AVANGRID Capital Planning Process

Applicable to:
- The Berkshire Gas Company (BGC)
- Central Maine Power Company (CMP)
- Connecticut Natural Gas Corporation (CNG)
- Maine Natural Gas Corporation (MNG)
- New York State Electric and Gas Corporation (NYSEG)
- Rochester Gas and Electric Corporation (RG&E)
- The Southern Connecticut Gas Company (SCG)
- The United Illuminating Company (UI)

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Issue Date	Issue No.	Author	Amendment Details
10/19/2019	V2.0	Chris Herrmann	--
5/26/23	V3.0	Adam O'Laughlin	• Portfolio planning policy update • IP4 policy update

Chapter 1 Planning Process

The process for planning and executing the Company's capital investments is critical to the overall success of the Plan. The process is a rigorous approach that addresses selection, prioritization, approval, execution, and governance of the capital portfolio of projects and programs. The Plan is refreshed annually by reviewing and updating the projects and programs, aligning functional needs, and synchronizing resources, costs, and schedules.

Section 1.1 Planning Process

The following is a description of the annual capital investment planning process for AVANGRID. Details of each of the Company's investment forecasts are included in the chapters following this one.

Section 1.2 Planning Objectives

In identifying projects / programs included in a capital investment plan, each Company considers the following strategic objectives:

- **Maintain and Improve System Safety** & **Security**
- **Meet the Electric Needs of our Customers**
- **Achieve Service Reliability and Quality Targets**
- **Replace Assets and Facilities Based on Condition and Obsolescence**
- **Improve Effectiveness and Efficiency Through Modernization**
- **Enable Clean Energy Transformation**.

During the planning process, each Company selects projects aimed at achieving one or more of these objectives in a cost-effective and timely manner.

Section 1.3 Contributors

The contributors to the plan include both operational business areas as well as those areas that support the operation of the business. Each group is responsible for a sector of the business and coordination and communication occurs between each as the system needs are assessed and the investment plan is developed and

refined. The business and support areas that contribute to each Company plan are as follows:

- Operational Business Areas: Customer Service, Electric Operations, Gas Engineering & Delivery, Gas Operations, Generation, Process & Technology, Planning & Coordination, Projects, Operational Smart Grids, Non Wires Alternatives and Smart Grids Innovation.
- Support Business Areas: General Services, Business Development, Information Technology, Security.

Section 1.4 **Plan Overview**

The investment plan is developed to meet the needs of customers, improve reliability, strengthen the system against the adverse effects of major storms, ensure that cyber and physical aspects of the system are secure, support grid enhancement to accommodate clean energy objectives, and achieve the long-term business objectives of the Company. The projects and programs proposed in the plan are those that have currently been analyzed and determined to be necessary to support the delivery of safe and reliable service to customers.

The Company continually re-evaluates and re-prioritizes projects / programs and review the system needs due to the continually changing environment in which the Company operates. Therefore, at any single point in time, the plan is a current snapshot of the portfolio of projects and overall system needs, which will likely change as a result of ongoing re-evaluation and re-prioritization processes embedded within the investment planning process.

For example, many of the electric projects reduce the risk of service outages in the event of contingency situations while other projects address mandates issued by state and federal regulators, and we expect that new regulations will be forthcoming during the term of this Plan. In addition, there are several projects that continue the process of bringing the electric delivery system up to present day standards by modernizing equipment, employing software and IT platforms, and expanding system automation. These standards are under reviewed regularly and reassessed

to identify the best solution to meet the needs of our customers. The phases of the planning process are described in *Section 1.5*. While the plan phases are defined, the process is fluid and the re-iteration through the phases occurs many times throughout the year as new factors are introduced and other factors change such as regulatory requirements, customer needs and system conditions.

Section 1.5 Phases of the Planning Process

Phase I – Initiation and Planning: During this initial phase, business areas focus on the Company's strategic objectives to meet the needs of the systems and of its customers effectively and efficiently. A description of each strategic of those objectives are as follows:

- **Objective 1 – Maintain and Improve System Safety and Security**: Safety is each Company's number one priority, and the Company accordingly places significant emphasis on the safety of its employees and the public. The Companies operate a "no harm" culture and will continue to make investments to assure the safe and reliable operation of the system.

  No aspect of the Company's operations is more important than accident prevention. Safety is a value that does not change. There is no job so important that established safety rules are ever compromised. Management strives to provide a hazard-free work environment that complies with all applicable health and safety laws and regulations, and educates employees, customers and the public about health and safety hazards associated with our operations. Further, management is committed to the recognition, assessment, and control of health and safety hazards related to each of the Company's facilities and operations.

