Mahoney	0.9		0.0	0.0	0.0
Complete	Spend / Budget Reductions ¹	RL05-C	2019 / 2020	Guillermo Fernandez*	Scott Tremble		15.0	25.0	10.0	25.0
Complete	Sourcing Events	RL08-C	2019 / 2020	Brian Ewing	Doug Stuver			0.6	0.6	0.6
On Track	Working Capital	RL10	2019 / 2020	Dominick Manno	Doug Stuver	0.9		0.3	0.3	0.3
Complete	Legal Insourcing	RL12	2019	Julie Blindauer	Scott Mahoney	1.8	1.7	1.7		1.7
Total						44.9	24.6	36.1	11.5	36.1

* For initiatives where Control is the lead: Control is responsible for monitoring and updating the charter; the Business Owner is responsible for achieving savings as described on each charter

1 Corporate Spend/Budget Reductions excludes extraordinary budget request in Tax (\$7.3M; fully expensed) and COVID-related deferrable costs (\$3.6M as of Aug close)

Several of the 2020 corporate services initiatives show significant status changes from the initial targets set in 2019. Management “retired” (stopped pursuing) four initiatives - - supply and contract management, strategic sourcing, infrastructure outsourcing, and outsource purchasing. They had been slated to produce cost savings of about \$15.3 million annually as initially targeted. Management classified four other initiatives as delayed - - finance outsourcing, cognitive automation, corporate services operating model, and fleet optimization. Their combined estimated annual savings had been \$17 million, but became viewed as unobtainable in the near future. A number of other utility holding companies have outsourced finance functions to obtain significant cost savings. Avangrid has not committed to this initiative, however, citing local concerns with outsourcing to foreign countries.

Management achieved \$25 million in 2020 reductions not contemplated by its initial targets, reversing some of the lost 2020 cost savings from retired, at risk or delayed initiatives. Management has preserved the option of later pursuing delayed initiatives (such as the operating model for corporate services), perhaps in 2021.

D. Conclusions

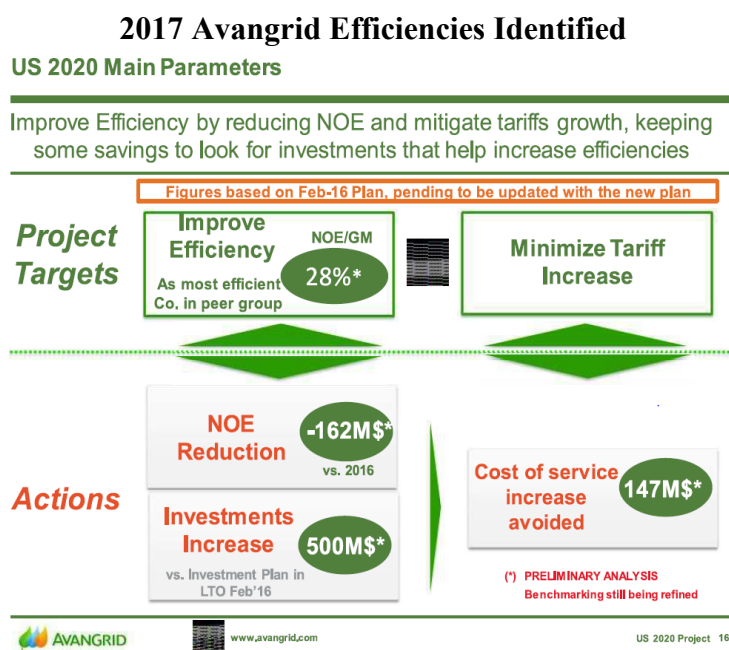
1. Through 2018 AGR focused its Implementation/Forward 2020 programs on financial and earnings commitments and objectives.

Avangrid clearly established its Forward 2020 initiatives to reduce operating expenses to attain long-term earnings growth targets communicated to the investment community. Investor presentations made by AGR projected earnings growth from 2016 through 2020 at a targeted compound annual growth rate of 8 to 10 percent. "Improved efficiencies" comprised a key component of the earnings growth management sought through Forward 2020 initiatives designed to reduce operating expenses - - what Leadership termed "Net Operating Expenses."

Management estimated that the integration, process optimization, and best practices objectives of Forward 2020 initiatives would contribute significantly to reducing total Avangrid operating and maintenance expenses by \$162 million annually from 2016 through 2020. The "cost efficiencies" of the Forward 2020 initiatives primarily focused on three elements:

- Reductions in full-time employees (originally targeted as 623 FTEs for Networks)
- Reduction in costs related to external services of 12 percent
- A reduction in fleet expenses of 10 percent.

The following slide formed part of a presentation to the Avangrid Board of Directors, as 2017 approached.



Management sought AGR NOE reductions of \$162 million annually to reduce its key metric of NOE/Gross Margin from about 37.4 percent in 2016 to 28 percent in 2020. These reductions would increase the earnings for all operations, including the Networks utilities, and contribute to the earnings growth sought. Management classified NOE/Gross Margin as an “efficiency ratio”; the best utilities efficiency ratio it found for comparison was 28 percent, which management considered best-in-class in its sector. The Forward 2020 initiatives formed an important component in meeting AGR’s earnings expectations that comprised the highest-level goals of planning and strategy.

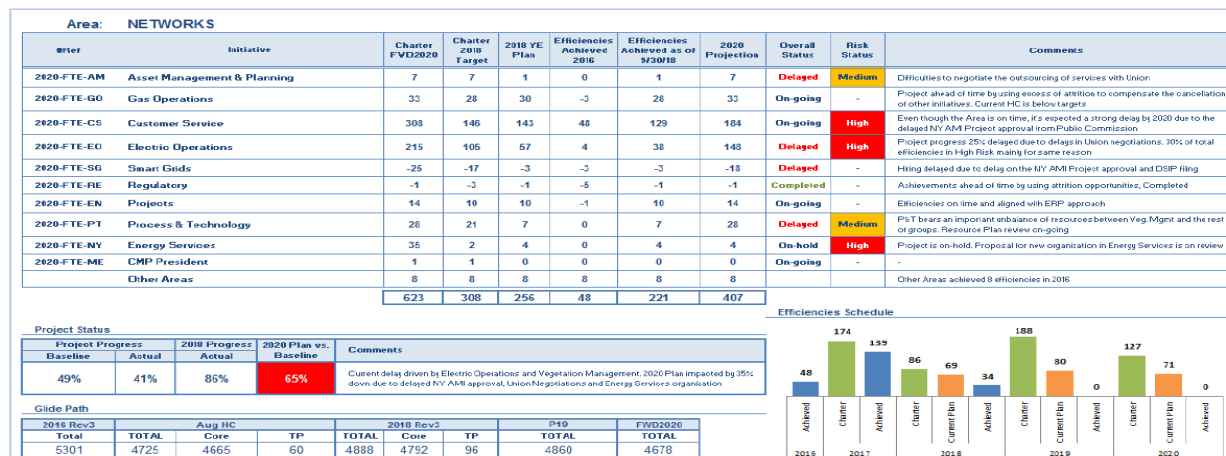
2. Forward 2020 experienced limited success through 2018 in achieving Networks FTE reductions and reducing external service costs.

The Forward 2020 objectives included reductions of 623 (12 percent) in Networks FTEs, and a 12 percent reduction in external service costs. The Networks utilities businesses “achieved” a net reduction of 221 employees by September 30, 2018, well behind its originally targeted pace. Management slotted the vast majority of the planned Networks employee reductions (84 percent) in customer service (308) and electric operations (215).

The chart below shows details of Networks FTE reductions as of September 30, 2018.

Forward 2020 Networks FTE Reductions as of September 30, 2018

Networks Business – FTE Efficiencies Summary



* See Annex for further information about each Area's Initiatives

** 49% = (308/623) // 41% = (256/623) // 86% = (221/256) // 65% = (407/623)

Management also did not realize the reduction in external services costs it identified as a primary objective of Forward 2020. In each year starting in 2017 and continuing through 2020, external services costs in most instances increased significantly. Certain components of external service costs did experience reductions, but overtime and external contractor costs ran far above the expected and budgeted levels. External costs for storm recovery remained a consistent source of cost overruns for at least the last four years. We explain more fully the details of cost overruns

related to external service and other operating expenses in the Planning and Results chapter of this report.

Management effectively terminated the Forward 2020 program late in 2018. AGR management reported that it no longer considered achievable the electric operations and customer service employee reduction objectives from either operational or financial viewpoints, and re-considered them during 2019. AGR management also noted that the follow-on 2019 consulting engagement represented a stepping away from the Forward 2020 objectives and initiatives, to produce an outside look at employee reductions.

3. External consultants have driven a reset of Forward 2020 with an emphasis on corporate processes and improved sourcing instead of Networks FTE reductions.

Management used its outside consultant in early 2019 to find revised means for achieving its targeted 8 to 10 percent compound growth rate in earnings - - initially targeting \$60 million to \$70 million of annual cost savings and attaining best-in-class operational efficiency. The high-level earnings objectives for this effort essentially equaled those of Forward 2020, with the use of the consultant to evaluate and make recommendations on initiatives instead of deriving them internally. The 2019 targets sought to reduce costs by \$66 million to \$85 million, with sustainable performance improvement and additional cost reductions in the long term. The consultant's July 2019 report to the Avangrid Board of Directors included initiatives in seven generalized "lever" categories, as shown in the following chart.

April 2019 Deloitte Identified Savings Categories








Run Rate Impacts

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- ~\$40M of Run Rate savings to be implemented through 2019 Initiatives
- ~\$47M of Business Improvement Initiatives
- ~\$23M of potential Transformative Initiatives requiring changes in Operating Model

Summary of Run Rate Impacts

Lever (impacts in \$M)	From 2019 Initiatives	Business Improvement 2020+ Initiatives	Transformative 2020+ Initiatives	Total by Lever
 Process Optimization & Automation	13.5	23.1	-	36.6
 Operating Model & Governance	7.9	6.2	6.8	20.9
 Outsourcing/Insourcing	6.3	-	15.9	22.2
 Spend Management	9.4	10.8	-	20.2
 Real Estate	0.6	3.2	0.6	4.4
 Service Delivery	0.5	3.6	-	4.1
 Organizational Design	2.3	-	-	2.3
TOTAL	40.5	46.9	23.3	110.7



25

Management stated that it set the savings targets at aggressive levels, basing them on meeting expectations it set for the investor community reflecting cost reductions (in the \$100 million range) that would allow Avangrid to meet its long-delayed long-term earnings objectives.

4. Mid-Period Assessment/Forward 2020+ initiatives in 2019 and 2020 resulted in reports by Avangrid of cost reductions that lower costs to CMP by \$6.5 million and \$6.8 million, respectively.

AGR realized significant cost savings in its “Corporate Services” areas in 2019 and 2020 as a result of the Forward 2020+ initiatives originally proposed by its consultant. The initiatives generating the largest portions of the reported 2019 Corporate cost savings of \$34.6 million were:

- \$19.4 million in spend/budget reductions
- \$3.9 million from reviewing performance, spans of controls, and layers
- \$3.0 million in reduced audit fees
- \$2.4 million in reduced external IT costs
- \$2.1 million from tax operating model transformation
- \$1.2 million from legal insourcing
- \$1.1 million from capitalizing labor and reducing overtime.

Management has categorized the cost saving initiatives for corporate services by benefitting entity (*i.e.*, ASC, AMC, or CMP) and has identified the estimated CMP savings as shown in the following table. For initiatives indicating AMC as the primary beneficiary, the operating companies (including CMP) will receive direct and indirect benefits through a reduction in AMC costs charged through ASC for allocation to those companies. A second category of these savings for CMP comprise “corporate services,” such as Controller, General Services and Information Technology that are performed internally by CMP employees.

2019 Corporate Services Cost Savings and CMP Impact

Initiative Name	ID	Savings Across All Corporate Functions (in millions)	Primary Direct Beneficiary ¹	CMP Savings (in millions)
Training Cost-Phase I(Training Gov.)	CS04	\$0.2	AMC	
Training Cost-Phase II(Training Strat.)	CS06	-\$0.1	AMC	
EHS-Organization-Corporate	CS30	\$0.2	AMC	
Performance Review/Spans & Layers/Other	RL02-RL03	\$3.9	ALL OPCOs	
Working Capital	RL10	\$0.2	ALL OPCOs	
Capitalized Labor/OT	RL04-C	\$1.1	ALL OPCOs	
Spend/Budget Reductions	RL05-C	\$19.4	ALL OPCOs	
Total for Initiatives Above				\$3.6
Reduce Audit Fees	CS02	\$3.0	ALL OPCOs	\$0.6
Tax Operation Model Transformation	CS01	\$2.1	AMC	\$0.7
External IT Services Reduction	IT01	\$2.4	ALL OPCOs	\$1.5
Legal Insourcing	RL12	\$1.2	AMC	\$0.0
Sourcing Events	RL08-C	\$0.8	ALL OPCOs	\$0.0
Parking Space Optimization	CS03	\$0.1	AMC	\$0.1
Fleet Optimization	CS26			
Total		\$34.6		\$6.5

The table shows that Avangrid has identified 2019 savings of \$34.6 million in corporate services. Management calculated these corporate costs savings to CMP for 2019 at \$6.5 million, or 18.8 percent of overall Networks savings. Management believes that costs savings continued in 2020, producing a reported \$36.1 million for the year in corporate services cost savings as a result of Forward 2020+ initiatives. The largest 2020 cost savings initiatives came from:

- \$25 million in spending/budget reductions
- \$3.4 million from tax operating model transformation
- \$3.3 million in audit fees reduction.

Applying an 18.8 percent factor to calculate CMP's share of the reported corporate services savings produces a 2020 value of \$6.8 million.

5. CMP's operating expenses will be reduced by an additional \$8.8 million annually due to cost savings accrued by Networks from Mid-Period Assessment/Forward 2020+ initiatives in 2020.

Networks, including CMP and its other operating utilities, realized significant reported cost savings in 2019 and 2020 from Forward 2020+ initiatives. These savings will directly lower CMP internal operating expenses, although its customers will only realize these savings in rates with the resolution of the next distribution rate case and corresponding updated operating expenses.

The initiatives that generated the largest portions of the 2020 Networks cost savings of \$36 million (net) were:

- \$18.1 million in spend/budget reductions less external spend for minor storm/trouble
- \$6.8 million from capitalized labor
- \$3.5 million from efficient contracting model.

Management categorized these savings as the following table shows (specific to 2020, in contrast to the 2019 calculations provided for the previous conclusion).

Networks Cost Savings and CMP Impacts

Initiative Name	ID	Networks Savings (in millions)	Beneficiary ³	CMP Savings (in millions)
Avangrid Self Service Model-Admin Eff	N21	\$0.7	NY/CMP/UIL	\$0.1
EHS Organization-Networks	N30	\$0.3	ASC/NY/CMP/UIL	\$0.0
Org Redesign/Restructuring	N01	\$0.6	ASC/NY/CMP/UIL	\$0.2
Performance Review/Spans & Layers/Other	RL02-RL03-N	\$1.2	ASC/NY/CMP/UIL	\$0.0
Efficient Contracting Model	N12	\$3.5	All Networks	\$0.4
Resource Plan	N23	\$0.8	NY/CMP/UIL	\$0.6
Storm Response	N31	\$1.6	CMP	\$1.6
Consolidate Customer Service Centers/Call Ctr	N13	\$0.2	BGC/UI	-
Customer Core Technology Opt	N14	\$0.2	CMP	\$0.2
RPA for Customer Service	N15	\$0.6	NY	-
Capitalized Labor ²	RL04-N1	\$6.8	All Networks	-
CCNC	RL07	\$1.4	NY/CMP/UIL	\$0.1
Sourcing Events	RL08-N	\$0.1	NY/CMP/UIL	\$0.0
Total for Initiatives Above		\$18.0		\$3.3
Spend/Budget Reduction & Unalloc Effic ¹	RL05-N1	\$30.3	All Networks	
External Spend for Minor Storm/Trouble	RL05-N2	-\$12.2	NY/CMP/UIL	-\$7.5
Total		\$36.0		-\$4.2

¹ Anticipated spend reductions in the budget were reallocated to properly align margin to the rate cases decisions

² CMP realized an increase of Cap labor of \$3.9M from the prior year but this was driven by increase in total Personnel cost and not specifically attributable to this initiative

³ For initiatives where ASC is indicated as a beneficiary, there will be both direct and indirect benefits (through a reduction costs through ASC) realized at the OPCO level

Avangrid reported Networks savings of \$18 million for the first section of initiatives shown above and calculated CMP “internal” cost savings for 2020 at \$3.3 million, or 18.3 percent of the Networks total.

Two other initiatives are shown above that also impact the Networks cost savings related to Forward 2020+. The “Spend/Budget Reduction & Unallocated Efficiencies” initiative had very substantial cost savings of \$30.3 million, but AGR did not attempt to calculate a share for CMP. Liberty believes the CMP portion of these savings reduces CMP internal costs, but customers will not realize such savings until the inclusion of new operating expenses in a future rate case. Regardless, these cost savings will lower CMP expenses and revenue requirements. Using CMP’s 18.3 percent share of Networks savings for the other initiatives, we estimate lower CMP operating expenses of an additional \$5.5 million annually.

The bottom line of initiatives in the preceding table indicates “External Spend for Minor Storm/Trouble” caused by excess spending above budgeted amounts on minor storm response from external contractors of \$12.2 million for Networks. As noted in the text of this chapter, spending on storms of \$47 million dollars wiped out all of the Forward 2020+ savings for Networks in 2019, and also reduced the savings in 2020. However, we note that if the recent (2020) 1Networks program is effective in reducing storm response expenses, such negative results should be transient, and become lower or even reverse in future years.

We conclude that future CMP internal operating expenses should see reductions of about \$8.8 million annually due to the Networks Forward 2020+ initiatives based upon the company’s calculations of results in 2020.

6. Networks and CMP costs related to storm recovery, overtime, and external services continue to be difficult for management to control despite Forward 2020/+ initiatives and efforts.

Forward 2020+ committed (planned for) savings from the project in 2019 was \$35.1 million for Networks, with a reduction in FTEs of 35. AGR reported that 16 of the Networks initiatives in the “Rapid Launch” and Networks categories produced \$35.2 million in cost savings and 36 FTE reductions, slightly exceeding the committed savings. The primary contributors to cost savings were the “Spend/Budget Reductions (Excl. Minor Storm/Trouble)” and the “Capitalized Labor” initiatives that had cost savings of \$14.6 million each. However, two other entries in the Forward 2020+ update reports revealed that ongoing storm-related problem areas for Networks caused unplanned expenses in 2019 that overwhelmed the positive cost savings and resulted in net increased costs for the year.

Networks reported that “External Services for Minor Storm/Trouble” in the Forward 2020+ update reports produced additional, unplanned costs of \$23.3 million. A second entry labeled “Overtime” caused additional negative savings of \$23.4 million. These two categories neither appeared as initiatives in the Deloitte Consulting report nor did they have committed or budgeted cost savings dollars on the progress update reports. The original initiatives generated the cost savings expected, but those savings were offset by increased costs for minor storm/trouble and overtime.

