

Cherokee Clean Air Clean Jobs Project Guideline

Capitalization of Costs for Plant Labor and Consumables

SUMMARY

Questions frequently arise concerning the treatment of costs as they relate to various types of capital project activities compared to business operations. This guideline is an effort to address Capital Asset Accounting (CAA) policy as it relates to accounting for project related costs. This guideline is intended to provide a general framework to help the project determine how to properly account for various scenarios and to understand the basis for Xcel Energy capital policy as it relates to major capital project activities. In general, activities that are normally charged to Operating and Maintenance (O&M) should continue to be charged as such during the lifecycle of a defined capital project within an existing plant. If the application or intent of this guideline is unclear, contact Capital Asset Accounting for assistance and interpretation.

1. Operational Readiness Activities

Operational readiness refers to a set of activities that the plant implements in parallel with the construction and startup of new units to provide assurance that plant personnel are prepared to operate the facility after the units are completely turned over to operations. These types of activities are commonly referred to as organization costs and are defined as those tasks performed by Plant Operations to develop or revise processes and procedures at an existing facility to commence new operations and maintenance programs. These costs are incurred to support future O&M activities, are not directly related to the construction and commissioning of the new units and are considered O&M.

Examples of these activities include:

- a. Developing Lockout/ Tagout (LOTO) Procedures
- b. Developing Preventative Maintenance and Surveillance Programs
- c. Developing Spare Parts Programs and Purchasing Capital Spare Parts
- d. Defining and Developing MAXIMO Systems and Subsystems
- e. Development of Warranty Management Programs

2. Plant Labor Supporting Project Engineering, Construction and Startup Activities

Labor costs that directly support capital project activities during the engineering, construction and startup phases of a major capital project are considered a capital cost.

Examples of activities that directly supporting engineering, construction and startup include:

- a. Work flow engineering drawing reviews
- b. Inspection, Installation or Repair of Permanent Equipment or Materials
- c. Hanging Equipment Tags
- d. Providing Temporary Construction Power or Communications
- e. Performing LOTO Activities
- f. Operating Units for First Fire and Steam Blows
- g. Operating Units to Tune Emissions Control Equipment
- h. Operating Units to Tune Plant Control System

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3. Classroom Training

Under General Accepted Accounting Principles and FERC Accounting guidance, costs to attend training are generally an O&M expense as these activities do not exhibit the essential characteristics of an asset. Accordingly, Xcel Energy Capital Policy requires that the majority of training costs be recorded to operating and maintenance expense, even when related to a capital construction project.

According to the FERC Electric Plant Instructions 3(19), training costs may be capitalized when employees are being trained to operate or maintain plant facilities that are not conventional in nature or are new to the company's operations. Combined cycle operations and maintenance activities are not new to the company and the classroom training provided to Plant personnel for the project is considered an O&M cost.

Examples of classroom training related to a major capital construction project include:

- a. Generator Circuit Breaker Training
- b. Switchgear & MCC Training
- c. Battery & UPS Systems Training
- d. Steam Turbine Generator (STG) Operations and Maintenance Training
- e. Heat Recovery Steam Generator (HRSG) Operations and Maintenance Training
- f. Combustion Turbine Generator (CTG) Operations and Maintenance Training
- g. BOP Systems Training such as the Aqueous Ammonia System, Boiler Feedwater System, Drain Systems, Chemical Feed Systems, Circulating Water System, Closed Cooling Water System, Condensate System, Demineralized Water System, Fire Protection System, Lube Oil System, Potable and Service Water Systems, Steam Systems and Water Treatment System

4. Transition of Consumable Costs From Capital to O&M

The costs of consumables will be switched from being booked to the project capital accounts to being booked to the appropriate operations and maintenance accounts upon synchronization of U5 CTG and U6 CTG to the grid. Natural gas meters on these units will facilitate accounting of the amount of natural gas used until that time. No consumable costs can be reclassified to capital at a later date.

Examples of consumable costs include:

- a. Natural gas
- b. Chemicals
- c. Lubricants
- d. Gaskets and Packing
- e. Filters
- f. Gases (Ammonia, Nitrogen, Hydrogen, CO₂, etc.)
- g. Catalyst
- h. General Consumable Materials and Supplies

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5. Transition of Plant Operations Support Labor Costs From Capital to O&M

Plant Operations labor to support Commissioning tasks transitions from Capital to O&M based on the phase of the project and the types of project activities being performed at the time. When the combined cycle plant is declared In-Service the all costs for Plant Operations and Maintenance labor will no longer be charged to project capital accounts.