  Each Company continues to upgrade the physical security at and around the Company's facilities as well as the overall cyber security infrastructure to keep the Company's employees and the public safe, to help ensure the integrity of the Company's systems and provide reliable service to

customers. These upgrades include improved access control, video surveillance and alarming capabilities. More stringent NERC standards require the Companies to improve and expand its security capabilities to protect critical electric system infrastructure. Further, the challenges that each Company faces to ensure data protection, privacy and ensuring compliance with regulatory and legal mandates continue to grow as threats evolve and grow increasingly more sophisticated.

- **Objective 2 – Meet the Electric Needs of our Customers**: The Company needs to provide reliable and dependable electric service to large commercial and industrial customers as well as residential customers. Often large commercial and industrial customers require an upgrade to the Company's electric facilities to meet their needs, and the Company strives to make these upgrades in a timely manner. In certain cases, all, or a portion of the costs of these upgrades may be offset by contributions from the specifically affected customers. Additionally, with the increased proliferation of distributed energy resources (DER) on the electric system, the Company must interconnect large and small generation projects to its transmission and distribution systems, as requested by customers and in accordance with applicable regulatory requirements.

- **Objective 3 – Achieve Service Reliability and Quality Targets**: The Capital Plan supports this strategic objective by the following actions:
    - Prevent or minimize system violations on lines and transformers and other electrical elements under normal operating conditions (N-0) at peak demand.
    - Prevent or minimize system adverse impacts caused by contingency situations (N-1) and (N-1-1); and
    - Enhance operation and restoration of the system through replacement and modernization of end–of-life equipment.

- **Objective 4 – Replace Assets and Facilities Based on Condition and Obsolescence**: The Company continuously reviews equipment and facilities to determine which assets need replacement. Typically, those assets are identified due to one of the following conditions:
    - Equipment and facilities with high failure rates.
    - Technological obsolescence (eg. inability to obtain spare parts).
    - Facilities that are determined to be beyond their useful operating life and the maintenance of such equipment is no longer cost effective.
    - Equipment with high maintenance costs for reasons other than their deteriorating condition.
    - Risk of not meeting safety, reliability, and environmental objectives; and other indicators of asset health.

- **Objective 5 – Improve Effectiveness and Efficiency Through Modernization**: The Company continually looks for ways to make operations more effective and efficient. One of those ways is through network automation. The Company continues to modernize the operations of its systems, enhancing the effectiveness with which it serves customers, and enhancing reliability and efficiency. On the electric system, the primary customer benefit of automation is more efficient and effective response to distribution circuit outages thereby limiting the number of customers impacted by an outage event. The crews restoring service will receive notification of an outage sooner than they would have absent an automated system of notification. Adding reclosers on distribution lines reduces the potential number of customers whose service is impacted during an outage and reclosers will quickly relay the location of an outage to the Company's Energy Control Centers (ECCs). Additionally, the Company projects an increase in crew efficiency due to the reduction of travel time to assess an outage. Investment in automation will also be compatible with technologies required for the development of a smart grid.

- **Objective 6 – Enable Clean Energy Transformation**: Advance clean energy / decarbonization ("electrification") initiatives being proposed by the various state and local municipalities in which the Company operates. Sustaining the environment and transforming the grid, including enhancing system robustness to accommodate the increased proliferation of clean energy resources

Phase II – Data Gathering and Analysis: Given the objectives of the Company, the business areas analyze data to determine whether the objectives are being met. The data is collected and provided through several different methods such as asset condition health assessments, inspection programs, failed equipment information, and asset replacement practices.

The business areas determine the data that needs to be collected and reviewed to assess the system needs. For instance, fleet replacement is determined by application of the established fleet replacement procedure which contains specific criteria for replacement including age, maintenance, and condition. With electric and gas equipment, there are many factors which contribute to the inclusion of projects in the plan, including customer and capacity needs, the overall obligation to serve, reliability indices, asset health, system hardening needs, adherence to operating standards, and support of normal operations. New projects are initiated, and current projects may be adjusted, based on the information that has been collected and analyzed.

Phase III – Individual Budget and Plan Development: Upon the completion of the analysis and data gathering efforts, the business areas then develop and/or modify the individual project forecasts specific to each Operating Company. These individual project forecasts comprise a business area's forecast which in turn becomes a component of the individual Operating Company's and AVANGRID's total capital plan. Business area plans can, and do, change over time based on a variety of factors, including system conditions, customer needs and regulatory

requirements. These conditions are reviewed and addressed by the business areas.