The unplanned external services and overtime costs for storm response were a major negative factor in Networks’ generation of cost savings. However, this same situation has consistently occurred since 2017, whether the initial Forward 2020 or Forward 2020+ is in place. The \$46.7 million of unplanned costs from these two initiatives overwhelmed the positive cost savings of the other Networks initiatives, causing negative Networks cost savings of \$11.5 million for 2019.

The same two categories continued to cause operating expense issues in 2020 that reduced the cost savings for Forward 2020+. The “External Services for Minor Storm/Trouble” initiative had negative savings versus the budgeted amounts of \$12.2 million, which the “Work Shifts/Overtime” initiative underperformed the budget by an additional \$7.1 million.

VI. Customer Service

A. Chapter Summary

Leadership's inability to integrate UIL Holdings efficiently and effectively and its overemphasis on closing gaps between actual earnings performance and the investment community expectations created led to cuts that adversely affected customer service at CMP. By 2019, as the rollout of SmartCare and its new customer information systems approached, staffing cuts impaired management's ability to address resulting problems, producing a public crisis of confidence in management and widespread concerns about loss of control over billing accuracy.

Changes have come since then, aided substantially by a change in CMP's top-level management and a re-focus on bringing important aspects of CMP customer service leadership and management back to Maine. Those changes have much improved customer service performance.

The questions that remain - - important ones - - concern the sustainability of those improvements and the continuing stability of Maine-focused leadership. Iberdrola S.A. faces an existential threat to Avangrid's continuation as an electricity distribution utility and it has demonstrated an absorbing leadership focus on completion of the NECEC project. History calls into question what it will commit to Maine when those issues pass, particularly if it continues to see regulatory "approval" as leading rather than following its planning, budgeting, and resource commitment.

It is not too early to conclude that leadership has established a sound and credible path for sustaining recent improvements in Maine customer service. Neither is it out of line to consider history a sufficient basis for concern over whether sustainability will follow for the longer term.

B. Background

We examined the management and operation of CMP's customer service activities since the UIL Holdings acquisition. Our examination included organization structure, resource alignment and numbers, and activities driving CMP customer service. We examined and evaluated business practices, staffing, facilities, expenditures, performance levels, and management decisions that contribute to or solve problems. We place particular emphasis on:

- The top-level management structure in place to plan, set goals and budgets for, oversee, and measure the levels and costs of service to Maine customers
- Alignment of customer service functions among CMP, service companies, and other Avangrid or Iberdrola S.A. participants, and the changing levels of resources at each
- Changes in customer service organization and staffing over the last five years
- The impact of customer service personnel transfers to and from CMP and affiliated entities (e.g., service companies)
- Customer Service organizational changes and resourcing decisions related to the SmartCare implementation and post-go live through today and as may be expected in the near-term future
- Processes in place to set goals and objectives and to track customer service performance
- Quality of services provided by CMP affiliates and CMP, as measured by objective metrics
- Costs of services provided by affiliates
- Appropriateness and value of services provided by affiliates to CMP ratepayers.

- Management's response to the challenges and issues affecting customer service operations and service quality to CMP customers over the past five years.

The following section of the report contains a summary level review of CMP's Customer Service organization, costs, management, and performance, followed by a detailed review of key Customer Service functions including:

- Billing, Collections & Customer Care System
- Call Center Operations
- Credit & Collections
- Meter Operations, Field & Meter Services.

C. Findings

From 2016 through 2020, CMP's Customer Service organization underwent significant change, substantially driven by the implementation of the SmartCare Customer Information System. During 2016, a combined team of CMP Customer Service, IT, Avangrid, Deloitte, and other vendors worked together to define the new system. The Customer Service Manager at the time was dedicated to the project and customer service staff levels increased slightly to allow customer service employees to work on the project on a full- or part-time basis.

Activities in 2017 turned to testing the new system, training, preparing for go-live, and post go-live activities, as management placed SmartCare into operation over the weekend of October 31, 2017. A particularly severe winter storm hit CMP's service territory on the same weekend that SmartCare went live, creating additional, unexpected challenges for the Customer Service leadership team.

The transition to SmartCare introduced problems that drove customer satisfaction below targets and customer complaints well above normal levels. Management experienced undue difficulty in eliminating underlying causes of billing complaints and in resolving individual customer issues timely. Delays in resolving billing issues added to already elevated levels of customer concern, creating a cycle of escalating customer impatience and skepticism.

2018 and 2019 also proved difficult for the Customer Service organization as it grappled with the challenges brought on by the new system and the customer experience issues that employing it caused. SmartCare functioned largely as planned, but defects in its operation contributed to billing exceptions and delays for customers. Performance weaknesses in managing SmartCare development and go-live processes contributed substantially to the high level of billing and customer-service challenges experienced.

The 2018 Avangrid Customer Service reorganization and associated voluntary separation offers resulted in a weakened Maine-based management team and reduced staffing in key Customer Service functions at a critical time. Call volumes, customer complaints, and billing exceptions came at very high levels following the implementation of the SmartCare.

In September 2019, the CMP customer service organization underwent reorganization again, with appointment of a CMP Vice President of Customer Service, situated in Maine. Management intended this local-leadership structure to focus exclusively on Maine customer service, while

continuing to draw substantial support from service company resources. Call Center, Collections, and Billing responsibilities came back to Maine, and Call Center and Billing headcount increased. Customer Service performance improved significantly in 2020 following these Maine-centric changes.

1. Overall Changes in Customer Service

High customer service management priorities across an extended portion of our study period focused strongly on SmartCare deployment and associated challenges following go-live. CMP's introduction of SmartCare produced large numbers of customer concerns and a degradation in customer service performance. Customer calls to express and discuss those and other concerns increased. Call volumes for the first two months of 2018 ran 70 percent higher than the corresponding months of 2017. CMP found more customers abandoning calls before completion. More customers were calling, but failing to get through to discuss inquiries, concerns, and complaints.

Management did ramp up call center staffing ahead of the new system with temporary employees, but the Billing group did not supplement its resources until addressing billing backlogs exceeded in-house staff capacity. Many customer bills became delayed. Management underestimated the period of time it needed to stabilize SmartCare and the impact the deployment would have on the billing group. It also failed to staff the Billing group adequately to meet the increasing volume of billing exceptions and manual work in the months following SmartCare go-live.

The high level of defects and billing exceptions at go-live materially delayed bills to customers. Backlogs in billing work began to accumulate in February and March 2018. At the end of April 2018, with backlog growing, two billing analysts who had accepted an early separation option left the company. Their departures left the Billing group below normal staffing levels at a time of significantly increased workload. Management secured third-party resources to assist with exception processing, at the same time adjusting threshold settings in the system to concentrate resource application to the most critical billing exceptions. Bill error rates that rose following SmartCare deployment have since improved, as management addressed SmartCare-related issues, added resources to the Billing group, and implemented the Maine-focused Business Support and Solutions Team (BS&S).

CMP Call Center Supervisory Span of Control also widened significantly at go-live and has remained high. CMP added CSRs to address expected increases in call volumes, but did not add supervisors to support the increase in agents, significantly widening supervisor spans of control. This expansion made it difficult for supervisors to monitor the quality of call center representatives serving customers and to provide other supervisory support to employees. Neither management nor the third-party source CMP used to supplement its customer service resources consistently evaluated the quality of customer service delivered. Call-quality monitoring comprises an essential element in ensuring a good customer experience. A lack of attention to this process can undermine call center performance and result in higher customer dissatisfaction.

Customer complaints rose following the SmartCare deployment and the Customer Quality team had difficulty responding to customers in a timely manner. CMP's customer satisfaction

performance has not fully recovered from the issues experienced following SmartCare deployment.

The appointment of the Maine-based CMP VP of Customer Service at the end of 2019, additional Call Center and Billing staffing, and the creation of a Maine-based Billing and Collections Manager and BS&S group in 2020 have re-built a strong local leadership team and established a local SmartCare support team. These organizational changes have led to the improvement in performance, and increased Customer Service operating costs and staffing levels, as compared to prior years in our audit period. Customer Service performance, as measured through the Service Quality Indicators and other key metrics, has improved steadily from the first quarter of 2020 through the present. CMP's year-to-date 2020 customer service performance also compares favorably with the customer service performance of the other Avangrid operating utilities.

Since April 2020, with the appointment of the current ASC Vice President, the Customer Service organization has focused its strategy on what it terms "brilliant basics" - - delivering effective customer service, accurate bills, low estimated bills, and good phone call experiences.

The 2020 Networks Strategic Plan outlines initiatives intended to Improve Customer Experience by providing innovative new products and services, including:

- Increasing eBill/AutoPay customer adoption rates
- Providing easy access to more Outage information
- Providing consistent experiences across digital devices with responsive Web design and mobile apps
- Surveying customers to measure expectations related to new products and services
- Developing a "voice of the customer" based Customer Strategy that leverages best practices
- Improving customer outage communication, information sharing, and restoration accuracy
- Implementing key technology products to upgrade SAP, IVR, and pilot automation and robotics.
- Creating standardized approach to Quality Monitoring across all Contact Centers and Back Offices
- Measuring success of Quality Monitoring
- Developing a Customer First culture.

Also detailed in the 2020 Networks Strategic Plan, the 1Networks Project includes initiatives intended to "meet Customer Expectations at the lowest possible cost." Customer Service initiatives identified by the plan intended to reduce operating costs, primarily through automation, include:

- Possible outsourcing or consolidation of Back Office activities (e.g., Billing)
- Customer Core Technology Opt. (SAP enhancements)
- RPA for Customer Service (Robotic Process Automation)
- Chat Bots/ Web Chat
- Agent Assist.

Management also leverages customer-facing technologies to expand user options. CMP recently introduced a mobile app for customers and has added customer service-related videos to YouTube.

The Digital Team is also working on getting all operating companies on one outbound customer notification platform, working on the initiatives listed above, looking into adding more self-service, supporting smart speakers (Alexa), and enhancing or replacing Energy Manager.

2. Customer Service Organization

Avangrid reorganized customer service functions in December 2017, moving from a decentralized, company-functional organization to a service company-based matrix structure. The change moved responsibilities for customer service functions from the CMP VP of Customer Service to the Avangrid Service Company (ASC) VP of Customer Service, reporting to the Avangrid Networks organization. At the same time, responsibilities for Meter Operations and Meter and Field Services moved from the CMP Customer Service organization to the Electric Operations areas of Operations Technologies and Regional Operations, respectively.

Management made as part of Avangrid's reorganizing efforts four offers of voluntary separation, for which certain non-union, Customer Service organization employees qualified. Thirteen CMP customer service employees accepted the offer, with their departures coming at a critical time. Call volumes, customer complaints, and billing exceptions reached very high levels following the implementation of the SmartCare system at the end of October 2017. Six of the departed employees had comprised part of the Customer Service and Customer Relations Center management team.

With the September 2019 appointment of a CMP Vice President of Customer Service, situated in Maine, Call Center, Collections, and Billing responsibilities returned to Maine, headcount increased in the Call Center and Billing functions, and the Maine-focused BS&S team began.

A new CMP Billing and Revenue Recovery Manager position, based in Maine, came in February 2020. This manager got responsibility for CMP billing and collections. Prior to this change, a service company manager (the ASC Billing Manager) had responsibility for all operating company billing groups. Similarly, an ASC Revenue Recovery Manager had held responsibility for operating company collections functions. Creation of a CMP manager responsible for CMP billing and collections instilled a managerial presence in Maine, allowing the group to leverage process and protocols from a Maine regulatory perspective. There has remained a dotted line reporting to ASC to facilitate best practice sharing and interaction among peers and the management team.

ASC leadership has responsibility for all Avangrid Customer Service functions, retaining the service company-based matrix structure for Berkshire Gas, CMP, Maine Natural Gas, NYSEG, RG&E, UIL, SCG, and CNG.

The Avangrid VP of Customer Service changed again in April of 2020 with the promotion of the Director of Customer System Operations and Support to that position. The current VP of Customer Service has 28 years with Avangrid, with more than 20 years in customer service functions. This new incumbent replaced an executive who had come to Avangrid from Scottish Power. The appointment of an ASC VP of Customer Service with significant direct Avangrid and CMP work experience has proven beneficial for the CMP Customer Service organization.

In addition to the appointment of the Maine-based CMP VP of Customer Service, ten new positions came in 2020 to ASC's Business Support and Solutions (BS&S) team, to increase the focus on SmartCare defect resolution and to provide localized support of SmartCare in Maine. These BS&S employees work from Maine, and focus on CMP-related activities. An additional position, a CMP Compliance Manager, again, based in Maine, came in the Fall of 2020, to strengthen CMP's compliance with MPUC rules and regulations. This position reports directly to the CMP VP of Customer Service.

In addition to the management changes introduced in late 2019 and throughout 2020, the hiring of 18 additional customer service representatives increased staffing levels in the CMP Contact Center in 2020. In addition, two analysts each were added to CMP's Billing and Collections groups. The following table summarized CMP and ASC staffing levels by year from 2016 through 2020 for each function within the Customer Service organization.

Customer Service Staffing Levels

	2016		2017		2018		2019		2020	
	CMP	ASC	CMP	ASC	CMP	ASC	CMP	ASC	CMP	ASC
Customer Contact Center	67	0	90	0	83	0	85	1	113	
Customer Billing	8	0	9	0	10	0	9	1	11	
Credit and Collections	8	0	6	0	6	0	7	1	9	
Customer Service Systems and Technology Support	3	2	3	2	3	5	14	5	16	5
Customer Complaint Resolution	2	0	1	0	3	0	4	0	3	
Customer Satisfaction Measurement	2	0	2	0	2	0	3	0	3	
WorkForce Management and Quality Assurance	2	0	2	0	2	0	1	2	1	2
Vendor Management	2	0	2	0	1	0		1	1	2
TOTALS	94	2	115	2	110	5	123	11	157	9
Field and Meter Services and Meter Data Collection	105	0	89	0	86	0	85	0	91	0

ASC's works with CMP and the other Avangrid operating companies to promote best practice sharing, performance trending, and other common interests. UIL became fully integrated into the ASC Customer Service organization in 2019, with UIL customer service functions reporting to the ASC Customer Service leadership team. All Avangrid operating companies operate on an SAP platform now, allowing the companies to share SAP best practices as well.

3. Customer Service Performance

We examined the approach, resources, efforts, and activities involved in Customer Service performance measurement to assess their effectiveness, efficiency, and conformity with customer and regulatory expectations and requirements. We reviewed service quality index (SQI) metric practices, seeking to determine how management defined, gathered, analyzed, and reported metrics and how SQI performance has driven management decisions and resourcing. We also analyzed customer service operations performance statistics, customer research results, and customer complaints to determine CMP's level of performance and compared CMP performance to that of other Avangrid Operating Companies.

a. Service Quality Indices

A February 19, 2020 Order on CMP revenue requirements, established a four-metric SQI to assist the Commission in determining whether services provided by CMP reached reasonable and adequate levels. The SQI metric began on March 1, 2020 to measure performance over a rolling 18-month period. When performance over the rolling 18-month period does not meet the benchmark for all four metrics, CMP may not seek relief from a 100 basis point ROE adjustment. Definitions of the four SQI metric follow:

- **At least 80 percent of business calls answered within 30 seconds** - - The calculation of the metric adds the number of calls answered by agents within 30 seconds and total calls abandoned within 30 seconds, and then divides by total agent calls answered plus total agent calls abandoned.
- **Nor more than 7 percent of calls abandoned** - - The calculation of the metric adds calls abandoned and calls receiving a busy signal or courtesy message, and then divides by total calls requesting live customer-service representative assistance plus calls that receive a busy signal or courtesy message.
- **No more than 0.4 percent billing errors** - - The calculation of the metric divides the total number of delayed or erroneous bills issued by the total number of bills issued.
- **No more than 1 percent estimated bills** - - The calculation of the metric divides the total number of meters billed based on estimated usage by the total number of possible meter reads.

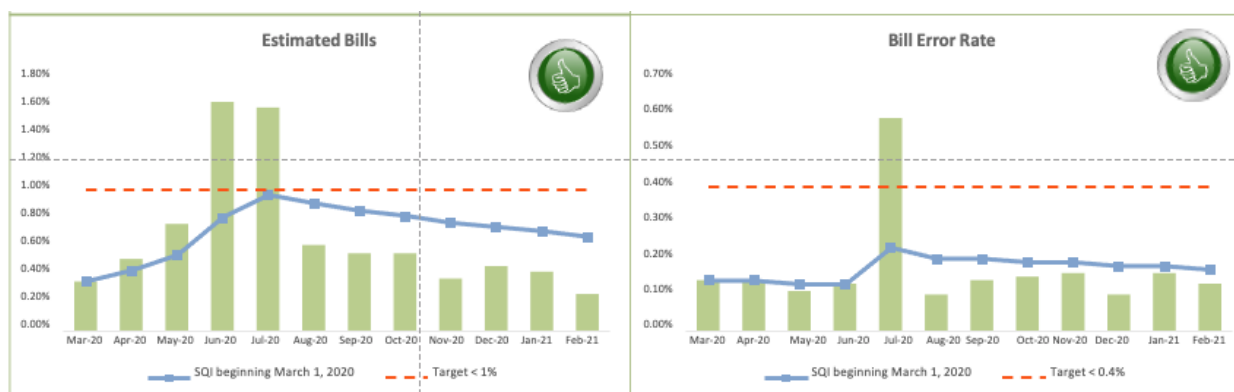
A September 2020, Avangrid Internal Audit examination titled *Avangrid Networks-Regulatory Performance Metrics Final* sought “review of the calculation of regulatory performance metrics reported to State regulatory commissions for accuracy and completeness in accordance with approved methodologies.” Internal Audit found that “the accuracy and completeness is generally effective and in accordance with approved methodologies” and suggested as an improvement that CMP “develop a robust set of procedures that outline the processes, methodologies and employee responsibilities describing the calculations and reporting of customer service metrics.”

CMP has reported its progress on these metrics in four quarterly SQI performance reports since June 26, 2020. The most recent report, issued on March 31, 2021, provides SQI performance from December 2020 through February 2021. CMP has reported meeting or beating its targets for each of the four over this period.

CMP missed its goal of answering 80 percent of calls within 30 seconds in two of the past 12 months - - April 2020 and most recently in December 2020, as the chart below summarizes. On a cumulative basis, the most recent 12-month average for the percentage of calls answered within 30 seconds we observed exceeded 80 percent. CMP also failed to meet the target for call abandonment rate twice since March 2020, in May 2020 and December 2020, but again met the SQI target on a cumulative 12-month average basis.