Examples of operations activities that occur after the In-Service date include:

- a. Operating units to support Plant and equipment Performance tests
- b. Operating units to perform emissions testing
- c. Operating units to perform acoustic testing
- d. Operating units to perform Reliability testing
- e. Operating units to perform Demonstration testing

	Mechanical Completion of First System Sep14	First Fire Combustion Turbines Mar15	In-Service Date As-Built Forms Stop AFUDC Jun15	Commercial Operation Date Aug15	
	Construction Phase	Turnover / Commissioning Phase	Testing / Tuning Phase	Plant Performance Testing Phase	Project Closeout Phase
Project Capital Activities	<ul style="list-style-type: none"> • Electrical Cable pull & term • Piping install & test • Erect HRSG's • STG Erect/align/couple • Lube oil flushes 	<ul style="list-style-type: none"> • Charge Plant Battery System • Loop Checking • Backfeed Power for Startup • Startup/energize 4kV and 480V • Startup Air, Demin, BFW, Circ Wtr 	<ul style="list-style-type: none"> • Mechanical Completion • CTG first fire and Sync • Steam Blows • CTG Tuning and Testing • Roll STG / Ramp to Full Load 	<ul style="list-style-type: none"> • CEMS RATA Test • Plant Performance Test • Emissions Testing • Reliability Test • Substantial Completion 	<ul style="list-style-type: none"> • Commercial Operation • As-Built Drawings • WECC Testing • Punchlist • Closeout
Plant Operations Support of Capital Activities		<ul style="list-style-type: none"> • Commissioning Planning • Lock Out Tag Out • System Surveillance Rounds 	<ul style="list-style-type: none"> • Commissioning Planning • Lock Out Tag Out • System Surveillance Rounds • Support System Trouble Shooting • Support System Operations • Support Operations of CTs During Tuning & Testing 		
Plant O&M Activities	<ul style="list-style-type: none"> • Operational Readiness Activities • Classroom Training 	<ul style="list-style-type: none"> • Operational Readiness Activities • Classroom Training 	<ul style="list-style-type: none"> • Operational Readiness Activities 	<ul style="list-style-type: none"> • Plant Operations During Performance Testing 	<ul style="list-style-type: none"> • Plant Operations

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6. Definition of Terms

- a. **Mechanical Completion:** Mechanical Completion verifies that construction and installation of equipment, piping, instrumentation, cabling, electrical, telecoms and mechanical components are physically complete and all inspections, testing and documentation requirements have been completed according to the design. It represents the interface between construction and commissioning activities and includes all interface checks between all systems and subsystems plant wide. At this time all major construction work is complete. Minor work not interfering with operations may not be completed, such as punch list work.
- b. **Commissioning:** The Commissioning phase begins with the turnover of systems from construction to startup. Startup subsequently performs a verification of functional operability of elements within the systems, by subjecting them to a set of simulated operational conditions, to achieve a state of readiness for commissioning. Commissioning requires energization of equipment and implementation of the LOTO system.
- c. **In-Service:** The combined cycle plant will be declared In-Service and ready for its intended use upon successful completion of a 24 hour run at full load of all three units simultaneously during which all systems are operating normally. The project will submit In-Service As-Built forms to CAA who will in turn stop the AFUDC calculation, move the constructed asset to plant, and start to book depreciation.
- d. **Commercial Operation:** The point in time when all three units have been turned over to Dispatch for operations.
- e. **Final Completion:** To facilitate timely closing of work orders, the Combined Cycle Project will achieve Final Completion within six months of the In-Service Date. All costs will be recognized to the work orders, final as-built forms will be submitted to CAA and the capital unitization process will follow. If there are extenuating circumstances that cause capital costs associated with the completing the project to occur more than six months after the In-Service Date, CAA will make a determination to either grant an exception or require the original work orders to be closed and new work orders to be created.
- f. **Allowance for Funds Used During Construction (AFUDC):** Allowance for funds during construction is the regulated mechanism to charge to the capital project the assumed debt and equity costs associated with funding the project before it is in its revenue-generating phase. The AFUDC is added to the capital project and at the same time is recognized as either income or an offset to expense. When the project goes into service the cost of the debt and equity are part of depreciation expense, which is a component of the customer's rate.