Phase IV – Plan Review and Alignment: Utilizing the information and budget data from each area's individual plans, the Company's capital investment plan is compiled. The plan is reviewed for alignment across the business areas and may be adjusted during the review process.

Section 1.6 Capital Investment Planning Approval Process

The Company has designed the Planning and Investment Approval Process to be in alignment with the it's planning objectives as described above. The process includes Governance oversight and project review and approval stage gates with an overall focus on project justification, review, and prioritization. A graphic representation of the planning processes is shown below in

Figure .

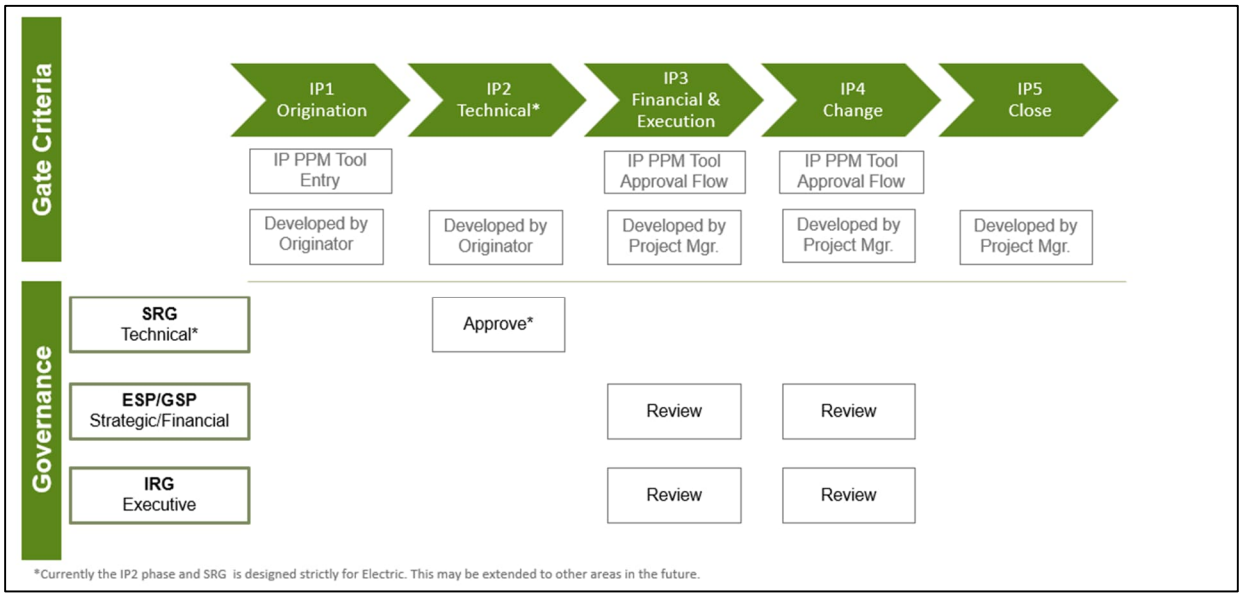


Figure 1 – Investment Planning and Approval Process

Governance:

Depending on the value, complexity and nature of the investment, proposed projects and previously identified projects are reviewed by one or more of the following governance review groups through the approval process.

- System Review Group (SRG)
    - Members include Planning and Non-Wire Alternative Groups Business Areas.
    - Meets monthly to discuss and approve technical and engineering aspects of electric investments, including both Transmission and Distribution Investments.
    - SRG provides technical approval for an electric investment to move forward
- Electric and Gas Strategic Planning Group (ESP/GSP)
    - Members include business areas leaders
    - Meet bi-weekly to review and approve investments for inclusion in the plan, financial and execution approval and changes to any investments already approved.
    - Reviews and approves, conditionally approves, puts on hold, or rejects all investments ≥ $500K or out of tolerance.
- Investment Review Group (IRG)
    - Members include Networks executives such as CEO, Company Presidents and the Senior Leadership Team
    - Meet monthly to review and approve investments for inclusion in the plan by providing executive visibility, collaboration and input into significant investment plan proposals and changes.

- Review all investments ≥$5M, except for Maine Natural Gas and CT/MA Gas Cos review all investments ≥$1M.