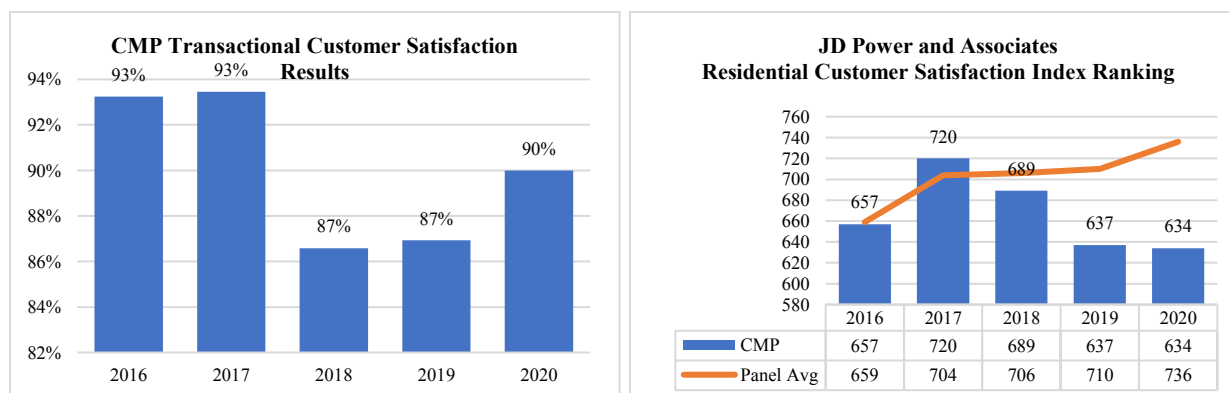


Since August 2020, CMP's has met the estimated bill and billing error targets, as the charts below indicate. On a cumulative basis, over the 12-month period, both metrics remain within target.



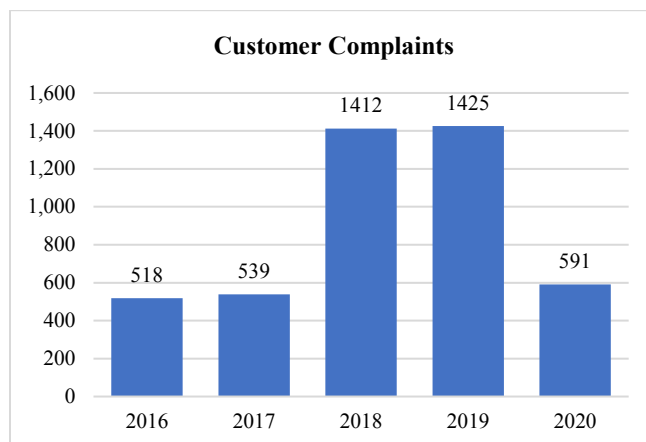
b. Customer Satisfaction

CMP's customer satisfaction has also improved over the last year, as measured internally by CMP's transactional customer satisfaction survey. The company had witnessed a significant decrease in satisfaction from 2017 to 2018. CMP has fallen below the panel average for customer satisfaction since 2017 and remained so in 2020, as compared to other utilities in J.D. Power and Associates' Eastern segment of large electric utilities. It ranked last in the J.D. Power and Associates' panel in 2019 and 2020 in overall customer satisfaction.



c. Customer Complaints

CMP's Customer Complaints, after peaking in 2019, have returned to pre-SmartCare levels, as the following chart illustrates.

d. Employee Satisfaction

CMP's Customer Service stands as one area that showed significant levels of positive response and gains from 2018 to 2019 in annual employee empowerment and engagement surveying. The 2019 results showed a significant gain and each major category showed improvement as well.

e. Performance vs Other Avangrid Operating Companies

CMP's customer service performance, as measured by the following service indicators, shows mixed performance when compared to other Avangrid operating companies. CMP has the second lowest customer satisfaction for recent contacts and the highest caller abandonment rate. CMP calls answered within threshold is second highest, with a wide gap between the next closest company. CMP's percentage of estimated meters is the lowest of the group, but expectedly so; CMP's meters have been fully automated and the other utilities have not yet fully automated meter reading.

Comparative Avangrid Utility Service Indicators

Service Indicators (%)	CMP	NYSEG	RGE	UI	SCG	CNG	BGC
Answered w/i Threshold	88.0%	67.6%	76.3%	74.3%	67.9%	63.8%	88.9%
Meters Estimated	0.7%	9.2%	11.3%	N/A	N/A	N/A	N/A
Contact Satisfaction	90.0%	90.7%	92.3%	89.0%	93.2%	90.4%	94.0%
Abandons	3.2%	2.4%	2.4%	2.5%	2.2%	2.4%	0.1%
Answered	93.20%	97.60%	97.60%	97.50%	97.80%	97.60%	99.90%

4. *Billing, Collections & Customer Care System*

CMP bills for metered electric service and for several unmetered services, including area lights, line extensions, service establishment charges, temporary service charges, and pole charges. SmartCare also performs billing functions for supplier charges for all Standard Offer Provider charges and those Competitive Electricity Supplier (CES) accounts consolidating delivery and supply charges. CMP's systems create and communicate transaction sets of customer usage and

other information for the accounts of other Competitive Electricity Suppliers who bill their supply charges separately.

Billing staffing levels remained static in 2016 and 2017, leading up to and following the implementation of the SmartCare system. CMP management underestimated the level of billing work following SmartCare deployment and it failed to staff the Billing group adequately to meet the increasing volume of billing exceptions and manual work in the months following SmartCare go-live. Backlogs in billing accumulated in 2018, delaying the issuance of bills for customers. Management added three additional billing analysts to the organization in 2018, followed by the 2019 loss of an analyst (backfilled in 2020).

CMP Billing Staff

Year	Supervisor	Lead Analysts	Analysts	Manager*	Total
2016	1	2	4		7
2017	1	2	4		7
2018	1	3	6		10
2019	1	3	5		9
2020	1	3	6	1	11

*Responsible for CMP Billing and Collections functions

Management created a new position, Manager of Billing and Revenue Recovery, in February 2020 to oversee CMP's Billing and Collection functions, intending this position to bring a more focused effort to CMP to address SmartCare issues and defects, and to focus managerial presence in Maine on Billing and Collections. Before this change, these groups fell under service company managers not based in Maine and shared with other operating company Billing and Collections groups. Billing and Collections had CMP supervisors located in Maine.

CMP established a Business Support & Solutions (BSS) organization in 2019 to increase the focus on SmartCare defect resolution and provide localized support of SmartCare in Maine. CMP's BSS group reports to the ASC Business Support & Solutions Manager who reports to the Director Customer Service and Systems (CSS). A CMP supervisor manages BSS employees who focus their work on supporting CMP; the supervisor and staff work from Maine.

Customer Service Systems & Technology Support

Year	Supervisor	Analysts or Lead Analysts	Senior BI Architect	ASC Manager	Total
2016	Organization non-existent				
2017					
2018					
2019	1	7	1	1	10
2020	1	7	1	1	10

Billing operation and maintenance (O&M) expenses increased by approximately 28 percent from 2016 to 2020.

Bill Processing Costs

Year	Personnel Costs	External Costs	Total Cost	Bills Issued	\$ / Bill
2016	\$420,011	\$2,549,589	\$2,969,600	7,467,697	\$0.40
2017	\$518,983	\$2,773,708	\$3,292,691	7,470,386	\$0.44
2018	\$492,652	\$3,170,852	\$3,663,504	7,688,456	\$0.48
2019	\$656,605	\$3,299,675	\$3,956,280	7,728,411	\$0.51
2020	\$881,376	\$2,912,656	\$3,794,032	7,761,973	\$0.49

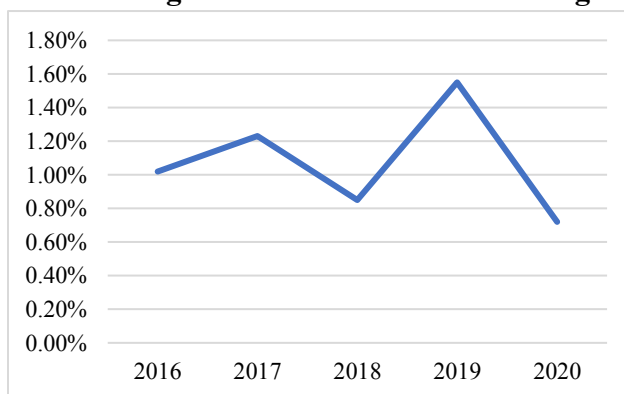
Customer Service Systems & Technology Support (O&M) expenses increased by approximately 624 percent from 2016 to 2020, which tracks with the increase in headcount during those years.

Customer Service Systems & Technology Support Costs

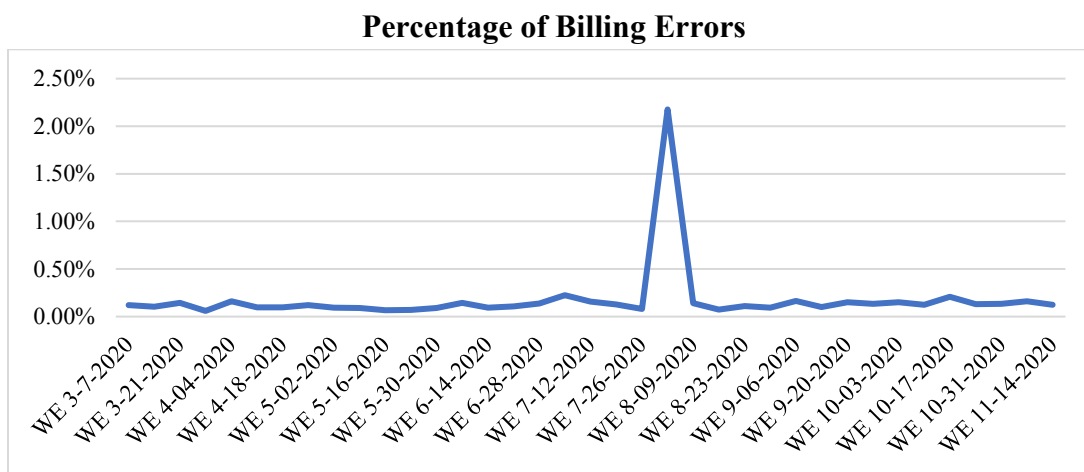
Year	Personnel Costs	External Costs	Total Cost
2016	\$531,506	\$208,240	\$279,454
2017	\$552,283	\$70,071	\$622,354
2018	\$742,940	\$58,739	\$801,679
2019	\$975,033	\$338,596	\$1,313,630
2020	\$1,992,717	\$11,097	\$2,003,814

Estimated bills can trigger customer inquiries and complaints, especially when bill amounts vary noticeably from the prior month. AMI network efficiencies typically allow CMP to keep numbers of estimated meter readings minimal, but storm damage and system and technical issues can affect read performance. The following chart details an increasing trend in estimated meter readings by year from 2017 through 2019. CMP has improved estimated meter reading performance in 2020.

Percentage of Estimated Meter Readings

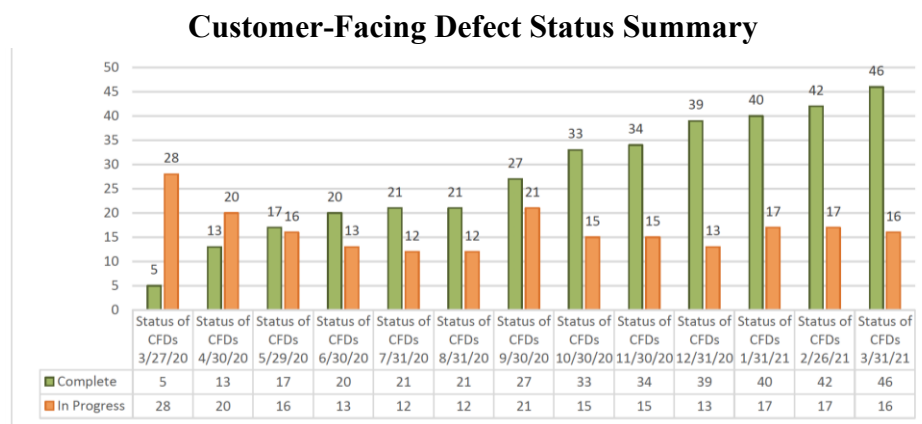


CMP's percentage of billing errors, which includes delayed bills as well as billing errors, has increased slightly since measurement began in March 2020, with a peak during the first week of August 2020.



f. Customer-Facing Defects

Pursuant to the February 26, 2020 Commission Order (in Docket No. 2019-00015), CMP has filed monthly reports addressing outstanding customer-facing defects. At the time of the order, CMP had identified 33 outstanding customer-facing defects in the SmartCare system. The report filed on April 1, 2021, stated that CMP has completed SmartCare system updates to resolve 46 of 62 customer-facing defects identified as of April 2021. CMP expects to resolve the remaining 16 by third-quarter 2021.



However, in the spring of 2020 CMP failed to notify the Commission's Consumer Assistance and Safety Division (CASD) of a newly discovered customer-facing defect that had existed since go-live. MPUC Rules Chapter 815 requires CMP to send new customers a written summary of their rights and responsibilities within two months. Following SmartCare implementation, CMP did not fully comply; 72,000 customers did not receive their statement of rights and responsibilities, in the time allotted. The defect and lack of compliance to Chapter 815 was self-reported to CASD on September 14, 2020, accompanied by a retro-active mailing to all active, affected customers.

To strengthen compliance, CMP established a new Compliance Manager position in the Fall of 2020. In addition to MPUC Chapter 815 compliance, the new manager will review all communications with customers to ensure compliant, understandable content.

CMP files separately a quarterly report with the Commission updating ongoing maintenance of the SmartCare system, including efforts to resolve defects not customer-facing, system enhancements, and system maintenance.

5. Customer Complaint Resolution

We sought to determine whether the approach, resources, and activities for handling customer complaints and inquiries have proven effective, efficient, and compliant with customer and regulatory expectations and requirements. We reviewed CMP's performance in handling complaints and ability to analyze complaints to determine root cause and effect change to business processes or organization.

Handling Customer Complaints falls under CMP's Customer Service Quality organization. The group serves all states, using a combination of analysts and regional leaders. Networks has assigned regional leaders to each Avangrid state served, using them as regulatory experts and primary interface with regulators. The analysts handle the day-to-day receipt and response to customer complaints. CMP's analysts and the Avangrid Manager of Customer Service Quality work from Maine.

The next tables summaries changes in the Customer Service Quality staffing that has supported handling of CMP's customer complaints. Vacant during our field work, management reported that it recently filled the Regional Leader position supporting Maine.

Customer Service Quality

Year	Manager	Regional Leader	Analyst or Lead Analyst	Total
2016	1		1	1
2017	1			1
2018	1	1	1	3
2019	1	1	2	4
2020	1		2	3

Customer Service Quality expanded its support of customer complaint handling in 2020, adding responsibility for responding to "executive" complaints - - those sent directly to an officer or executive at CMP. Prior to this change, these complaints went to the Call Center organization. In 2020, CMP also began widening its customer feedback beyond regulatory and executive complaints, to include customer satisfaction feedback, "live learnings," and other customer feedback received as a part of regulatory hearings. For instance, testimony from the 80 or so customers who participated in the hearings associated with the Meter and Billing Inquiry produced customer case studies, with further refinement into "live learnings" incorporating a root cause

analysis approach to review of specific complaints to identify resolution steps and options for avoiding the issue in the future.

CMP has branded this approach as “NOW WOW FIX” and seeks to change the culture of the organization to consider the customer experience as complaints get addressed. A three-step service recovery process exists:

1. Contact the customer right away (within 24 hours) following the complaint (NOW).
2. Focus on the customer to find a resolution to the complaint (WOW the customer).
3. Identify how to avoid this from happening in the future (FIX).

The third step, FIX, takes longer when it requires a change to process or technology. CMP chooses certain complaints, those involving multiple groups, to address through discussions and review. A series of three meetings introduces the complaint to the cross-functional team, identifies data or information needed to resolve the complaint, and then discusses possible process changes to fix the issue and to gain buy-in and commitment to doing things differently in the future. The Customer Service Quality team facilitates the process and provides documentation to define changes and track action items.

CMP also began using a new Customer Satisfaction Survey, “Rant and Rave” in 2020, after a brief pilot of the approach at the end of 2019. The Customer Service Quality team supports the survey by making outbound calls to customers who participate in the weekly transactional customer service survey. Where possible, CMP attempts to address customer concerns and complaints using the NOW WOW FIX and efforts produce weekly Rant and Rave dashboard updates.

CMP's transactional customer satisfaction has improved since 2018 and customer complaints have declined since 2018, as described earlier in this chapter under *Customer Service Performance*.

6. Call Center Operations

We examined the organizations in place over the past five years to handle customer calls, including the CMP Contact Center, Contractor Call Centers, and any third-party service providers. We examined resource changes in relation to quality of service provided to customers.

Customers call CMP's Contact Center for issues related to service disconnection, electric outage, billing, and credit or collection issues, or to raise general questions. CMP accepts calls specific to new-service connections between the hours of 7:00 a.m. and 4:00 p.m. Management trains all customer service representatives to handle electric customer service and emergency calls. Electric emergencies, and customer reports of hazardous conditions, such as wires down, get the highest priority, under which CMP routes the call to the first available representative. CMP takes outage and emergency calls on a 24/7 basis and customer service calls from 7:30 a.m. to 6:00 p.m. Monday through Friday. CMP's IVR and web remain available at all hours. Staffing at CMP's Contact Center in Augusta includes 105 Customer Service Representatives, assigned to six supervisory teams, producing an average team size of 17 to 18 representatives.

CMP boosted call center staffing ahead of the SmartCare implementation in 2017. However, staffing then dipped slightly in 2018 and 2019 during a period when CMP had difficulty meeting call answering handling goals (discussed in the earlier *Performance* section of this chapter).

Staffing increased in 2020 to make more agents available to customers, reduce customer wait times and abandonment rates, and help meet CMP's earlier-discussed SQI call answering performance goals.

The following table details the changes in staffing for the CMP Contact Center since 2016.

Contact Center

Year	Manager	Supervisor	Reps	Span of Control	Analysts	Total
2016	1	5	59	12	2	67
2017	1	4	80	20	2	87
2018	1	4	78	20	0	83
2019	1	4	80	20	0	85
2020	1	6	105	18	0	112

Prior to 2018, two workforce management (WFM) (traffic) analysts worked onsite to assist with CMP contact center scheduling and reporting. In 2018, Networks assigned these two analysts to the ASC WFM and Quality Assurance group, which reports to the ASC Director of Customer Care. The ASC Vendor Management/Technology group also supports the CMP Contact Center, managing the Center's iQor outsourcing contract.

CMP Contact Center Supervisory Span of Control widened significantly in 2017 and continued to remain high through 2020. We find that level high compared to the industry and well above CMP's 2016 levels.

Call Center costs have fluctuated as a result of the changes in staffing and increases in external costs. On a cost per call basis, costs have ranged from a low of \$3.19 per call in 2017 to \$4.88 in 2020. From 2016 to 2020 Call Center costs have increased by 47 percent. In 2020, call center costs increased, as compared to prior years, while call volumes decreased.

