

5 ANNUAL PLANT COST DATA

(Data submission is done using the smart sheet file)

5.1 Reporting Costs in Local Currency Units

All costs should be reported in thousands (1000s) of LOCAL CURRENCY UNITS to two decimal places. Conversion of costs for comparison between different currency units will be done automatically in the database using the internal Purchasing Power Parity (PPP) methodology.

Please contact HPC Chair with any questions regarding local currency unit cost reporting.

5.2 Generally Accepted Reporting Principles

This set of rules is established in order to ensure reporting consistency across member utilities and immunize the process against possible differences in utilities' internal reporting practices.

All applicable costs should be reported and costs that are not applicable should not be reported.

Reporting all applicable costs and nothing more is the primary consideration. Allocating costs properly is the secondary task.

Costs that are to be reported generally relate to current or future operations of a given plant (please see detailed listings under each cost category). Costs that are not to be reported include work on new plants and work for others, for example, (Hydro plant) machine shop working for a fossil plant.

Prime Function Rule

When assessing costs and appropriate cost classification, we encourage use of the Prime Function Rule (if costs are difficult to segment, then they should generally follow the primary function being undertaken).

Cost Allocations

When costs are incurred for more than one plant or clearly belong to more than one cost category, making allocations is necessary. In general, allocations should be done by the most appropriate cost driver or, if applicable, multiple cost drivers. Allocation by plant MW capacity can be used as a default in case when no better method can be identified.

Sometimes it is advisable to do the allocations in stages. For example, corporate HR cost may first have to be allocated to transmission and generation divisions and then to specific Hydro plants.

It many situations, allocations made by corporate will be available and these will be the best choice for reporting as such allocations are usually given a fair amount of thought and analysis by professionals.

Merged operations

In case of merged operations, for example Hydro-Thermal (Fossil) operations carried out from the same organizational unit, it is necessary to separate costs using available methods. The method will depend on available reports and materiality of costs. In case of any difficulties with separating Hydroelectric Business Unit costs from other costs, please contact HPC Chair for Committee's advice based on specific circumstances.

Materiality of Costs

Materiality of costs is a definite factor when reporting costs. It is difficult to set general rules, however, the following costs could be considered as small:

- Below \$1,000 USD or equivalent
- Below 1% of total cost per category
- Below 0.2% of total controllable OM&A cost

The treatment and attempted accuracy should reflect the cost's materiality.

Costs Not to be Included

The following is a list of general items that should *not* be included in any category of the data submission:

- Power marketing (trading) costs
- Amortization costs
- Lost opportunity costs
- Non-generation revenues

If you have questions or comments, please contact HPC Chair for Committee's advice based on specific circumstances.

5.3 Cost Category Detail Information

5.3.1 Annual O & M Expenditures: Operations

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
COST CATEGORY:	Sub-component of the Cost Category Group. Costs will be rolled up to this level from the Expense Type Category.
SUB-COST CATEGORY:	Sub-component of the Cost Category (applies to Investment section only). Costs will be rolled up to this level from the Expense Type Category.
EXPENSE TYPE CATEGORY:	The level at which cost data is input. Sub-component of the Cost Category for Annual Operating Costs or Sub-Cost Category for Investment costs.
COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes.

OPERATIONS

Cost items, activities, or services which directly impact or control the operation of the plant/facility/project (O1) or involve management of the system/fleet as a whole (O2), with the specific outcome being the generation of electrical energy. Power Marketing (trading) activities/costs will not be included in the HPC database.

O1 Facilities Operations

Costs associated with providing services and resources to carry out directives/instructions for unit dispatch and water management.

- Note local plant/facilities/project actions.

Cost of labor, materials used and expenses incurred in operating hydraulic works including reservoirs, dams, and waterways, and all activities directly related to hydroelectric generation at the generating station.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

Supervision/Management

- 1 Supervising hydraulic operation.
- 2 Engineering Services related to Operating the plant
- 3 Supervising electric production.
- 4 Labor costs (all including benefits, concessions, payroll taxes etc) for Operators (Operations staff) who are employed at the plant/facility/project

Operation of Equipment and Facilities

- 5 Operating intakes, spillways, sluiceways and outlet works.
- 6 Operations of gates, conduits (such as PRVs or Hollow cone bypass valves), canals, pipelines, reservoirs.
- 7 Operating prime movers (turbines), generators, exciters and auxiliary equipment- such as diesel backup/standby, compressors etc.
- 8 Remote operation of intakes, spillways, sluiceways and outlet works.
- 9 Remote operation of gates, conduits (such as PRVs or Hollow cone bypass valves), canals, pipelines, reservoirs.
- 10 Remote operation of prime movers, generators and auxiliary equipment.
- 11 Operating generator cooling system and related auxiliary equipment.
- 12 Operating lubrication and oil control systems, including oil purification.
- 13 Operating bubbler, heater or other de-icing systems.
- 14 Operating switchboards, switchgear, electric controls and protection equipment.