Stages in the Investment Planning Approval Process:

The approval process consists of a staged approach. This staged approach to investment approval where investments are approved at distinct points (gates, noted as IP1, IP2, etc. in 2) throughout the process provides for:

- Separate concept and technical/engineering approval stages that ensure only those projects that have viable solutions have resources allocated to develop full technical specifications.
- Separate governance reviews and approvals for financial/execution before expending funds.
- Re-approval of investments while not necessary for all projects does allow for Governance Teams to challenge the underlaying reasons for those that do propose a change to the scope, schedule or cost of a project. This also has the advantage in that it tends to draw out lessons learned for application to future projects.

The five-stage Investment Planning Approval gates are described in detail below and illustrated in Figure 2.

- **Origination Phase (IP1):**
  - All new projects/programs are entered the Portfolio Management Tool as an IP1
  - Approval at this stage allows for inclusion in the Capital Investment Plan but does not approve spending of financial resource.
- **Electric Network Technical Approval (IP2):**
  - Provides greater understanding and approval of the technical aspects of those projects in the approved plan.

- Includes review of system need, alternatives considered, single line diagrams, project cost estimate and project timing.
- IP2 Approval is received by the SRG Governance process and currently applies to electric projects only

- **Financial and Execution Approval (IP3)**:
  - Provides overview of key project drivers, solution, authorizes project to spend company funds and moves the project into execution. Including detailed project description, scope, benefits, and any additional documentation required for decision making.
  - There are 2 stages of IP3 approval:
    - Stage 1: Preliminary Authorization (or seed funding) for pre-engineering, purchase of long-lead time assets, ground condition surveys, etc.
    - Stage 2: Full Financial and Execution Authorization of the full project financial cost.
- **Change Approval (IP4)**
  - A project change request is required for any modifications to scope, schedule, or costs from an approved IP3 or last IP4 outside of established tolerances.
  - Review of reasons and amount of the change is reviewed by the SRG, ESP/GSP and IRG, where required.
- **Project Closure (IP5)**: IP5 is required when a project is materially, technically, and financially complete.

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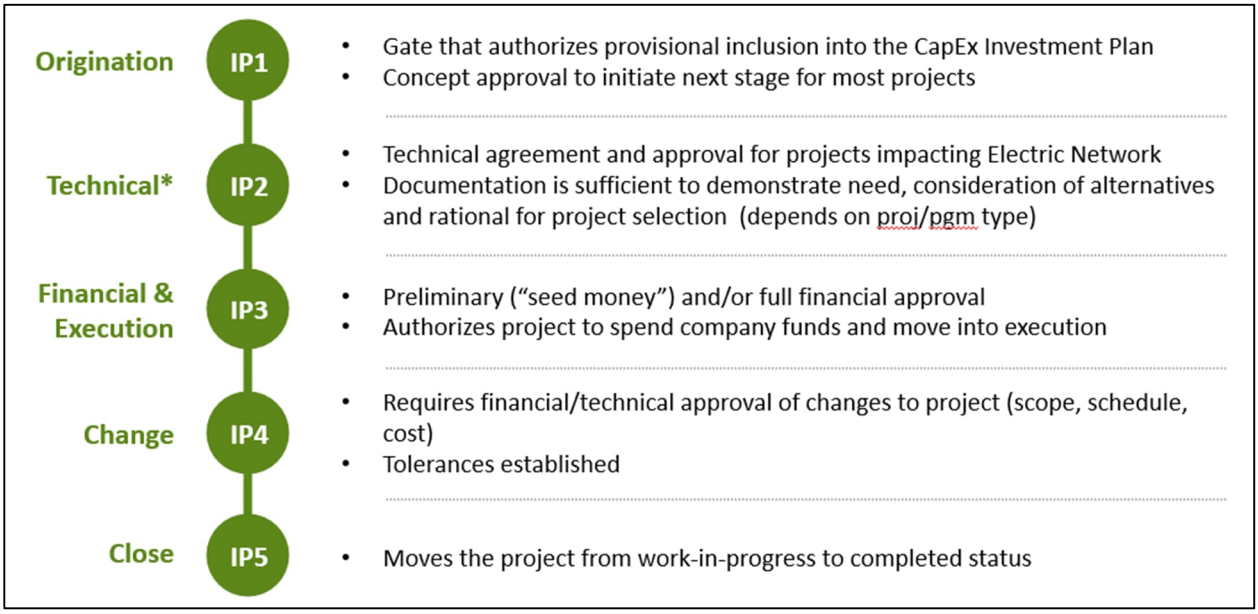


Figure 2 – Investment Planning Gates