Call Center Costs

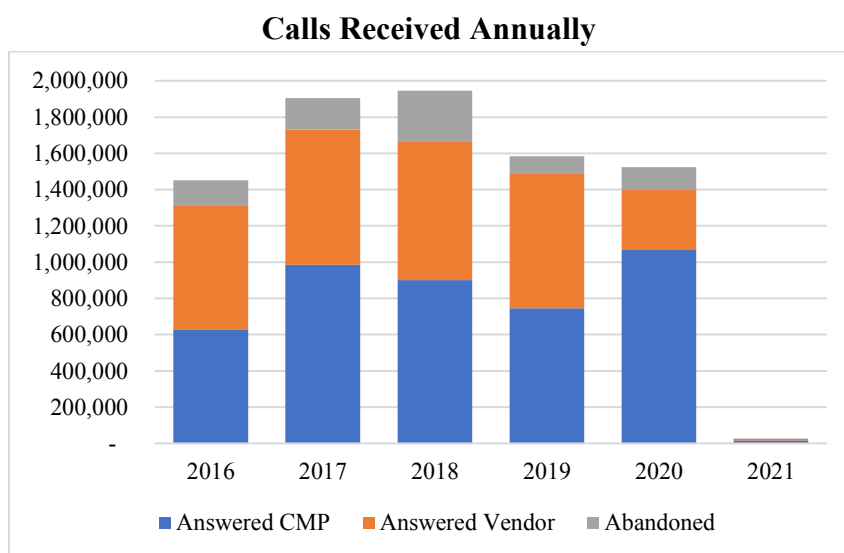
Year	Personnel Costs	External Costs	Total Cost	Calls Handled	\$ / Call
2016	\$4,138,148	\$473,370	\$4,611,518	1,309,910	\$3.52
2017	\$5,091,431	\$440,068	\$5,531,499	1,731,452	\$3.19
2018	\$4,966,651	\$604,024	\$5,570,675	1,666,474	\$3.34
2019	\$5,185,431	\$652,150	\$5,837,581	1,486,500	\$3.93
2020	\$6,076,953	\$770,763	\$6,847,716	1,401,155	\$4.88

External costs, composed primarily of third-party live outsourced call handling and high-volume call answering service vendor costs, have risen moderately over this same period. CMP uses iQor, an international provider of outsourced representatives to assist with CMP's call handling. Since 2016, iQor has answered about half of CMP customer calls. Intrado (previously Twenty-First

Century Communications/West Communications) provides high volume call answering for CMP. These costs have remained fairly constant over the five-year period we examined.

CMP received 1.5 million calls in 2019. Call volumes in 2020 trended down slightly, largely due to the pandemic and reduced collection activity. CMP's Contact Center did not move to remote operations in 2020, in contrast to what many Call Centers have had to do to continue operations. CMP's telephony platform does not currently support remote call handling. Instead, management spaced out existing Contact Center seating into adjoining areas to support social distancing requirements.

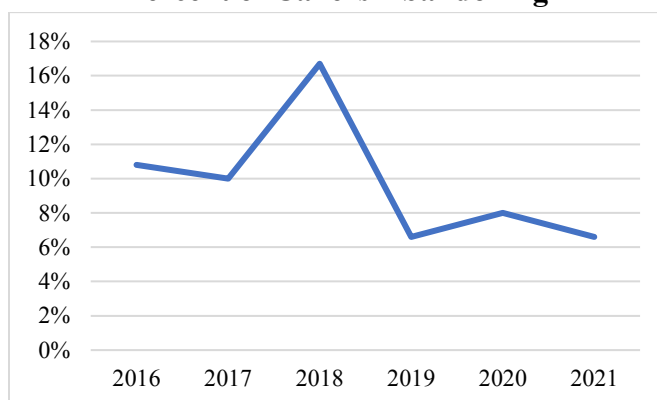
The next chart depicts total calls received annually since 2016, those answered by CMP, those answered by the outsourcing vendor, and callers abandoning.



Call volumes increased before SmartCare go-live at the end of October 2017. The major storm coinciding with go-live significantly increased volumes. Call volumes continued to climb in 2018, dropping down to more typical levels in 2019 and 2020. CMP uses iQor, an international provider of outsourced representatives to assist with CMP's call handling. From 2016 through 2019, iQor has answered about half of CMP customer calls. However, in 2020 and 2021 year-to-date, iQor has handled about a third of CMP's customer calls.

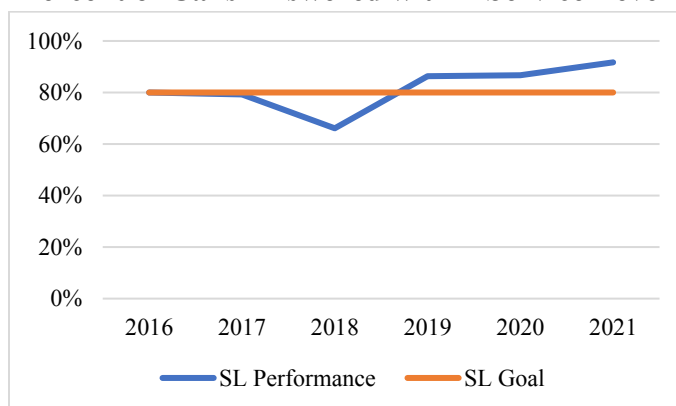
Numbers of callers abandoning before reaching the contact center also increased significantly after go-live, peaking in 2018, as the next chart illustrates. CMP has minimized the abandonment rate in 2019, 2020 and 2021 to-date.

Percent of Callers Abandoning



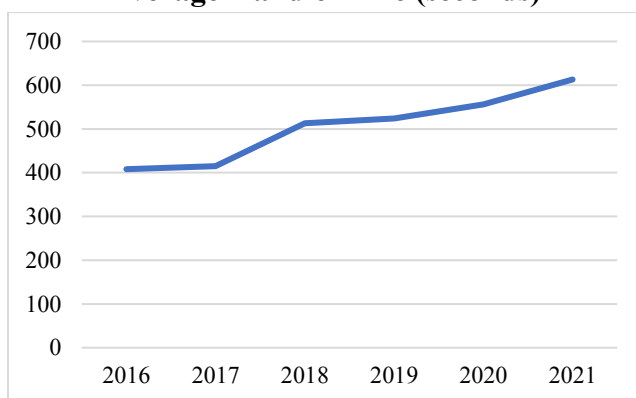
The contact center did not meet annual service level objectives in 2017 or 2018, as the next chart illustrates. However, since initiation of the Service Quality Index in 2020, CMP has generally exceeded service level objectives (reference Section 2. Customer Service Performance). Service Level was defined as answering 80 percent within 45 seconds until 2019, including with support from technology. CMP's current Service Level goal is to answer 80 percent within 30 seconds, without technology support.

Percent of Calls Answered within Service Level



CMP's Average Handle Time (AHT) has increased since SmartCare deployment in 2017, reaching a peak in 2021. Management believes that the AHT increase reflects an enhanced representative focus on the quality of interaction versus ending the call. Taking the call time needed to address the customer's questions has been a matter of management emphasis.

Average Handle Time (seconds)



Commission Staff identified performance and quality of CMP's call center as a problem prior to the implementation of SmartCare, as early as April 2016, with performance deteriorating after implementation. During 2017 and much of 2018, the lack of sufficient numbers of internal resources and the high turnover experienced among personnel provided by an outside firm impaired CMP's Contact Center operations. The Contact Center did not consistently achieve answering goals, suffering a very large drop in performance in July 2017 and again in May 2018.

Call Center performance improved significantly in 2019 and 2020, as prior performance charts in this chapter illustrate. Following institution of the call answering SQI in 2020, CMP has generally exceeded call answering service level objectives. Abandonment rate has decreased, and callers are able to get through more quickly to a customer service representative for assistance. The increase in call handle time mostly results from a combination of representatives' taking more time to handle customer concerns and longer conversations with customers struggling to pay their bills during the pandemic and the need to negotiate payment arrangements and installment plans.

CMP's structured program for evaluating representatives' dealings with customers suffered significantly from the lack of supervisory personnel during the 2017 to 2018 period. Established policy has called for the call center supervisory team to review multiple conversations by each representative with customers each month. Performance of these reviews since the summer of 2017 came too infrequently - in some months not occurring at all. iQor, the firm contracted to support CMP customer contacts, also did not monitor its performance at expected levels during the six months following SmartCare go-live.

In addition to adopting SQI call answering metrics, on February 19, 2020 in Docket No. 2018-00194, *Investigation into Rates and Revenue Requirements of Central Maine Power Company* ("CMP"), the Commission directed CMP to hire a third-party to review quality assurance policies and procedures and make recommendations for improvement. The third-party is also expected to independently monitor and evaluate CMP performance in adopting quality assurance improvement recommendations.

A Request for Proposal issued on May 4, 2020, the selected firm began work on July 30, 2020, and finalized a Recommendations Report on April 30, 2021. The study found call quality assurance (QA) program well-organized and highly structured and determined that both agents and

supervisors reported a strong desire to get and give feedback. The firm, however, found supervisor to agent ratios high (1 to 17) as compared to centers with similar call complexity and observed that supervisors report limited time available to conduct quality reviews or provide feedback to agents. Recommendations included widening supervisory spans of control, adding a leadership role to provide coaching for coaches, and adding personnel to support the expanded demands of the quality assurance program, and supplementing professional development for managers and supervisors. The firm also recommended changes to the evaluation forms and reference guides for employees, more frequent agent evaluations and evaluation frequencies aligned with skill levels, and better quality-assurance integration.

The firm's proposal called for it to monitor CMP's performance improvement for a 90-day period following implementation recommendations - - set to begin imminently. Customer Service has begun to address the recommendations in the report, including establishing a new Customer Service Vision Statement that states, "We provide customers with a superior quality experience during every interaction; one customer at a time."

7. Credit & Collections

We reviewed the credit and collections organization to determine services and tasks provided by CMP, its affiliates, or third parties. We examined staffing levels and performance over the last five years to identify changes to the credit and collections organization and to assess collections efficiency, effectiveness, and conformity with customer and regulatory expectations and requirements.

Staffing has remained fairly constant and dedicated to CMP and Maine regulatory concerns over the period since the UIL Holdings acquisition. Management of the Credit & Collections function did, however, shift from CMP in 2016 to ASC in 2018. In 2020, CMP appointed a Billing and Revenue Recovery Manager, a CMP management position reporting directly to CMP's Vice President of Customer Service, to head up the Credit & Collection organization. This move came in conjunction with the 2019 effort to re-implement local leadership to focus efforts exclusively on Maine customer service. There remains a dotted-line responsibility to the ASC Director of Customer Service and Systems to permit the organization to remain consistent with Networks-wide strategy and support. The following table presents Credit and Collection staffing levels from 2016 to 2020.

Credit & Collections Staffing

Year	Supervisor	Representatives	Admin Specialist	Analyst	Total
2016	1	7	1		8
2017	1	5	1		7
2018	1	4	1		6
2019	1	4	1	1	7
2020	1	5	1	1	8

CMP's Credit and Collection costs remained fairly constant from 2016 through 2019, exhibiting a one percent drop in costs during that period. However, Credit and Collection costs have fallen significantly in 2020, due to the moratorium on collections-related service disconnection activity during the pandemic. External costs dropped by half from 2019 to 2020. The 2020 Customer Service Monthly Variance Report shows external costs for postage under budget by 38 percent while external costs related to final collections fell under budget by 65 percent. iQor, a third-party outsourcer, handles collection-related calls for CMP and 2020 actual vendor costs were also under budget by about 19 percent.

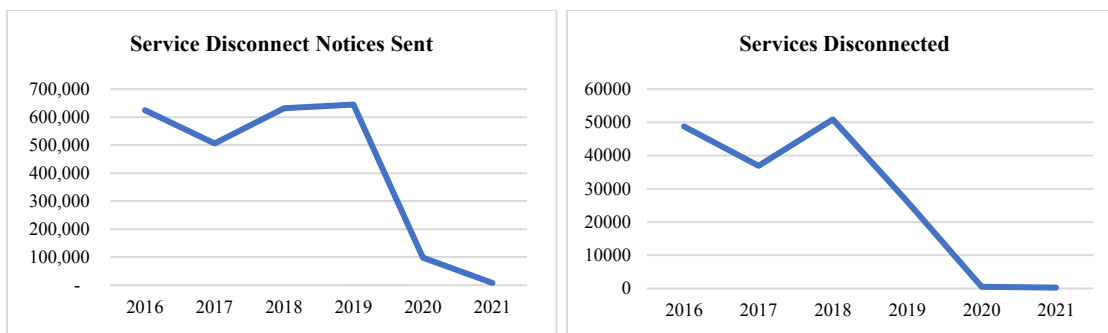
Credit & Collection Costs

Year	Personnel	External	Total
2016	\$173,125	\$2,952,164	\$3,125,289
2017	\$42,633	\$2,952,843	\$2,995,476
2018	\$74,027	\$3,150,548	\$3,224,575
2019	\$48,977	\$3,046,090	\$3,095,067
2020	\$12,608	\$1,863,372	\$1,875,980

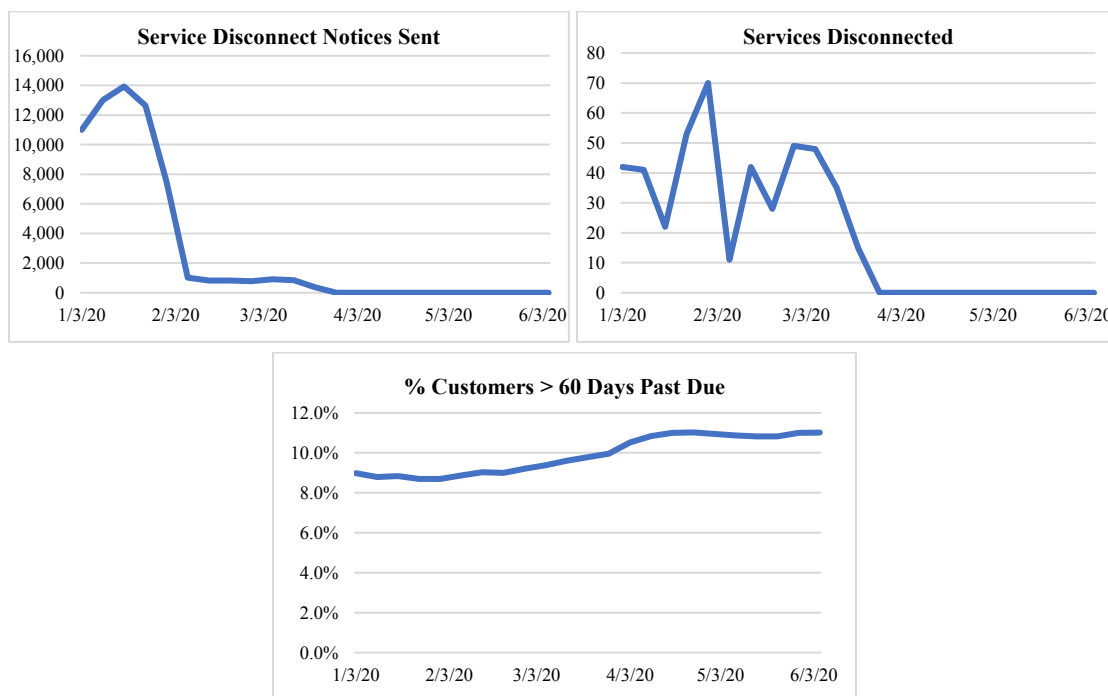
From 2016 to 2019 CMP sent on average 600,000 disconnect notices to customers with arrears and disconnected about 40,000 meters per year for non-payment. During this period, CMP replaced its legacy Customer Information System with SmartCare, and ceased most collection activity immediately before and for a period following go-live. Collection activity in 2020 fell significantly to accommodate customers during the difficult economic conditions brought on by the pandemic. During most of 2020, collection actions remained on hold, with late payment charges and collection notices, dunning, and disconnection suspended. These suspensions have served to reduce inbound customer call volumes to the Contact Center and to iQor, the vendor responsible for handling collection-related customer calls.

CMP did offer more flexibility on installment plans and conducted outbound campaigns to offer payment arrangements to customers having difficulty paying their balance.

The following two charts show Credit & Collection workload trends, represented by Service Disconnect Notices Sent and Service Disconnected, which directly affect operations costs.

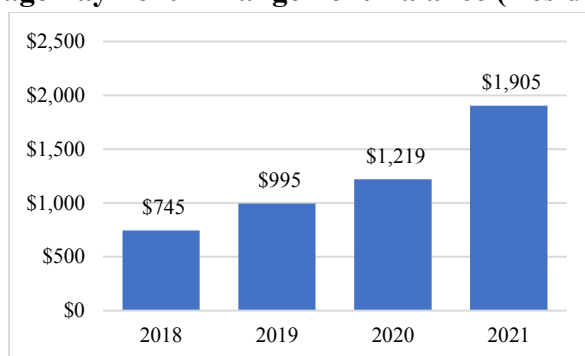


The following charts demonstrate the impact of reduced collection actions during the pandemic, specifically during the first half of 2020. Commission requirements limited disconnection to non-residential accounts during the winter period followed by the COVID moratorium.



The average balance of customers negotiating payment arrangements has grown substantially since 2018, with the pandemic adding substantially to outstanding balances due.

Average Payment Arrangement Balance (Residential)



8. Meter Operations & Meter Services

Effective management of metering requires a sound organization, sufficient staffing, appropriate qualifications, training, and operating procedures. We reviewed the Meter Operations organization to determine services and tasks provided by CMP, its affiliates, or third parties. We examined staffing levels and performance over the last five years to identify the drivers of change in performance levels and cost.

Field Customer Service and Meter Services form the two parts of CMP's Meter Operations organization. Field Customer Service encompasses the field staff assigned throughout CMP's service territory to respond to service requests to install or remove meters or to gather field information from meters. Meter Services comprises metering staff located throughout the service territory and assigned to install or remove larger, more complex meters. Meter Services also includes the Meter Lab personnel who receive and test meters, and AMI Meter System Operations, employees responsible for managing AMI operations throughout CMP service territory.

In 2016, CMP's Metering Services resources comprised a Manager, two Field Supervisors, the Meter Lab Supervisor, and the AMI group. The AMI group generally included AMI Meter Systems Administrators, Meter Engineers, Meter Technician, and Lead Analyst-Project Managers.

Field Customer Service and Meter Services, including Meter Lab and Meter System Operations, reported to the CMP Customer Service Director in 2016 and 2017. The AMI group moved in August of 2017 to an organization headed by the Director of Operations Technology, to whom a Manager of Smart Metering and a Manager of Meter Operations report. At the same time, the Meter Services group (meter and lab technicians) moved to the Customer Services organization, operating under the Manager of Regional Operations-Customer Service.

In 2018, the Regional Operations Customer Service organization moved from Customer Service to Electric Operations. Meter System Operations moved to the Smart Metering organization reporting to the Manager of Smart Metering, who reported to CMP's Director of Operations Technologies. During this time, Field Customer Service Representative and Field Clerk staffing fell with reduction in Meter Operations and Meter Services.

Marginal changes in staffing levels occurred in these years, with a focus on shifting to a more skilled field workforce and consolidation of clerical functions and dispatching activities, following the introduction of the Click workforce system.

In 2019, the CMP Smart Metering organization moved to the ASC Process & Technology organization, reporting to ASC Senior Director Operational Smart Grids, with a mixture of ASC and CMP designations among employees of the organization. AMI Network Operations moved to ASC while Meter System Operations employees, with the exception of the Manager, were designated as CMP employees.

Meter Services/Smart Metering

Year	Supv.	AMI Meter Systems Admin	AMI Network Ops	Lead Analyst/Project Mgr.	Meter Lab Tech, Tester, Analyst	Meter Tech A&B	Field Service Worker	Field Meter Clerk, CSR	Meter Engineer Meter Tech II, Analyst	Total
2016	9	3		3	3	11	56	9	4	98
2017	1	3	7	2	2	10	55	8	4	92
2018	1	3	8	4	2	12	49	5	4	88
2019	1	3	8	4	3	9	51	13	2	94
2020	10	3	9	4	4	11	52	14	3	110

g. Costs

Meter Operations Costs*

Year	Personnel	External	Total
2016	\$4,241,801	\$63,558	\$4,305,359
2017	\$4,869,116	\$93,970	\$4,963,086
2018			
2019	\$4,033,363	\$331,024	\$4,364,387
2020	1,736,455	33,469	1,769,924

*Reorganization moved Meter Operations to Smart Metering in 2018.