- 15 Adjusting Station equipment where such adjustment primarily affects performance, such as regulating cooling water, current fields of a machine, or changing voltage of regulators or station transformer taps.
- 16 Spillway operations
- 17 Managing emergencies (flow, flooding, emergency shut down etc.)
- 18 Labor costs (all including benefits, concessions, payroll taxes etc) for Operator/Area Dispatchers who maybe within the project or stationed remote (i.e. a central location) who provide services to Generation.
- 19 Labor costs for staff whose prime business function is to monitor the Generation side of the business (central) and who may assist in monitoring the system, or act as liaison with those Marketing Generation products.

Communications, Safety, and Operation Records Management

- 20 Following Schedules
- 21 Operators Logs (plant- control room)
- 22 Keeping plant log and records and preparing reports on plant operations
- 23 Availability Management
- 24 Work Protection (safety-lockout) specially associated with operations activities * Reading/Recording of Station Metering and instrumentation
- 25 Maintenance and update of general records of physical characteristics of station equipment, lines, capacities etc. This will include:
 - a) Station one lines updates not as part of capital investment work
 - b) Isolation schematics updates not as part of capital investment work
 - c) Pollution prevention/ emergency management
 - d) Fire prevention/emergency management
 - e) Ground resistance records
 - f) Maps, prints, and drawings applicable to the facility.

Dam and Reservoir or Hydrology issues

- 26 Patrolling reservoirs and waterways, which are not incidental to other work
- 27 Dam Safety Inspections which are not incidental to other work, such as weekly, monthly annual or semi-annual inspections /audits.
- 28 River Hydrology- reading gauges/flow etc.
- 29 Transportation expenses associated with crews attending specifically to local operations activities.

OPERATIONS

O2 Operations Generation Planning and Integration

Costs associated with support system or facility generation planning and the issuing of instructions or directives for unit dispatch and water management.

- Note actions, which are not conducted by local plant/facility/project staff – such as central resource planning, or area/regional control centres.

Cost of labor, materials used and expenses incurred in operating hydraulic works including reservoirs, dams, and waterways, and all activities directly related to hydroelectric generation - outside the generating station.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category:

Supervision and Management

- 1 Supervising central resources involved in hydraulic operation or electric production issues.
- 2 Engineering Services related to central operations issues

Supervision and Management cont'd

Planning

- 3 Inventory/Resource Planning
- 4 Setting Power Schedules (Generation Schedules)
 - a) Allocating loads to plants and interconnections with others
- 5 Maintaining communication and planning with transmission providers as appropriate.
- 6 Hydrology Issues Management – including snow pack monitoring
- 7 Hydrology Planning/Engineering Services
- 8 Meteorology- including special or emergency events
- 9 Control Centre–Central Dispatch costs
- 10 Communicating operations orders/dispatches to control centers
- 11 Communications regarding marketing decisions and resource availability
- 12 Controlling System Voltage (as appropriate to the utility) moved to O3 – but likely not a Hydro cost.

Records Management

- 13 Recording loadings and water conditions
- 14 Preparing operating reports and data for billing and budget purposes.
- 15 Any activity listed in Operations O1, which is directly actioned by individuals outside local plant operation.
- 16 Transportation, travel and meal expenses associated with central operations activities

OPERATIONS

O3 Operations Miscellaneous

Costs which fall within the Operations Cost definition but which are not readily classified either O1 or O2.

- Note items in this category will be reviewed on a regular basis by the HPC- DMS to determine whether they should be reclassified O1 or O2.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category:

- 1 Cost activities involved in supporting broader utility wide issues – such as EUCG, CEA
- 2 Cloud Seeding (as done to increase water/fuel)

Items formerly in Operations cost, to be excluded from benchmarking:

Cost items that will not be benchmarked against, and therefore are not relevant to capture in the HPC Data Base.

- 1 Navigation Facilities are incidental to Hydro operations, are not present at the majority of member utility facilities/projects and are therefore considered not significant for benchmarking purposes.

5.3.2 Annual O & M Expenditures: Maintenance

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
COST CATEGORY:	Sub-component of the Cost Category Group. Costs will be rolled up to this level from the Expense Type Category.
SUB-COST CATEGORY:	Sub-component of the Cost Category (applies to Investment section only). Costs will be rolled up to this level from the Expense Type Category.
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COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes.

MAINTENANCE

Cost activities specifically directed at supporting or ensuring that equipment or facilities are available when required to support operation of the plant/facility/project.

M1 Powerhouse Maintenance Expense

Costs associated with the maintenance of equipment and facilities which **directly support** power generation.