Meter Services Costs*

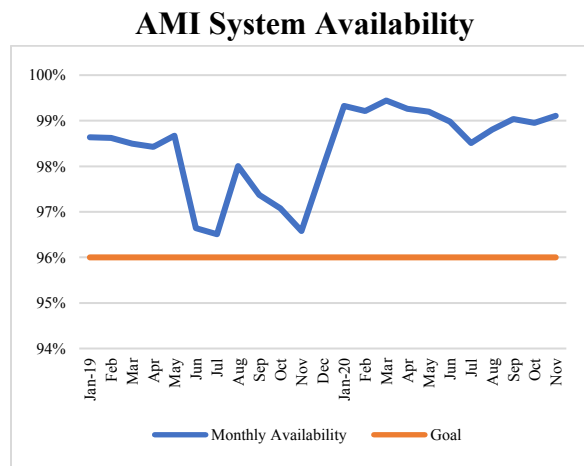
Year	Personnel Costs	External Costs	Total Cost
2016	\$2,325,918	\$163,237	\$2,489,155
2017	\$1,976,187	\$182,863	\$2,159,050
2018	\$5,008,770	\$471,041	\$5,479,811
2019	\$1,289,289	\$116,072	\$1,405,361
2020	\$881,528	\$171,270	\$1,052,799

*Reorganization moved Meter Services to Energy Delivery in 2018.

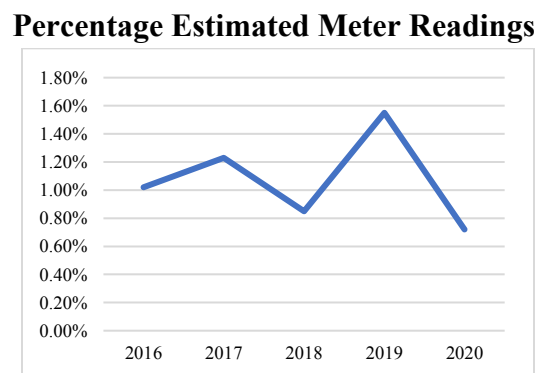
CMP's Smart Metering group has responsibility for monitoring and managing CMP's AMI network. The AMI system employs about 650,000 meters operating in AMI mode. An AMI

Network provided by Trilliant offers a mesh, wireless system for communications (including meter registrations of customer usage) between the AMI meters and a Trilliant Head End System to manage collection of information through the network. An Itron Enterprise Edition Meter Data Management System gathers and permanently stores meter information from the Head End System. Upon request, the Meter Data Management System uploads meter data to SmartCare system, which performs billing calculation and preparation functions.

Management measures operations performance of the AMI network through AMI system availability and the percentage of estimated bills rendered (SQI metric). AMI system availability measures the AMI network's availability to aggregate and transmit AMI meter reads back for processing and billing. CMP's AMI availability goal is 96 percent or greater and actual performance has trended above target since January 2019, as the next chart shows.



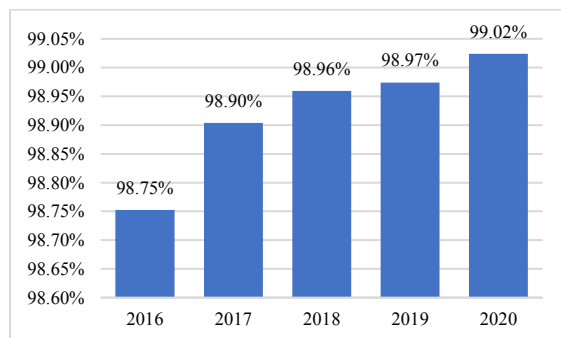
Inability to secure meter usage data through the AMI network, generally results in usage estimation by the SmartCare system. CMP has gradually decreased the percentage of estimated meter readings since 2016. Estimates increased in 2017 due to the October storm and again in 2019 due to an issue in loading readings in February. Aside from these monthly anomalies, estimated readings are trending down, as expected with improving AMI system availability and 99 percent AMI meters in service. CMP has kept the percentage under the target of 1 percent.



CMP has increased the percentage of Smart Meters within its service territory, from 98.75 percent

in December 2016 to 99 percent in July 2020.

**Percent of Automated/Smart Meters
of Total Meters Installed**



As required by the Commission, CMP completed the firmware upgrade to the Aclara i210 meters to address the i210 meter anomaly prior to the March 31st deadline. CMP updated the meter firmware “over the air” using the Trilliant network. It physically replaced those not updatable via the network with new meters having the latest firmware installed. Network Operations monitors firmware on all installed devices to ensure compatibility with the AMI network. CMP has established an agreement with Trilliant, renewed annually, to keep the AMI network software up-to-date. Quarterly meetings with all vendors are held to review product notices, alerts, and other information concerning CMP’s installed AMI equipment.

A multi-year CMP AMI network resiliency project underway focuses on strengthening the network and will explore options such as solar storage to provide power for critical devices and other technologies to improve connectivity or network reliability.

9. New Service Connections

CMP reconstituted its New Service Coordination group in 2020 to address customers who require assistance setting up electric service at a location. Management added seven new service coordinators at the end of 2020 and the Group, soft launched in December, reports to the Workforce Planning and Management group, reporting to Electric Operations. The group will be advocates for customers requiring a new connection, work with customers to determine what is needed, work with distribution, electricians and other entities as needed to ensure a successful new service connection.

Management eliminated a similar group in 2015, when implementing the integrated planning and scheduling initiative at Avangrid. The New Service Coordinator role remained empty for five years. In the meantime, analysts, line clerks, and supervisors positions filled in. CMP also experienced an effective doubling of new service requests over a two-year period. The process took longer in SmartCare to set up and update, resulting in 2018 and 2019 backlogs for customers.

CMP leadership decided to re-establish the group in 2020 as part of the reputational rebuild initiative, involving New Service Initiative, Distributive Generation, and Safety City. CMP also

offers a service guarantee with a credit of up to \$250 on delivery charges on the first electric bill for new service if CMP does not connect electricity by the date promised.

D. Conclusions

1. The factors that drove staffing and cost reductions following the UIL Holdings acquisition caused adverse CMP customer service at SmartCare go-live and into 2018.

Improving the efficiency of Networks operation (including CMP) through reductions in resources, as other chapters of this report explain, have served as a fundamental driver of Iberdrola S.A. Those efforts began with examinations of how best to consolidate activities at the service company level and move more to a search for means to meet gaps in earnings expectations created for investors. Those chapters describe the primacy of financial measures generally, and note specific examples involving the customer service function, which global Iberdrola S.A. management has directly acknowledged as falling short due to staffing limitations. By the time of SmartCare rollout, spurred further by separation offers, CMP operated with a weakened local management and leadership presence in Maine for customer service. Staffing was too low at a critical time, with call volumes, customer complaints, and billing exceptions at very high levels following the implementation of the SmartCare.

2. Following the harsh lessons learned after SmartCare rollout and the introduction of SQIs by the Commission, Customer Service performance has improved.

Customer Service performance, as measured through the Service Quality Indicators and other key metrics, has improved steadily since 2019. All areas of customer service have demonstrated a positive trend from 2019 through present. CMP's customer service performance, as measured by the following service indicators, however, shows mixed performance as compared to other Avangrid operating companies. CMP's customer satisfaction performance has not fully recovered from the issues experienced following SmartCare deployment at a time when CMP has found itself facing both an existential threat to its continued role as a Maine electricity distribution utility and a major transmission business opportunity that has engendered continuing public issues.

The imposition of SQIs, while appropriate, raises implications for the nature of the regulator/utility relationship that exists in Maine. We have noted elsewhere in this report the strength of leadership's focus on those aspects of performance that have direct financial traction. One sees that in the differences between the performance metrics, including those involving customer service, reported for the various Iberdrola S.A. U.S. utility operating companies.

The issue is not so much that top-level reporting addresses those metrics to which regulators have attached more immediate consequence. Rather, our concern lies in the failure to report and compare consistently those that do not, but still should form important focuses of leadership attention. The overfocus, as we have explained in other chapters, extends past specific performance metrics, going to the connection between leadership allocation of resources and effectively prior commission approval or at least acknowledgement of their propriety.

The implications that these aspects of the Iberdrola S.A. approach have for the regulator/utility relationship lie in the degree to which leadership (a) takes ownership of the process of planning

and executing programs, projects, and activities that take large amounts of resources, versus (b) hinging them on assurances of cost recovery before moving ahead with them.

We have described how Avangrid, with a strong element of Iberdrola S.A. leadership embedded in both its governance and management structures, favors the second of these paths. Thus, SQIs, while an effective response to pushing management in a sound direction, also can have the tendency to reinforce an aversion to the first of the paths. Using such measures across a narrow range of the drivers of overall performance effectiveness and efficiency can also (in the long, rather than short run) further a lack of management focus on the part of the range not subjected to measures like SQIs.

In short, we start by recognizing and commending CMP's recovery from difficult and disappointing customer service circumstances. A concern about their sustainability should not diminish appreciation for its occurrence. At the same time, concerns expressed about sustainability and the historical and current factors that bring risk to that continuity. They apply in considering how to ensure that customer service improvements will survive current opportunities and threats.

3. CMP's staffing levels and associated costs have increased since 2017.

The appointment of the Maine-based CMP VP of Customer Service, additional Call Center and Billing staffing, and the creation of a Maine-based Billing and Collections Manager and BS&S group have re-built a strong local leadership team and established a local SmartCare support team. These organizational changes have led to the improvement in performance, and increased Customer Service operating costs and staffing levels, as compared to 2016.

4. Re-establishment of the New Service Coordination group adds dedicated personnel to Electric Operations who are responsible for assisting customers through the establishment of new service connections.

CMP reconstituted its New Service Coordination group in 2020, as part of the reputational rebuild initiative, to address customers who require assistance setting up electric service at a location (this function was disbanded previously in 2015 when the integrated planning and scheduling initiative was deployed).

Seven new service coordinators were hired at the end of 2020 and the group, soft launched in December, reports to the Workforce Planning and Management group, reporting to Electric Operations. The group will be advocates for customers requiring a new connection, work with customers to determine what is needed, work with distribution, electricians and other entities as needed to ensure a successful new service connection.

VII. Other Service Quality Drivers

A. Chapter Summary

As we began this engagement, the focus on service provided to Maine customers centered on customer operations. However, as our work progressed, it became clear that, as Avangrid moved through various stages of integrating UIL and as it responded to significant top management pressure to close financial gaps in meeting investor earnings expectations, it made reductions in Maine distribution system expenditures. These reductions included cuts in field resources and reductions in vegetation management expenditures.

During this period, significant input measures (work performed) declined to the point where some output measures showed negative trends. Typical reliability metrics like outage durations and frequencies generally comprise these measures. We also found that high-level Avangrid measurements of key utility performance measures, including for CMP, have focused on those having regulatory (generally monetary) consequence. We observed metrics (useful for measurement at all utilities) tracked at one Avangrid utility having a direct incentive to be concerned about it, but not at CMP, where the Commission has not attached direct, material consequence to meeting it or not. Avangrid's overfocus on metrics having such consequence does not conform to good utility practice and has caused it a lack of transparency and ability to compare and assess the relative performance of its utilities in ways others use to optimize performance.

As CMP faced public pressure about its performance (related, however, more to customer operations performance) and as it has faced an existential threat to its authority to continue providing utility service in Maine, it has more recently restored field resources and increased vegetation management expenditures to more comforting levels. Those measures are sound, but need to continue.

Cuts in the recent past have manifested the nature of the organization in which CMP has operated - - specifically an organization where earnings performance has unduly affected commitments to operations. We did not see performance drops at levels apparently threatening imminent service failures, but continuation of the trends since corrected were nevertheless troubling. The question for the future becomes whether Avangrid will continue the more system-healthy approach that has occurred recently. Several factors make it sound to exercise diligence in assuring that continuation is not threatened by reversion to prior practice:

- Very recent operations improvement came in significant part under top Networks leadership with a strong operations background, it has just been displaced by replacement with leadership coming more from the financial and regulatory management perspectives, which have been too predominant in the recent past
- Strong leadership put into place in Maine following customer service problems and the existential threat to CMP's continuing role has been material, but is clearly short-term and without an apparent plan and identified leadership for maintaining it
- Continuing frequent organization changes in operations and activities performed for CMP at the Networks level and pursuing the continuing practice of frequently cycling executives and leadership through Networks operational positions will continue to deprive CMP of the benefits of a stable direction of operations.

Finally, one way or another, current watershed issues, like those associated with NECEC and CMP's future as a Maine electricity delivery company, will become resolved, raising the question of what level of commitment Avangrid and Iberdrola S.A. will continue to be willing to make to Maine when the stakes have changed.

In summary, therefore, we believe that the structure in which CMP has operated did have negative implications for the maintenance of a distribution network sufficient to serve Maine customers over the long term. Those implications have been addressed for the present, but it is sound to continue to have concern about what the future may bring.

B. Background

Our work scope generally included all matters affecting the quality of service delivery in Maine and the costs of doing so. It specifically included customer operations as an area of focus, and, by omission, did not cull out service reliability. However, in examining the costs of providing service and the organizations and resources inside and outside CMP that provide it, it became clear that some of the issues under examination did have material implications for service reliability. Unlike customer operations performance, distribution system performance tends not to show the effects of under-commitment, lack of focus, or underspending so quickly but rather emerges and worsens over time.

Even less robust (meaning distinguished from those designed and operated using good utility practice) U.S. electricity systems employ design and operations and maintenance cushions. Much of that cushioning seeks to enable systems to withstand major weather events. Perceptible declines in standard reliability metrics (like CAIDI, SAIFI, and SAIDI), which measure outputs (or effects), provide one indicator of declining system performance, but the absence of perceptible declines over a short period of years does not necessarily signal the opposite. Looking at the sufficiency of efforts to maintain system health over the short term requires attention to inputs, or causes of service problems.

Continuing cuts in resources or contractor costs (including vegetation management, generally outsourced for the most part in the industry) inevitably exacerbate the factors that cause reliability problems. These factors include inspections, predictive maintenance, corrective maintenance, acres of vegetation cleared, for example. From the first year on, with risks generally increasing as they continue, such cuts erode the margin that systems have. We therefore examined the input measures we could secure from CMP. We also examined whether any clear reliability metric declines had occurred, recognizing that they alone cannot answer the question of whether Avangrid and Iberdrola S.A. committed sufficient resources to ensuring reliability during our study period.

C. Findings

1. Annual CMP Reliability Improvement Reports

CMP has annually filed a Reliability Improvement Report pursuant to Commission orders dating back to 2014. The latest available report covered 2019 operations. It showed that, by a number of measures, reliability has declined since 2015, as work to correct deficiencies disclosed by pole inspections and vegetation management activity fell from time to time. The 2019 annual report, however, did state that CMP has performed sufficient work to meet established five-year

vegetation-management cycles. Nevertheless, management deferred a large portion, about 1,500 miles of overall planned 2019 and 2020 work.

The next chart shows reported changes in reliability measures and work units performed. CMP has followed the prevailing industry practice of relying on outside vendors to perform the bulk of vegetation management work. Pending negotiations with vendors, management reportedly deferred some 2019 and 2020 planned work, subject to full completion of all 2021 planned and 2019/2020 deferred work to be completed by the end of 2021.

Historical CMP Reliability Measures

Measure	Target	Year						Change	
		2015	2016	2017	2018	2019	2020	#	%
Major Reliability Indices									
CAIDI	2.18	1.82	1.89	1.86	2.13	2.07	1.80	-0.02	-1.1%
SAIFI	1.89	1.57	1.75	1.81	1.85	1.53	2.05	0.48	30.6%
SAIDI	4.12	2.86	3.31	3.36	3.93	3.15	3.68	0.82	28.7%
Interruptions									
Number	Not applicable	8,224	9,078	9,849	10,366	7,686	14,790	6,566	79.8%
Customer Hours		1,767,116	2,057,446	2,124,036	2,498,841	2,032,980	2,398,523	631,407	35.7%
Customers Interrupted		970,551	1,091,388	1,144,901	1,171,810	983,542	1,332,086	361,535	37.3%
Total Customers		616,979	621,927	631,273	635,107	642,816	651,000	34,021	5.5%
Work Performed									
Vegetation Management Spans	Varied Yearly	3,500	3,300	3,325	4,551	2,883	3,508	8	0.2%
Poles Inspected		136,312	138,883	133,001	136,917	134,076	141,970	5658	4.2%
			Decline		Improvement				

We found the delay in performing work due to negotiations curious and asked for a description of its reasons. Management reported as the primary factor a significant increase in the prices offered by vendors in solicitations for new contracts. Management reported concerns about contract provisions for insurance, data security, and cyber insurance as secondary concerns. The explanation provided did not appear sufficient to warrant substantial delay in work performance; it may have contributed to reducing earnings shortfalls of concern to management.

The notes of the November 14, 2019 meeting of the Avangrid Executive Committee observed that CMP's CAIDI measurement showed a year-to-date value higher (worse) than target, "...although there is no financial penalty associated to it." The notes show no discussion of causes or potential responsive measures. The minutes of these meetings and of the boards as a whole show a strong focus on NECEC as 2019 progressed, and much less attention on utility metrics apart from continuing concerns about SAIFI levels in New York and to a much lesser extent this Maine CAIDI issue. Reports through the period we examined continued to provide comparatively much more detail on NECEC, but management did add to high-level reports some additional operating company operations performance information near the end of 2019. For example, reporting of new Maine Service Quality Indicators began in November 2019, along with more detailed reporting on New York SAIFI measures.

2. Worst-Performing Circuits

The annual reports provide yearly reliability data regarding “underperforming” distribution circuits. Common industry practice identifies, takes measures to address, and reports on the results obtained for what the industry commonly refers to as “worst-performing” circuits. With attention to those circuits and with diligence in regular inspection, maintenance, and repair across the system, one normally expects to see improved reliability among the circuits that become worst performing (after measures to address those that made the list from the prior year). We compared 2015 worst-circuit average performance with that of 2018 and 2020. The next table compares managements reported underperforming (“worst-performing”) circuit measures for 2015, 2018, 2019, and 2020, after adjusting them for major weather events deemed excludable. Results have proven mixed, with some measures improving, but with outage numbers increasing and affecting more customers for, producing a larger number of outage hours.

Comparative CMP Underperforming Circuit Reliability

Year	Average Reliability Index			Average Interruptions		
	CAIDI	FAIFI	SAIFI	Number	Customers	Hours
2015	1.98	6.85	0.018	51	10,853	21,467
2018	2.11	5.32	0.0148	60	9,406	19,849
2019	1.82	4.85	0.015	41	9,325	16,989
2020	1.87	6.33	0.024	98	15,432	28,891
Change	-5.6%	-7.6%	31.7%	92.2%	42.2%	34.6%

3. Distribution Work Activity Trends

We also examined distribution-system work performance levels in the period following the acquisition of UIL. We found that vegetation management work levels fell across a number of years in this period. Longer-term cuts in such work affect reliability, more particularly outage frequency, which the earlier table shows has grown.

Deferral of circuit inspection and maintenance has the same effect. The next table shows that distribution line inspection activity remained constant from 2016 through 2019, with essentially all planned inspections completed and with discovered deficiencies steady at 4 to 5 percent. We also saw no decline in other planned distribution inspection and maintenance work or increases in defects observed, with the exception of some work deferrals due to COVID-19 restrictions. Substation work completion exceeded 99 percent for 2016 through 2018 and reached about 96.5 percent for 2019.

Historical CMP Line Inspection Work Levels

Year	Distribution Overhead Poles			Transmission Poles		Transmission Cross Arm-Structures		
	Planned	Completed	Deficiencies	Planned	Completed	Planned	Completed	Deficiencies
2015	135,567	101%	7%	8970	99%	4719	118%	16%
2016	134,665	103%	4%	6,361	99%	4,256	97%	17%
2017	132,629	100%	4%	4,425	99%	3,196	97%	17%
2018	133,704	102%	5%	5,686	107%	4,025	103%	24%
2019	133,638	100%	5%	4,619	102%	3,380	99%	19%
2020**	141,456	100%	8%	6,925	100%	4,405	107%	11%

Completing inspections as planned conformed to good utility practice; however, CMP permitted work in correcting identified deficiencies to lag substantially. Management identified about 8,500 backlogged repair items remaining from those identified between 2013 and 2018 through distribution line inspections. Management developed for 2019 a plan to grow resources to catch up on backlogged corrective actions, which required the addition of a sizeable resource complement to avoid continuing work deferrals. This large backlog approached 1.5 times the number of corrective actions typically identified across a year of inspections. The plan showed an ultimate need for 258 people on a steady state basis, a full 10 percent more than the 234 assumed in place for 2019. Eliminating the work backlog, however, would also require an increase of many more (27 percent) through 2022. The next table shows the progression from catching up on backlogged work to a sustained work force that would avoid future work deferrals. It makes clear the extent of the backlog allowed to grow during a period when top management remained focused on resource cuts.

CMP's 2019 Field Resource Plan

Year	Hours		FTEs
	Available	Gap	
2019	451,163	(46,150)	234
2020	536,002	38,689	279
2021	571,712	74,399	297
2022	525,842	28,529	273
2023	497,313	0	258
2024	497,313	0	258

The plan also showed the need to increase field planner and clerk staffing by 10 FTEs long-term (a 50 percent increase) and by even more during the backlog-catchup period. These planners design maintenance and construction work orders and the clerks perform work paper processing and clerical duties. An amendment of its labor agreement in April 2019 increased CMP's minimum number of bargaining unit positions from 606 to 665 by the end of 2024. CMP has made the following bargaining unit position additions to its field resources so far under that amendment:

- Electric Operations
 - 24 Line Apprentices
 - 8 Substation Apprentices
 - 13 Fully qualified Lineworkers
 - 6 Field Planners
 - 4 Line Clerks.

CMP has also added five system operator and nine customer service representative bargaining unit resources.

Resources dedicated to line and substation work fell through the first part of the period we studied, but increased thereafter. The next table shows Total T&D resources and the portions dedicated to those two areas.

CMP Line and Substation Positions

Work Functions	Year					
	2015	2016	2017	2018	2019	2020
T&D Total	484	470	442	515	558	597
Line Positions	251	244	243	235	253	270
Substation Positions	29	28	27	26	30	32

CMP has faced limitations on resources applied at the global Iberdrola S.A. level. Regular meetings of the lead executives of Iberdrola S.A.'s networks businesses worldwide have included discussions of limitations imposed on staffing at Networks entities. Specifically, the October 21, 2019 meeting, citing those limitations, noted permitting the filling of "priority" positions (such as planners) despite such limitations. The notes of that meeting also made clear the connection between limits on headcount and excessive overtime, prompting a review of U.S. networks "business needs" and tying that review to an acceleration of the "Transformation" plan (or, 1Networks).

The notes specifically stated that, "Customer Service is 80 FTEs under what is needed, leading to potential penalties of ~25M\$ for negative performance." Management has described 1Networks (described more fully in Chapter V of this report) as including a resources plan element intended to "[i]mprove productivity and the better use of resources by performing a thorough resource plan evaluation and implementing productivity controls for the business."

Top Avangrid executives did not attend that meeting nor did they state any recollection in our interviews with them of a staffing freeze or other limitation arising from the Iberdrola international level. They did acknowledge, however, that, at the time, controlling headcount and external service expenses to improve financial performance (especially given consideration of revenue requirements allowances imposed by state regulators) had produced too few resources to accomplish required work without high levels of overtime.

4. CMP's "Plan for Improved Service and Trust"

The September 8, 2020 meeting of the Avangrid Board's Executive Committee discussed this plan, noting its focus on "safety, customer service, sustainability and reliability." Beyond added customer guarantees, the plan called for added customer representatives, new service coordinators, increased tree trimming and inspection, improved storm response and increased improvements funding."

The next table shows the large planned increases in tree trimming work above recent-year levels. The increases exceed the average of historical planned expenditures by 21 percent. Actual expenditures have fallen well below planned levels - - plans for 2021 and 2022 exceed those historical actual levels by 60 percent. CMP has stated that it plans to continue increasing work levels to accomplish its reliability objectives. The additional work above 2018 levels reflects a \$10.5 million dollar increase (58 percent) above 2018 levels.

Historical and Planned Vegetation Work

Year	Miles			Cost		
	Planned	Actual	Δ	Planned	Actual	Δ
2018	4,184	3,534	-16%	\$18,421,694	\$18,249,411	-1%
2019	4,462	2,883	-35%	\$16,424,868	\$13,724,208	-16%
2020	4,558	3,534	-22%	\$23,173,157	\$20,244,638	-13%
2021	5,050	-	-	\$25,871,000	-	-
2022	5,602	-	-	\$28,803,479	-	-

The 2021 and 2022 plans incorporate expenditures for completing work deferred in 2019 and 2020 to:

- Await completion of new master agreements with tree trimming contractors (accomplished in May 2019)
- Account for contractor difficulty in securing sufficient labor
- Permit redirection of work to restoration following major 2019 and 2020 storms.

Contractual uncertainty may comprise a sound reason for moderate deferrals, but we have found contract termination dates fairly clear and would expect mid-contract efforts to renegotiate pricing to account for ongoing needs. We found the deferred work amounts large and they did coincide with concerted efforts to reduce expenses. The cuts that actually occurred may even have been greater in one sense. Planned costs per acre for 2020 through 2022 fall in a very narrow range centering on about \$5,126 per acre. Plans for 2018 show an average cost (\$4,403), 14 percent lower than the average planned cost for 2020 through 2022. Plans for 2019 are even more aggressive, reflecting a 28 percent lower planned cost per acre. In other words, absent some fundamental differences in the nature of the work in those two years, cuts from the amounts required to clear the planned acres were much greater. Note as well, that consistent with finance versus operations driven decisions, Avangrid did keep spending below planned amounts, with significant underperformance relative to identified operations requirements.

The improvement plan cited inspection increases, but we did not see them reflected in the data provided. Distribution line inspections have remained, as they have for many years, the same, using a five-year cycle. Actual numbers of poles inspected have met or exceeded planned numbers (between 134,000 and 141,000) and management annual costs (in the range of \$700,000) have continued.

Employee feedback led to the addition of a new position (new-service coordinator) charged with assisting customers and assuring completion of all requirements associated with connecting customers with new service. CMP plans to continue the use of the seven coordinators hired in the fall of 2020 and budgeted to cost about \$650,000 per year.

5. Top-Level Performance Indicators

Comparative quantitative measures of operational performance provide substantial insight into the focus of top leadership on successes and gaps at the individual operating company level. Best practice employs a broad range of metrics (often termed key performance indicators, or KPIs) measured continually and used to compare performance among operating companies in multi-utility holding companies. A request for the KPIs that the Networks COO described as falling

under him generated only three standard reliability indices - - CAIDI, SAIFI, and SAIDI. The following listing of the KPIs offered by management reflects a very modest set of measures tracked at the highest levels. Even those appear not to produce measurements of and comparison of performance at all Avangrid operating companies. The next table shows measurements provided to the Networks board of directors. A significant number of measures from even this modest list do not undergo measurement across all Avangrid operating companies. The following table, presented to the Networks Board in October 2018 excludes CMP from a number of many measures (starred in the table). Measures are missing for operating companies whose state utility regulators have not established targets or standards.

Top Level Measurements of Key Performance Indicators

Performance Target	OPCO	YTD Oct Result	2018 Target	2017 Result	Status	Performance Target	OPCO	YTD Oct Result	2018 Target	2017 Result	Status
Customer Service						Electric Reliability					
Customer Satisfaction						Customer Average Interruption Duration Index / System Average Interruption Duration Index					
Call Center Service Quality	CMP	87.0%	>= 85%	92.1%	●	CAIDI	CMP	2.14	<= 2.18	1.83	●
Contact Satisfaction Survey	NYSEG	90.3%	>= 89.5%	91.1%	●		NYSEG*	2.13	<= 2.08	2.05	●
	RG&E	91.1%	>= 88%	89.0%	●		RG&E*	1.80	<= 1.90	1.77	●
Contact Transactional Satisfaction Survey (performed semiannually)	BG	96.0%	>= 85%	84.8%	●		UI	1.59	<= 1.72	1.36	●
	CNG	88.0%	>= 85%	86.7%	●	SAIDI	CMP	3.34	<= 4.12	2.95	●
	SCG	89.0%	>= 85%	87.9%	●		NYSEG	2.22	<= 2.50	2.28	●
	UI	94.0%	>= 85%	88.8%	●		RG&E	1.19	<= 1.71	0.97	●
							UI	0.91	<= 1.10	0.55	●
Average Speed of Answer						System Average Interruption Frequency Index					
Answered w/in 45 Sec.	CMP	61.8%	>= 72%	79.0%	●	SAIFI	CMP	1.56	<= 1.89	1.61	●
Answered w/in 30 Sec.	NYSEG*	61.2%	>= 63%	69.0%	●		NYSEG*	1.04	<= 1.20	1.11	●
	RG&E*	78.5%	>= 77%	76.0%	●		RG&E*	0.66	<= 0.90	0.55	●
Average Speed in Seconds	BGC	29	<= 30 sec	22	●		UI	0.57	<= 0.64	0.41	●
	CNG	77	<= 90 sec	45	●	Vegetation Management					
	SCG	137	<= 90 sec	69	●	Spans Trimmed	CMP	3,460	>= 4,100	3,325	●
	UI	97	<= 90 sec	106	●	Total Trimmed Miles	NYSEG*	2,493	>= 2,700	2,778	●
Estimated Meter Reads							RG&E*	1,078	>= 1,100	1,139	●
Estimated Meter Reads	NYSEG*	5.7%	<= 6.1%	6.0%	●		UI	131	>= 250	207.6	●
	RG&E*	6.4%	<= 6.0%	7.1%	●						
Complaint Rate											
PSC Complaint Rate/100,000 Customers	NYSEG*	0.94	< 1.0	0.62	●						
	RG&E*	0.75	< 1.4	0.93	●						
Complaints (PURA)/1,000	BGC	0.09	<= 0.2	0.10	●						

*Only NYSEG and RG&E have regulatory targets with defined (Negative Revenue Adjustment) NRA.

Legend	
Metric is on track	●
Metric is currently off track	●
Metric is not met - no defined NRA	●
Metric is at risk - potential NRA	●

Management reports measurements at some level of other KPIs, but offered these as the ones focused on by the Networks COO.

D. Conclusions

1. Field position reductions and cuts in distribution system and vegetation maintenance resources and costs at times since the UIL Holdings acquisition have contributed to adverse trends in system performance.

The cuts generally corresponded in time with and we believe were caused by the unsound balance (discussed throughout this report) that Avangrid and Iberdrola S.A. senior leadership have struck between meeting investor earnings expectations and fulfilling needs to preserve system reliability in the long-term. Backlogs in correcting deficiencies found through distribution inspections (which interestingly have maintained a healthy pace) and cuts in expenditures for contractor performance of vegetation management have proven the areas of principal concern.

Staffing cuts, hiring limitations, and expense reductions have not brought the CMP system to the brink of collapse or disaster, but did produce work levels whose continuation would produce a noticeable drop in performance metrics over time. We did observe some noticeable (albeit still moderate) negative trends in performance metrics at points in our study period.

2. Leadership has taken action to reverse the staffing and contractor cost cuts, but, as explained elsewhere, optimism about continuation of restored and enhanced work levels should remain guarded given circumstances.

We have addressed at other places in this report frequent organization change, rapid cycling of Iberdrola S.A. managers and executives, many of them from off-continent Iberdrola S.A. origins with limited or no U.S. utility experience among them, the reversion from operations- to finance- and regulatory-management leadership of Networks, and the likely short-term tenure of top Maine leadership. We have described in this report the pendency of major Maine objectives and proceedings that substantially but temporarily raise the economic stakes of Iberdrola S.A.'s economic interests in business in Maine. We consider it, as we have explained, correct for concern to continue about the particular ascendancy that investor earnings expectations have over operational circumstances and needs of the Networks utilities. Therefore, we consider the past concerns about resource cuts and restrictions as relevant as recent improvements in gauging what is likely to happen in the future.

3. Networks has employed a far too narrow range of metrics in assessing operational performance.

Short in total number, the list of metrics used at the top level for CMP excludes some that Networks captures for other of its utilities. The distinction appears to turn on the existence or non-existence of regulatory targets, incentives, or penalties associated with the metrics that do not find common use. For top management and in turn the Board to rely on such a short list of key performance indicators is not consistent with good utility practice. Furthermore, hinging performance transparency in a key operations area on the existence of regulatory ramifications heightens the concern about the overemphasis on investor expectations and indicates too narrow a view of top leadership and the boards on performance-driving factors.

VIII. Service Company Cost Cap

A. Chapter Summary

CMP's service company charges have averaged \$38.2 million from 2017-2020, well above the CMP cap. It is not clear that Avangrid has succeeded in creating a structure that has produced efficient and effective service costs. Avangrid's Forward 2020 programs through late 2018 did not appreciably reduce service company charges to CMP. Initiatives begun in 2019 sought to reduce Avangrid costs significantly. Those initiatives have focused significantly on corporate versus operating or technical services and processes CMP service company charges were initially reduced by \$2.5 million in 2019, but rose substantially in 2020.

Clearly, Avangrid did not consider service company costs "efficient and effective" as it undertook efforts to improve them since the UIL Holdings acquisition. It has estimated reductions of \$34.6 million and \$36.1 million in 2019 and 2020 and its initiatives have continued so far in 2021, indicating a search for further cost reductions going forward. Thus, the production of efficient and effective service company operations should lower annual CMP service company charges by some \$6.5 million to \$6.7 million.

Of the identified 2019 savings of \$34.6 million attributed \$6.5 million to CMP for 2019 (about 36 percent of the savings attributed to ASC and AMC. Applying the same 36 percent share to calculate CMP's share of the 2020 ASC and AMC savings produces a of \$6.7 million. Avangrid "committed to" most of the initiatives originally designed by its external consultant, removing a few not considered feasible. Avangrid also developed a number of its own, additional initiatives.

The allocation methods used by ASC and AMC use standard utility practices and produce fair and reasonable basis for cost allocations to CMP. However, it remains the case that Avangrid has not shown most Iberdrola S.A. charges borne by CMP to be non-duplicative of those borne by Avangrid itself. Iberdrola S.A. may have its own legitimate interests in the activities it undertakes to oversee Avangrid operations, but that does not alone justify asking Maine electricity customers to pay them. Customers should only pay for what goods and services Avangrid would have to replace if Iberdrola S.A. were not providing them. There are functional areas where Iberdrola S.A. does provide such value, but Avangrid could not cite sources in its possession that would allow for a detailed review of cost sources using this standard. At the least then, it appears that Avangrid does not require or review such information and at the most, it does not exist. Either way, an annual amount that we broadly estimate to fall at about \$3 million does not have sufficient justification.

B. Background

CMP has paid over the past five years charges for affiliate services from three routine providers: ASC, AMC, and Iberdrola S.A. The need for other services and accompanying charges (*e.g.*, for storm assistance from other Networks utilities) have arisen as well. Arrangements for services from these three routine providers have changed since the UIL Holdings acquisition at the end of 2015, for example, as resources have moved from the operating utilities, like CMP, to the service-company level, and as field and customer service resources first fell than grew again toward the end of our five-year review period.

The combined amount for ASC, AMC, and Iberdrola S.A. service-company charges that Avangrid may include in its rates for services to Maine utility customers has remained subject to a cap since 2001. The cap amount rose to \$32.5 million in 2013 and it remains at that level today. This total includes a \$31.368 million value for CMP. The company proposed to eliminate the service charge cap in its 2018 rate filing, but the Commission rejected that proposal.

This chapter addresses the sources of service charges to CMP, the allocation of their costs to CMP, the actual charges through 2020, and addresses continuation, modification, or elimination of the cap.

C. Findings

1. 2016 to 2020 Cost History

The following tables summarize the changes in annual operating expenses for CMP, NYSEG, RG&E, UIL, and at the total Avangrid Networks level for 2016 through 2020. These numbers reflect the total dollars from combined corporate and networks functions provided at and for each utility, and reflect charges from internal utility labor, external services, and service companies.

2016 to 2020 Cost History

	2016	2017	2018	2019	2020
Selected Utilities					
CMP	\$183,184	\$219,582	\$221,594	\$216,018	\$283,967
NYSEG	\$454,549	\$502,339	\$624,316	\$594,495	\$667,347
RGE	\$205,316	\$258,805	\$221,755	\$203,812	\$216,290
UIL	\$238,154	\$227,434	\$228,895	\$224,382	\$239,860
Networks Total					
Networks Total	\$1,175,436	\$1,328,392	\$1,452,829	\$1,414,044	\$1,574,459

The following chart provides calculations of year-to-year cost changes, total period cost changes, and a compound growth rate for the entire period.

2016 to 2020 Cost History Breakdown

	2016	2017	16-17 Δ	2018	17-18 Δ	2019	18-19 Δ	2020	19-20 Δ	16-20 Δ	16-20 CAGR
Selected Utilities											
CMP	\$183,184	\$219,582	19.9%	\$221,594	0.9%	\$216,018	-2.5%	\$283,967	31.5%	55.0%	11.6%
NYSEG	\$454,549	\$502,339	10.5%	\$624,316	24.3%	\$594,495	-4.8%	\$667,347	12.3%	46.8%	10.1%
RGE	\$205,316	\$258,805	26.1%	\$221,755	-14.3%	\$203,812	-8.1%	\$216,290	6.1%	5.3%	1.3%
UIL	\$238,154	\$227,434	-4.5%	\$228,895	0.6%	\$224,382	-2.0%	\$239,860	6.9%	0.7%	0.2%
Networks Total											
Networks Total	\$1,175,436	\$1,328,392	13.0%	\$1,452,829	9.4%	\$1,414,044	-2.7%	\$1,574,459	11.3%	33.9%	7.6%

CMP expenses grew at a rapid pace over the five-year period, producing an 11.6 percent Compound Annual Growth Rate. NYSEG experienced a similarly high growth rate (10.1 percent) during this period. RGE and UIL growth rates were below inflation at 1.3 percent and 0.2 percent, respectively. The Networks total, including all eight utilities, grew at a rate of 7.6 percent.