The physical breakpoint for equipment costs within this category are defined as follows:

- Downstream of the TIV/PIV/Intake Gate (as applicable to the utility and power plant design)
- Extending to the high side of the unit transformer
- May generally be described as “within the powerhouse” to include all auxiliary systems equipment

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

Maintenance supervision/management

- 1 Maintenance supervision and engineering incurred in the supervision and direction of maintenance crews and activities.

Maintenance Inspection and Testing

- 2 Testing, checking and adjusting meters, gauges, and other equipment in the plant.
- 3 Inspection of Station Metering and Instrumentation
- 4 Load Test of circuits
- 5 Inspection and testing of lightening arrestors, circuit breakers, switches and grounds.
- 6 Transformer and circuit breaker oil analysis and oil replacement—sampling, testing, changing, purifying and replenishing insulating oils.
- 7 Gas circuit breaker – gas analysis – sampling, testing, changing and replenishing.
- 8 Inspection of Water Purification systems, Sumps, Pressurized vessels
- 9 Chemical cleaners and solvents used in maintenance activities, including appropriate storage, handling and waste disposal.
- 10 Handling and storage of bulk lubricating oils and appropriate waste disposal
- 11 Inspection (routine) and cleaning of manholes, conduit, network, transformer and other vaults
- 12 Inspection and testing of prime operating equipment, turbines, generators, exciters, transformers, breakers and all ancillary equipment such as compressors and associated systems.
- 13 Maintenance and repair of all grounds including permanent grounding systems and temporary grounds
- 14 Maintenance of cranes, ladders, hangers, engineered securing points etc; to include Fall Protection/Restraint issues

Maintenance Inspection and Testing cont'd

- 15 Control and upkeep of equipment maintenance repair/refurbishment or replacement records (either CMMS or hard copy). Includes maintaining supporting equipment manuals and other records.
- 16 Cleaning Electric Plant equipment

Maintenance Planning and Execution

- 17 Work Protection (safety-lockout) specially associated with Maintenance activities
- 18 All activities associated with scheduling maintenance outages, including communications with others outside the plant/facility/project
- 19 Maintenance of prime operating equipment, turbines, generators, exciters, transformers, breakers and all ancillary equipment such as compressors and associated systems
- 20 Maintenance of Station Metering and Instrumentation and associated materials and supplies
- 21 Repacking glands
- 22 Switching specifically associated with maintenance activities
- 23 Maintenance of Back-up/Stand-by Diesel and associated materials and supplies
- 24 Maintenance of Station Service
- 25 Maintenance of Station Battery Banks
- 26 Maintenance of Microwave System, Radio and Telephones as appropriate to the utility including the installation of new equipment (examples below)
 - a) Install various data communication circuits
 - b) Fiber optic cable installation
 - c) Response to and correction of alarms
 - d) Engineering for telephone switch upgrade
 - e) Telephone switch/PAX upgrades
 - f) Replacement of reservoir telemetry
- 27 Transportation expenses associated with crews attending specifically to maintenance activities

Maintenance Materials and Supplies not included in the above categories:

- 28 Fuel handling (diesel and other) for Station operation
- 29 Circulation water purification supplies
- 30 General maintenance supplies such as tools, gaskets, packing, etc.

Maintenance Materials and Supplies not included in the above categories:

- 31 Lubricants, packing and other supplies used to maintain equipment
- 32 Motor and generator brushes and other associated materials

MAINTENANCE

M2 Non-Powerhouse Maintenance Expense

Costs associated with the maintenance of equipment and facilities which **do not directly support** power generation.

The physical breakpoint for equipment costs within this category are defined as follows:

- Upstream of the TIV/PIV/Intake Gate (as applicable to the utility and power plant design)
- Includes all Dam, Gate, Spillway and Reservoir issues as well as metering, gauges and booms
- Includes all lands, grounds, support buildings, roads and bridges

EXPENSE TYPE CATEGORIES:

LABOR

- All regular, permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff-longer term contract or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc.
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items and activities to be included in this category are:

- 1 Maintenance supervision and engineering cost of labor and expenses, which are incurred in the general supervision and direction of maintenance activities not directly associated with power production
- 2 Maintaining and repairing bridges, roadways and trails which are used for utility maintenance/operations purposes