The large expense increases at CMP and NYSEG from 2016 to 2020 caused changes in the company percentage expenses of the Networks total for the four utilities shown. CMP increased from 15.6 percent to 18.0 percent of the Networks total, while NYSEG increased from 38.7 to 42.4 percent. On the other hand, RGE decreased from a period high of 19.5 percent to 13.7 percent, while UIL decreased from 20.3 to 15.2 percent. The following table summarizes these amounts.

Percent Share of 2016 to 2020 Networks Costs

	2016	2017	2018	2019	2020	Average	19-20 Δ	20 vs. Avg.
CMP	15.6%	16.5%	15.3%	15.3%	18.0%	16.1%	18.1%	11.8%
NYSEG	38.7%	37.8%	43.0%	42.0%	42.4%	40.8%	0.8%	3.9%
RGE	17.5%	19.5%	15.3%	14.4%	13.7%	16.1%	-4.7%	-14.5%
UIL	20.3%	17.1%	15.8%	15.9%	15.2%	16.8%	-4.0%	-9.6%

A significant expense increase for CMP of 37.1 percent occurred from 2019 to 2020, as the company spent heavily on its electric distribution operations. The following notes summarize the key contributors to this increase:

- Electric Operations**

The overall electric operations 2020 increase was about \$36 million or 43.9 percent. \$22 million of the increase was associated with deferrable storm events, \$2 million for minor storm events, \$1 million for increased costs associated with COVID-19 and \$1 million in other smaller net changes. An increase in electric operations headcount of 39 contributed to approximately a \$4 million increase in basic salary, while an increase in overtime of \$6 million drove the remaining personnel expense change.
- Process and Technology**

The Process and Technology expense increase in 2020 was \$16 million or 45.2 percent. Vegetation management increases was a major contributor, with \$7.5 million increase which is not deferrable for CMP. Maintenance activities also increase by \$2.3 million in 2020, while Storm support accounted for an increase of approximately \$5 million.
- President's Office**

CMP President's Office expenses increased by \$9.5 million in 2020, or 49.5 percent. President's support increased by \$5.0 million due to a \$4.9 million Standard Offer reserve expenses and NERC penalty expenses. Public Affairs increased \$1.6 million due to the Power On program. President's office storm expenses increased by \$1.5 million, while Personnel and COVID-19 costs caused increases of \$0.9 and \$0.5 million, respectively.
- Electric Distribution**

The 2019 vs 2020 increase was about \$4 million or 245.7 percent, driven by O&M expenses related to capital projects such as Distribution Line Inspection (DLI) activities and the O&M expense components of pole replacements.

2. Service Charge "Cascade"

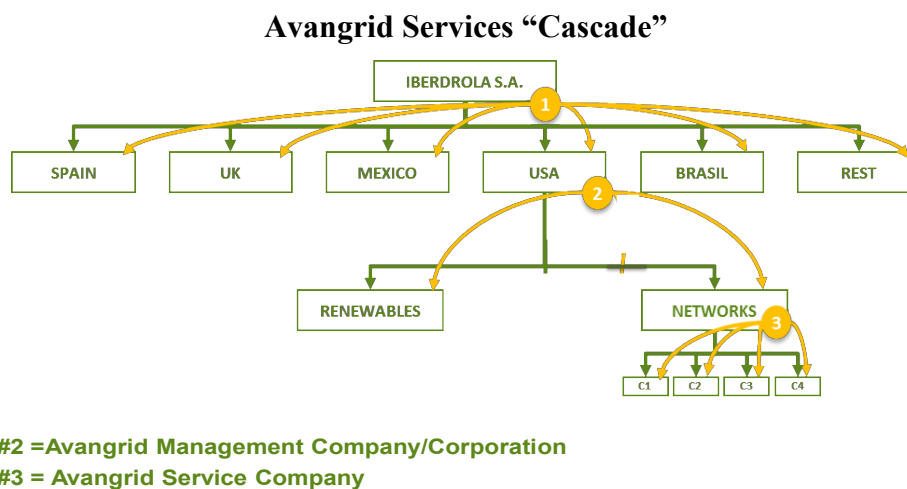
CMP has paid charges originating at three entities that regularly provide corporate and other services since 2015: Avangrid Service Company (ASC), Avangrid Management Company (AMC), and Avangrid's holding company, Spain-based Iberdrola S.A. This service company configuration became established in connection with the UIL Holdings acquisition, which

produced the formation of Avangrid. The Iberdrola USA and UIL companies had operated under their own shared services operations prior to the acquisition.

Following the acquisition, ASC assumed the service operations provided in common for the Iberdrola USA legacy companies. Avangrid progressively integrated the serving groups and personnel and changed (generally expanding) their common responsibilities and functions over four years. Complete of the integration came after the implementation of Global SAP financial systems (already employed for the legacy Iberdrola USA entities) for the UIL entities at UIL in September 2021. Prior to full integration of the Global SAP system, management manually calculated and billed UIL's portion of the shared services agreement. Eventually, UIL access to the SAP platform permitted automation of these manual activities to begin. Full UIL integration into the system occurred in 2021.

ASC provides shared services such as administrative, managerial, financial, accounting, legal, and technical services to each of the Networks operating utilities. ASC charges CMP, NYSEG, RG&E, UIL, and MNG for these services, while UIL has retained some of its previous services and charges to UIL, SCG, CNG, and BCG from 2015 through 2020. Some of the services for which ASC charges CMP and other Networks entities actually originate at AMC, which (unlike ASC) serves both Networks and Renewables. The AMC-originated charges services arise from the provision of corporate services (such as finance and accounting) commonly to both of the two Avangrid principal subsidiaries. Iberdrola S.A. also makes charges, some of which find their way to CMP through ASC. Prior to the UIL Holdings acquisition, Iberdrola USA employed only one service company. The addition of AMC segregated the corporate management costs benefitting both Networks and Renewables, seeking to leave ASC as a Networks-only service company focused on operations, with AMC providing separate services and cost streams for corporate management.

This layered serving arrangement produces what Avangrid describes as a “cascade” of charges from top (Iberdrola S.A.) to bottom (CMP). The following chart depicts this cascade, with CMP comprising one of the C1-level utilities shown in the lower right.



Services and charges at “Level 1” arise at Iberdrola S.A. and flow to the country level, which for purposes here means to Avangrid as the USA-level holding company. Because they benefit both

Networks entities and Renewables, management deems them AMC charges (shown as the flow designated in the chart as “2.” Level 2 charges also include costs arising from within Avangrid (again, designated as “USA” in the chart) and benefitting both Networks and Renewables. The flow designated as “3” represents charges for common services provided only to Networks and its entities. The chart shows the flow of Level 1 charges first through Level 2 (AMC) with a portion of them flowing to Networks, where they form part of the Level 3 flow. ASC and AMC have distinct legal entities and governance structures, but their practical importance lies in organizing:

- The flow of charges from Iberdrola S.A. to the entities (including CMP) that ultimately bear them.
- The flow of charges incurred at Avangrid that benefit both as well.
- Distinguishing the costs originating at Networks that benefit only its entities.

To summarize, CMP service charges come directly from ASC, and include a share of Iberdrola S.A. charges through AMC and a share of AMC charges to all Avangrid entities.

3. Services, Agreements and Allocations

ASC operates as the successor to the pre-acquisition entity directly serving the Networks utilities. It does so in accord with a 2019 “Corporate and Technical Services Agreement” between ASC and CMP. The following shared service functions contribute substantially to charges made to CMP:

- Asset Management & Planning
- Control
- Human Resources
- Information Technology
- Office of the CEO
- Operations Technology & Business Transformation
- Regulatory Services
- Legal Services
- Customer Service
- General Services
- Processes & Technology
- Business Development.

ASC also provides small amounts of services and related charges to CMP and the other Networks companies for administration, communications, governing bodies, internal audit, risk management, security, and taxes.

AMC, formed post-acquisition, distributes the costs of corporate-level services at Avangrid to both Networks and Renewables, including:

- Governing Bodies
- Regulatory and Government Affairs
- Finance, Treasury, Accounting, and Investor Relations
- Administration, Purchasing and Communications
- Human Resources
- Information Technology
- Audit, Legal and Taxes

- Real Estate and Fleet Management
- Cyber and Personal Security.

A separate “Corporate and Technical Services Agreement” signed in 2019 governs AMC services to CMP. The ASC and AMC service agreements with CMP include a catalog of services in Appendix A and a Cost Allocation Model (CAM) in Appendix C. Previous versions of each existed for 2016, 2017, and 2018. Management reported that the services provided by ASC and AMC overall have remained consistent for the past five years and are expected to remain so for the foreseeable future. The service agreements with ASC and AMC support and document the services they provide.

The CAM appendices address the assignment and allocation of ASC and AMC costs. Allocation methods use relative measures of operating entity (beneficiary) size (*e.g.*, the Massachusetts formula), and more direct assignment methods using a service-consumption measure (*e.g.*, number of employees or financial system users).

Iberdrola S.A. charges Avangrid for global corporate governance and administrative costs incurred primarily in Spain but deemed attributable to assets and operations in the U.S. A service agreement between AMC and Iberdrola S.A. defines the services provided and the cost allocations in manners similar to the agreements that CMP has with AMC and ASC. Five Iberdrola S.A. functions have accounted for the largest eventual allocations to CMP: Information Technology (by far the largest), Purchasing and Insurance, Control, Tax Services, and Administration.

4. Service Company Charge History to CMP

a. Iberdrola S.A. to CMP

A portion of charges originating at Iberdrola S.A. get allocated to Avangrid, and in turn a portion of those charges get relocated to CMP. Those charges flow first through AMC, then to ASC, and then to CMP. Thus, ASC actually charges CMP for these Iberdrola S.A. costs. The next table summarizes CMP charges that originated at Iberdrola S.A. from 2017 through 2020. Reductions in charges for Administration, Communications, Human Resources, Legal Services, and Regulatory Services have driven the roughly four percent drop in Iberdrola S.A. charges between 2017 and 2020.

CMP Charges from Iberdrola S.A.

(dollars in thousands)

	2017	2018	2019	2020	CAGR
Administration	\$495	\$423	\$344	\$331	-12.5%
Business Development	\$1	\$1	\$1	\$1	6.0%
Communications	\$177	\$55	\$41	\$63	-29.1%
Control	\$574	\$385	\$482	\$520	-3.3%
General Services	\$124	\$123	\$130	\$151	6.9%
Governing Bodies	\$11	\$3	\$3	\$5	-22.9%
Human Resources	\$403	\$339	\$320	\$297	-9.7%

Information Technology	\$1,519	\$1,774	\$1,696	\$1,672	3.2%
Internal Audit	\$5	\$5	\$5	\$6	6.6%
Investor Relationships	\$0	\$0	\$1	\$2	95.8%
Legal Services	\$566	\$542	\$306	\$310	-18.2%
Purchasing & Insurance	\$587	\$579	\$779	\$793	10.6%
Regulatory Services	\$546	\$372	\$229	\$187	-30.0%
Security	\$71	\$61	\$130	\$66	-2.2%
Tax Services	\$254	\$330	\$335	\$338	10.0%
Total	\$5,334	\$4,993	\$4,801	\$4,743	-3.8%

The widely-used Massachusetts formula has proven the largest driver for Iberdrola S.A. cost allocations to CMP, accounting for a low of 27 percent of total Iberdrola S.A. charges in 2019 to a high of 40 percent in 2017. More cost causative drivers (*e.g.*, percentage IT consumption by business and percentage of IT workstations for Information Technology) account for 60 percent or more of the total costs in each of the years shown.

b. AMC to CMP

CMP service charges from AMC include the costs of corporate-level services provided under the Corporate and Technical Services Agreement. As noted above, AMC charges to CMP also include a share of Iberdrola S.A. charges to Avangrid. The next table summarizes AMC's charges to CMP for 2017 through 2020.

CMP Charges from Avangrid Management Company

(dollars in thousands)

	2017	2018	2019	2020	CAGR
Administration	\$1,040	\$1,136	\$957	\$800	-8.4%
Business Development	\$119	\$131	\$131	\$198	18.4%
Communications	\$215	\$141	\$227	\$723	49.7%
Control	\$2,310	\$2,694	\$2,075	\$2,083	-3.4%
General Services	\$442	\$465	\$419	\$714	17.3%
Governing Bodies	\$1,990	\$2,017	\$1,910	\$1,624	-6.6%
Human Resources	\$1,730	\$2,650	\$2,501	\$3,454	25.9%
Information Technology	\$1,378	\$1,729	\$1,972	\$2,081	14.7%
Internal Audit	\$141	\$155	\$303	\$363	37.1%
Investor Relationships	\$187	\$179	\$222	\$147	-7.7%
Legal Services	\$582	\$660	\$573	\$716	7.1%
Purchasing & Insurance	\$1,466	\$1,389	\$1,174	\$1,077	-9.8%
Regulatory Services	\$395	\$452	\$340	\$263	-12.7%
Risk Management	\$65	\$58	\$82	\$89	11.0%
Security	\$633	\$817	\$592	\$600	-1.7%

Tax Services	\$2,215	\$2,513	\$1,970	\$1,461	-13.0%
Total	\$14,909	\$17,185	\$15,448	\$16,391	3.2%

AMC charges to CMP, including the Iberdrola S.A. charges, grew from \$14.9 million in 2017 to \$16.4 million in 2020, producing a compound annual growth rate of 3.2 percent. Significant increases in charges for Human Resources (\$1.7 million), Information Technology (\$0.7 million), Communications (\$0.5 million), and General Services (\$0.27 million) have driven the dollar increases in AMC charges. The overwhelming majority of AMC charges to CMP came via allocations, with less than one percent coming as direct charges: from 2017 through 2019 about 48.3 percent used the Massachusetts formula, 26.9 percent the number of people in the business, with smaller percentages from other usage drivers.

c. ASC to CMP

The services that ASC offers to Networks entities, which it serves solely, focus more on operations, as compared with the corporate or administrative and general services more characteristic of what AMC offers. The “Corporate and Technical Services Agreement” between ASC and CMP provides for the delivery of the following shared service functions:

- Asset Management & Planning
- Control
- Human Resources
- Information Technology
- Office of the CEO
- Operations Technology & Business Transformation
- Regulatory Services
- Legal Services
- Customer Service
- General Services
- Processes & Technology
- Business Development.

CMP’s total service charges from ASC also include the AMC and Iberdrola S.A. charges discussed above. The CMP charges specifically from ASC are shown in the following table.

CMP Charges from Avangrid Service Company

(dollars in thousands)

	2017	2018	2019	2020	CAGR
Administration	\$248	\$226	\$162	\$147	-16.0%
Asset Management & Planning	\$380	\$680	\$1,755	\$2,399	84.8%
Business Development	\$596	\$3	\$417	\$548	-2.8%
Communications	\$100	\$172	\$151	\$244	34.7%
Control	\$1,807	\$1,641	\$1,173	\$1,352	-9.2%
Customer Service	\$215	\$333	\$553	\$967	65.2%
Electric Operations	(\$454)	(\$665)	(\$1,218)	(\$2,049)	65.3%

Engineering & Delivery	\$6	\$14	(\$655)	(\$718)	
General Services	\$555	\$677	\$442	\$530	-1.5%
Governing Bodies	\$217	\$198	\$184	\$161	-9.4%
Human Resources	\$2,796	\$2,176	\$1,777	\$1,864	-12.6%
Information Technology	\$6,652	\$6,462	\$6,034	\$5,725	-4.9%
Internal Audit	\$187	\$181	\$149	\$146	-8.0%
Investor Relationships	(\$0)	\$0	\$0	\$0	
Legal Services	\$748	\$614	\$644	\$940	7.9%
Office of the CEO	\$1,846	\$1,888	\$2,302	\$2,164	5.5%
Ops Technology & Bus Transformation	\$1,215	\$1,345	\$1,373	\$2,181	21.5%
President's Office	(\$213)	\$0	\$0	\$0	-100.0%
Processes & Technology	\$61	\$143	\$269	\$503	101.6%
Purchasing & Insurance	\$22	\$0	(\$2)	(\$3)	
Regulatory Services	\$764	\$571	\$586	\$666	-4.5%
Risk Management	\$46	\$83	\$72	\$78	19.4%
Security	\$120	\$72	\$58	\$134	3.9%
Tax Services	\$26	\$12	\$0	\$37	12.5%
Total	\$17,941	\$16,826	\$16,224	\$18,018	0.1%

ASC charges to CMP have remained flat, growing annually at 0.1 percent. The ASC charges actually decreased almost 10 percent from 2017 to 2019 before increasing by 11 percent in 2020. Significant increases from 2017 to 2020 in charges for Asset Management & Planning (\$2.0 million), Operations Technology and Business Transformation (\$0.97 million), Process and Technology (\$0.44 million), and Office of CEO (\$0.32 million) drove the dollar increases in AMC charges. However, these increases were almost entirely offset by reduced charges for Electric Operations (\$1.6 million), Human Resources (\$0.93 million), Information Technology (\$0.93 million), and Engineering and Delivery (\$0.72 million).

The large majority of ASC charges to CMP came through allocations, with about 13.1 percent coming as direct charges to CMP.

d. CMP Total Service Company Charges and Cap

CMP currently operates with an annual limitation of \$31.368 million on the amount of affiliate services includable in its rates. The limitation began in 2001 when CMP sought approval of service agreements with affiliate Energy East Management Corporation. This “cap” on affiliate services (for Avangrid Maine utilities) began at \$7 million (increasable to \$10 million through a notice of filing), then rose successively to \$14 million, to \$25 million, and finally to \$32.5 million in 2013 following a Commission order in Docket No. 2012-00530.

CMP’s initial, October 2018 rate filing in Docket 2018-00194 asked for elimination of the \$31.368 million cap, stating that affiliate service costs had exceeded the cap for a number of preceding

years. CMP presented service costs totaling \$40.9 million for 2017 (which included some capital costs). The Commission denied CMP's request to eliminate the affiliate service charge cap.

CMP prepared the functional components and totals of the table below that represent the service company charges to CMP for 2017 through 2020, including charges from Iberdrola S.A., AMC, and ASC. Note that the service charges below do not include any capital costs, and are affiliate service costs that are applicable to the CMP cap.

CMP Total Service Company Charges

(dollars in thousands)

	2017	2018	2019	2020	CAGR
Administration	\$1,784	\$1,785	\$1,464	\$1,279	-10.5%
Asset Management & Planning	\$380	\$680	\$1,755	\$2,399	84.8%
Business Development	\$716	\$135	\$549	\$747	1.4%
Communications	\$493	\$367	\$418	\$1,031	27.9%
Control	\$4,691	\$4,720	\$3,729	\$3,955	-5.5%
Customer Service	\$215	\$333	\$553	\$967	65.2%
Electric Operations	(\$454)	(\$665)	(\$1,218)	(\$2,049)	65.3%
Engineering & Delivery	\$6	\$14	(\$655)	(\$718)	
General Services	\$1,121	\$1,264	\$991	\$1,395	7.6%
Governing Bodies	\$2,219	\$2,218	\$2,097	\$1,790	-6.9%
Human Resources	\$4,930	\$5,165	\$4,597	\$5,615	4.4%
Information Technology	\$9,549	\$9,965	\$9,701	\$9,478	-0.3%
Internal Audit	\$333	\$341	\$457	\$515	15.6%
Investor Relationships	\$187	\$180	\$223	\$149	-7.4%
Legal Services	\$1,896	\$1,817	\$1,523	\$1,965	1.2%
Office of the CEO	\$1,846	\$1,888	\$2,302	\$2,164	5.5%
Ops Technology & Bus Transformation	\$1,215	\$1,345	\$1,373	\$2,181	21.5%
President's Office	(\$213)	\$0	\$0	\$0	-100.0%
Processes & Technology	\$61	\$143	\$269	\$503	101.6%
Purchasing & Insurance	\$2,074	\$1,968	\$1,951	\$1,867	-3.4%
Regulatory Services	\$1,705	\$1,395	\$1,155	\$1,116	-13.2%
Risk Management	\$111	\$141	\$154	\$167	14.6%
Security	\$823	\$950	\$780	\$801	-0.9%
Tax Services	\$2,494	\$2,855	\$2,305	\$1,835	-9.7%
Total	\$38,184	\$39,003	\$36,472	\$39,152	0.8%
Amounts Charged to Networks	(\$6,767)	(\$7,280)	(\$5,512)	(\$7,825)	5.0%
CMP Total Service Company Charges	\$31,417	\$31,724	\$30,960	\$31,327	-0.1%

Note: the "Amounts Charged to Networks" line includes the amounts over the cap and other items.

D. Conclusions

1. CMP's service company charges have averaged \$38.2 million from 2017-2020, well above the CMP cap.

While averaging \$38.2 million annually from 2017 through 2020, total service company charges (Iberdrola S.A., AMC, and other ASC combined) fell by about \$2.5 million in 2019, possibly the result of the Mid-Period Assessment/Forward 2020+ cost reduction efforts that began in that year. However, they rose again in 2020 by \$2.7 million to reach a peak of \$39.15 million. The fact that CMP service charges did not see large decreases from the 2017 and 2018 levels of \$38.6 million while it implemented corporate service cost reduction programs in 2019 and 2020 is counterintuitive.

CMP service company "charges" have exceeded the applicable cap by an average of about \$7.2 million annually over this period.

2. Avangrid's Forward 2020 programs through late 2018 did not appreciably reduce service company charges to CMP.

Chapter V of this report describes how Avangrid's internally generated 2017 and 2018 initiatives did not appreciably reduce CMP service charges. Forward 2020 initiatives began in early 2017 and concluded in October 2018, with decidedly uneven results, as described in other portions of this report. However, CMP clearly did not experience reduced service company charges as a result of the Forward 2020 initiatives.

In early 2019 Avangrid brought in an external consultant for an "outside look," with goals to significantly reduce expenses throughout the company. The initiatives that resulted and were adopted by the company are much more focused on corporate services and processes, in contrast to the more operational focus of the internally-generated Forward 2020. The new and numerous initiatives focused on corporate services in 2019 and 2020. We expect them to have an appreciably positive impact on the level of CMP service costs and charges. In fact, the CMP service company charges were initially reduced by \$2.5 million in 2019.

3. The allocation methods used by ASC and AMC use standard utility practices and produce a fair and reasonable basis for cost allocations to CMP.

Corporate and Technical Services Agreements between CMP and ASC and AMC govern service company costs charged to CMP. The drivers of cost allocations in the Cost Allocation Manuals defined in these agreements include the Massachusetts Formula, widely used by utility service companies, and a variety of industry-standard utility employee, usage, and consumption allocators.

For example, IT systems costs are allocated by the number of system users, percentage usage consumption by the business, percentage number of IT workstations, and direct charges related to systems management. Liberty's review of the services provided, allocation drivers and actual allocations by ASC, AMC, and Iberdrola S.A. found the methods consistent with producing fair treatment of CMP in the service company allocations as compared to other Avangrid utilities.

4. The majority of Iberdrola S.A. costs borne by CMP continue to appear to involve activities that duplicate what Avangrid provides for itself; we estimate them, in the absence of supporting information from CMP, at about \$3 million for 2020.

Avangrid operates as a New York Stock Exchange listed company having outside shareowners. Iberdrola S.A. has created a separate holding company structure for its Avangrid operations, and Avangrid has staffed it to perform the full range of functions needed. Concluding that general descriptions of service provided by Iberdrola S.A. to operations in the U.S. under Avangrid comprise expected holding company services generally considered to provide value to subsidiaries does not establish the validity in holding CMP accountable for them. If Avangrid is already doing those activities for itself, then it is not reasonable to expect CMP customers to pay Iberdrola S.A. again for a portion of them.

The correct logical construct, given the Avangrid structure, is this - - CMP should pay only for goods and services that, were Iberdrola S.A. not there, Avangrid would find it necessary to do for itself. Avangrid operates under a structure that includes a full complement of internally provided corporate services. It may well be that, as the majority (81.5 percent) owner of Avangrid, Iberdrola S.A. has its own interests in conducting diligence due as an owner. However, the validity of performing that diligence does not make it valuable to Avangrid as a proper cost of doing utility-related business.

Comparing the service descriptions of the CMP service agreements with AMC and ASC, on the one hand, and the listing of services Iberdrola S.A. provides, according to the report of management's consultant shows very high commonality. The agreement governing services provided by ASC to CMP lists 40 "Corporate Services" while the EY report summarizing the provision of Iberdrola S.A. services includes 25, with nearly each of those described by EY having direct linkage (and in some instances identical language) to the ASC to CMP service agreement. A review of the record from Docket No. 2018-00194 does not explain how the commonly described Iberdrola S.A. services provide a contribution not already made from within Avangrid. Neither does the report of a consultant provided by Avangrid in this audit. That report also does not address the structure of the other enterprises in the Iberdrola S.A. family, their relationship with the organizations providing services from Iberdrola S.A., what they (versus Avangrid) do internally in the areas where Iberdrola S.A. provides services, or how the breadth and extent of their use of such services compared with those of Avangrid. The report's direct contents do not provide sufficient information from which to conclude that the assignment and allocation bases used to determine the Avangrid portion of the services costs is sound.

Our requests related to the services provided by Iberdrola S.A. generated only general service descriptions. A later-provided agreement furnished by management contained a list of Iberdrola S.A. services nearly identical to those described in the EY report, adding only one additional service (Development Services). A work session with senior financial management sought, among other things, the identification of information sources that would describe with particularity the specific goods, services, or other items of value provided, but nothing additional was disclosed.

However, that session did identify areas in which Iberdrola S.A. provides services, procurement arrangements, or platforms that Avangrid does not provide for itself. The areas covered by these

services likely include, for example, things like financial services, insurance services, information technology, quality, R&D, risk management, the SAP platform, and tax services. Those areas in total have accounted for about a third of total Iberdrola S.A. charges borne by CMP from 2017 through mid-2020. The portion of charges in these areas not covering things already provided by Avangrid itself probably falls significantly under 100 percent. However, some other charges borne in Spain (general services, for example) no doubt support the activities in question. In any event, using one-third as the basis, produces up to \$1.6 million, leaving about \$3 million that still require justification before one can conclude that they were reasonably incurred in the provision of utility service for Maine customers.

5. Avangrid has reported that Mid-Period Assessment/Forward 2020+ initiatives in 2019 and 2020 resulted in corporate service cost reductions of \$34.6 million and \$36.1 million, respectively.

Avangrid reported significant cost savings in its “Corporate Services” areas in 2019 and 2020 as a result of the Forward 2020+ initiatives originally proposed by its external consultant. The initiatives generating the largest portions of the reported 2019 corporate cost savings of \$34.6 million were:

- \$19.4 million in spend/budget reductions
- \$3.9 million from reviewing performance, spans of controls, and management layers
- \$3.0 million in reduced audit fees
- \$2.4 million in reduced external IT costs
- \$2.1 million from tax operating model transformation
- \$1.2 million from legal insourcing
- \$1.1 million from capitalizing labor and reducing overtime.

The following chart, prepared by management in early 2020, reported \$34.6 million realized in 2019 in the “Corporate” category, which includes ASC and AMC. As a result, we would expect CMP service charges to be reduced by a portion of these savings.

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P&L Forecast Summary – Week Ending 1.17 (FINAL)

Workstream	Committed (Comprometido)		Forecast P&L (Impacto previsto en Resultados)					# FTE Identified ^{1,2}
	FTE # (Annual)	\$M (Annual)	FTE # ² (Annual)	H1 \$M (In P&L)	Q3 \$M (Incremental)	Q4 \$M (Incremental)	\$M (Annual)	
Corporate	52	23.4	51	4.3	18.2	12.2	34.6	51
Networks	35	35.1	36	6.8	-9.9	-8.5	-11.5	36

Workstream	Forecast P&L \$M By Month (Impacto previsto en Resultados)							
	H1 \$M (In P&L) ²	July	Aug	Sept	Oct	Nov	Dec	\$M (Annual)
Corporate	4.3	4.5	6.5	7.1	1.5	4.9	5.8	34.6
Networks	6.8	-3.2	-9.6	3.0	-2.7	-5.2	-0.5	-11.5

Based on information provided by the Business and Corporate Areas (Dollar impacts are pretax, not including one-time restructuring costs)

1. FTE reduction does not include anticipated increase in Networks headcount vs. budget of 102 FTEs (including 71 apprentices) due to initiatives outside the project, which have been favorably noted by the Management Committee on September 27 and included in REV3.
2. Includes named employees, cancelled open positions and delayed backfills, as well as an internal cross-charge to Spain. YE identified net headcount reduction (named + cancelled open positions) is 90, delayed backfills is 8 (4 from Corp), and internal cross-charge is 1.

Management also reported that costs savings continued in 2020, producing a \$36.1 million savings for the year in corporate services cost savings as a result of Forward 2020+ initiatives. The largest 2020 corporate cost savings initiatives came from:

- \$25 million in spending/budget reductions
- \$3.4 million from tax operating model transformation
- \$3.3 million in audit fees reduction.

Savings Scorecard: Corporate Services

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Corporate Services as of 01.20										
Status	Initiative Name	ID	Category	Initiative Lead	Executive Sponsor	Targets		Forecast P&L		Achieved
						\$M (Initial)	\$M (In Budget)	\$M (Annual)	\$M (vs. Budget)	\$M (To Date)
Complete	Tax Operating Model Transformation	CS01	2019	Steve Stites	Doug Stuver	4.2	3.4	3.4		3.4
Complete	Reduce Audit Fees	CS02	2019 / 2020	Andrea Van Luling	Scott Tremble	3.2	3.0	3.3	0.3	3.3
Complete	Parking Space Optimization	CS03	2019	Ross Henderson	Peter Church	0.4	0.3	0.3		0.3
Complete	Training Cost - Phase I (Training Gov.)	CS04	2019	Elissa Sikora	Carla Gregory	0.3	0.2	0.2		0.2
Complete	Training Cost - Phase II (Training Strat.)	CS06	2019 / 2020	Raquel Mercado	Carla Gregory	0.5	0.2	0.2	-0.1	0.2
Delayed	Finance Outsourcing	CS15	2020	Scott Tremble	Scott Tremble	8.6				
Delayed	Cognitive Automation to reduce DSO	CS17	2020	Howard Coon	Doug Stuver	4.8				
Retired	Supplier & Contract Mgmt – Purchasing	CS18	2020	Brian Ewing	Doug Stuver	6.8				
Complete	Portfolio Opt. Holistic Strat. – Gen. Serv.	CS19	2020	Ross Henderson	Peter Church		0.3	0.3		0.3
Retired	Outsource Purchasing	CS23	2020	Brian Ewing	Doug Stuver	1.0				
Delayed	Operating Model - Corporate Services	CS24	2020	Carla Gregory	Peter Church	5.4				
Delayed	Fleet Optimization	CS26	2019 / 2020	Ross Henderson	Peter Church	0.2				
Complete	RE&FM Service Delivery	CS27	2020	Ross Henderson	Peter Church					
Complete	Travel Consolidation	CS28	2020	Ross Henderson	Peter Church	0.4		0.4	0.4	0.4
Retired	Strategic Sourcing	CS29	2020	Pablo Iglesias	Doug Stuver	5.6				
Complete	EHS Organization - Corporate	CS30	2019	David Labelle	Peter Church		0.4	0.4	0.0	0.4
Retired	Infrastructure Outsourcing	IT02	2020	Sergio Merchan	Peter Church	1.9				
At Risk	Capitalized Labor / OT	RL04-C	2019 / 2020	Jose Luis Gutierrez	Scott Mahoney	0.9		0.0	0.0	0.0
Complete	Spend / Budget Reductions ¹	RL05-C	2019 / 2020	Guillermo Fernandez*	Scott Tremble		15.0	25.0	10.0	25.0
Complete	Sourcing Events	RL08-C	2019 / 2020	Brian Ewing	Doug Stuver			0.6	0.6	0.6
On Track	Working Capital	RL10	2019 / 2020	Dominick Manno	Doug Stuver	0.9		0.3	0.3	0.3
Complete	Legal Insourcing	RL12	2019	Julie Blindauer	Scott Mahoney	1.8	1.7	1.7		1.7
Total						44.9	24.6	36.1	11.5	36.1

* For initiatives where Control is the lead: Control is responsible for monitoring and updating the charter; the Business Owner is responsible for achieving savings as described on each charter

1 Corporate Spend/Budget Reductions excludes extraordinary budget request in Tax (\$7.3M; fully expensed) and COVID-related deferrable costs (\$3.6M as of Aug close)

We believe that Avangrid's service company and corporate were not "efficient and effective," especially prior to 2019. In early 2019, Avangrid hired an external consultant with a goal of significantly reducing corporate costs. The charts above show that Avangrid was fully committed to reducing corporate costs, and realized its reduction goals of \$34.6 million and \$36.1 million in 2019 and 2020. These programs are ongoing in 2021, with further corporate cost reductions going forward.

6. Efficient and effective service company operations at ASC and AMC should lower annual CMP service company charges by at least \$6.5 million to \$6.7 million.

As explained above, service company charges to CMP from 2017 to 2020 averaged \$38.2 million, with the highest value in 2020. CMP was charged an average of \$31.357 million annually during this period, with the difference charged to Networks to comply with the CMP service company cap. The Mid-Period Assessment/Forward 2020+ corporate cost savings should be considered in determining the "efficiency and effectiveness" of CMP service company charges in relation to the cap.

We requested that management review each category of corporate service savings generated by the Forward 2020+ results to identify the ASC, AMC, corporate or other beneficiary, as well as the specific CMP service company charge savings impact for each initiative. Management prepared a response that detailed the specific service charge impacts on CMP of the 2019 Avangrid corporate services savings of \$34.6 million.

Management categorized the cost saving initiatives for corporate services by benefitting entity (ASC, AMC, or operating entity) and identified the CMP savings shown in the following table. For initiatives indicating AMC as the primary beneficiary, the operating companies (including CMP) will receive direct and indirect benefits through reduction in AMC costs charged through ASC for allocation to those companies.

2019 Corporate Services Cost Savings and CMP Impact

Initiative Name	ID	Savings Across All Corporate Functions (in millions)	Primary Direct Beneficiary ¹	CMP Savings (in millions)
Training Cost-Phase I(Training Gov.)	CS04	\$0.2	AMC	
Training Cost-Phase II(Training Strat.)	CS06	-\$0.1	AMC	
EHS-Organization-Corporate	CS30	\$0.2	AMC	
Performance Review/Spans & Layers/Other	RL02-RL03	\$3.9	ALL OPCOs	
Working Capital	RL10	\$0.2	ALL OPCOs	
Capitalized Labor/OT	RL04-C	\$1.1	ALL OPCOs	
Spend/Budget Reductions	RL05-C	\$19.4	ALL OPCOs	
Total for Initiatives Above				\$3.6
Reduce Audit Fees	CS02	\$3.0	ALL OPCOs	\$0.6
Tax Operation Model Transformation	CS01	\$2.1	AMC	\$0.7
External IT Services Reduction	IT01	\$2.4	ALL OPCOs	\$1.5
Legal Insourcing	RL12	\$1.2	AMC	\$0.0
Sourcing Events	RL08-C	\$0.8	ALL OPCOs	\$0.0
Parking Space Optimization	CS03	\$0.1	AMC	\$0.1
Fleet Optimization	CS26			
Total		\$34.6		\$6.5

The table shows that Avangrid identified 2019 savings of \$34.6 million in corporate services, and further attributed \$17.9 million (51.7 percent of the savings) of the savings to ASC (\$4.1 million) and AMC (\$13.8 million). Management then calculated the savings on service company costs charged to CMP for 2019 at \$6.5 million, or about 36 percent of the ASC and AMC savings. Applying the same 36 percent share to calculate CMP's share of the ASC and AMC savings produces a 2020 value of \$6.7 million.

Management designed the Forward 2020+ initiatives to reduce corporate service costs significantly; for CMP, this would mean reductions in service charges that averaged \$38.6 million in 2017 and 2018. Avangrid fully "committed to" most of the initiatives originally designed by the external consultant, removing a few not considered feasible by management. Numerous additional initiatives were also developed by Avangrid, who closely managed and monitored the initiatives in 2019, 2020, and continuing to date. In other words, Avangrid clearly needed to reduce corporate expenses by the targeted amounts to be "efficient and effective" in its own eyes, as well as those of the external consultant.

One should expect service company charges to CMP to fall by \$6.5 million to \$6.7 million annually in 2019 and 2020. However, the CMP charges increased to a new high of \$39.15 million in 2020. If previous CMP service company charge levels of \$38.6 million were reduced by these savings levels, it would result in values near the CMP cap. However, the expected savings were not realized in actual CMP charges, which Liberty would not consider to be "efficient and effective" levels.

7. The affiliate service charge cap should remain in place for CMP.

Avangrid has committed to, managed, and realized results from cost savings initiatives that should have reduced CMP service company costs from experienced levels in 2017 and 2018 to near the \$31.368 million limit. Moreover, CMP charges from Iberdrola S.A. likely contain some \$3 million or so that management cannot specifically show are required to provide what Avangrid does not already provide for itself. We recommend therefore that the existing CMP cap remain in place, for a number of reasons.

First, there is a lack of clarity on where and how the savings management has said it has already achieved are reflected in CMP costs.

Second, now more than five years removed from the UIL Holdings acquisition, management clearly still remains engaged in producing effective and efficient corporate services operations, meaning that it is reasonable to expect material cost changes as those efforts continue.

Third, Iberdrola S.A. provides Avangrid with services from a general list that largely duplicates the same listings contained in agreements with Avangrid's internal service providers. It does not appear that Avangrid has required or secured detailed service-by-service supporting documentation exists to show what Iberdrola S.A. provides is not already provided internally. That Iberdrola S.A. may want to provide an added level of comfort about the sufficiency of what Avangrid does itself is not sufficient. The proper question is, assuming the absence of Iberdrola S.A. and its performance of activities causing charges what Avangrid would have to replace. For

well more than a majority of the costs CMP has borne from Iberdrola S.A. the answer to that question remains elusive.