- 3 Snow removal from roads,, bridges and structures
- 4 Maintenance of buildings, facilities and grounds such as cutting the grass and other vegetation management, as well as sewers, drains, water systems, culverts, and associated components (i.e. rings, covers etc), and misc. repairs. This also includes all materials, supplies and tools associated with the work.
- 5 Janitorial Services
- 6 Tree trimming and vegetation management to include these issues in and around the dam structure
- 7 Maintenance of publicly owned roads and trails within the project
- 8 Cleaning of the plant/facility/project or equipment when not incidental to operations
- 9 Work Protection (safety-lockout) specially associated with Maintenance activities
- 10 Debris Management - Removing debris and ice from trash racks, reservoirs and waterways. Includes shoreline work, which is intended to minimize debris entering the reservoir/waterway.
- 11 Installation and maintenance of booms, anchors, chains etc for debris, ice of safety purposes
- 12 Ice and log jam work
- 13 Maintenance of all gates, valves, conduits, spillways, sluice gates and outlet works including canals, pipelines and waterways.
- 14 Maintenance of the Dam, including weirs, instruments and other monitoring equipment. Includes maintenance activities undertaken for Dam Safety purposes.
- 15 Maintenance of Security Equipment as appropriate
- 16 All costs associated with maintaining utility owned town sites
- 17 Fuel for heating not associated with the Powerhouse or Dam facilities.
- 18 Insect/varmint control and associated materials
- 19 Any cost for potable water for fire protection or general use

5.3.3 Annual O & M Expenditures: Environment and Regulatory

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
COST CATEGORY:	Sub-component of the Cost Category Group. Costs will be rolled up to this level from the Expense Type Category.
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COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes

ENVIRONMENT AND REGULATORY

Issues pertaining to the maintenance and operation of equipment or facilities that are for the specific purpose of maintaining environmental and regulatory compliance. This category will include all costs associated with issues related to the environment as it is impacted by or supports hydroelectric operations. It also includes all costs covering regulatory licensing, compliance, submissions and penalties.

ER1 Fish and Wildlife

Costs which fall within the general definition for Environment and Regulatory, and are specifically associated with fish and wildlife or related issues as they are impacted by hydroelectric operations.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 Direct supervision costs for labor activities supporting fish and wildlife activities in and around the plant/facility/project
- 2 Materials, supplies and expense issues associated with fish and wildlife activities in and around the plant/facility/project
- 3 Monitoring and reporting against fish/wildlife activities
- 4 Costs/issues associated with maintaining or enhancing forest, aquatic, or reservoir shoreline habitat, and which are directly attributable to hydroelectric supply including:
 - a) Wetland conservation and management,
 - b) Shoreline planting or grooming, – for habitat or erosion
 - c) Generic term conservation may be used to cover these issues in some utilities.
- 5 Operation of fish hatcheries/net pen facilities – cost of feed, material, labor, transportation, including the distribution of the fish
- 6 Operation and maintenance of spawning beds
- 7 Cost to operate or maintain bypass facilities, including fish screens, specific to fish passage
- 8 Monitoring dissolved gases and water temperature
- 9 Periodic payments for riparian rights
- 10 Communications, relationship issues, meetings etc with fish and wildlife staff or other governmental agencies.
- 11 All costs associated with Fish and Wildlife stranding and rescue
- 12 All costs associated with Fish and Wildlife assessment activities mandated by regulatory requirement.

ENVIRONMENT AND REGULATORY

ER2 Recreation

Costs which fall within the general definition for Environment and Regulatory, and which are specifically associated with recreational facilities and issues around the reservoirs or plants/facilities/project. These costs will be specifically associated with the impacts of hydroelectric generation.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 Direct supervision costs for labor activities supporting recreational facilities, or activities in and around the plant/facility/project
- 2 Materials, supplies and expense issues associated with recreational facilities, or activities in and around the plant/facility/project
- 3 Maintenance of publicly owned parks, roads and trails outside the project, as they are associated with issues for hydroelectric generation.
- 4 Communications, relationship issues, meetings etc with governmental agencies.
- 5 Cost associated with the operation and maintenance of boat ramps, docks or marinas.
- 6 Cost associated with the operation of visitor centers. The amount included should be net of revenue generated.

ENVIRONMENT AND REGULATORY

ER3 Cultural

Costs which fall within the general definition for Environment and Regulatory and are specifically associated with cultural, first nations/aboriginal, historical resources, archaeological resources or related issues as they are impacted by hydroelectric operations.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 Direct supervision costs for labor activities supporting cultural activities in and around the plant/facility/project
- 2 Materials, supplies and expense issues associated with cultural activities in and around the plant/facility/project
- 3 Direct costs associated with draw down of the reservoir for cultural review or monitoring (First Nations)
- 4 Communications, relationship issues, meetings etc with governmental agencies, First Nations groups.
- 5 All costs associated with the operation or maintenance of historical resources.
- 6 All costs associated with the operation of archaeological resources

ENVIRONMENT AND REGULATORY

ER4 Other

This sub-category will include all costs that fall within the general definition for Environmental and Regulatory but are not readily classified ER1, ER2 or ER3. These costs will be specifically associated with the impacts of hydroelectric generation.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 Direct supervision costs for labor activities supporting activities in and around the plant/facility/project, which cannot be easily classified into the above three categories
- 2 Materials, supplies and expense issues associated with environmental and regulatory activities in and around the plant/facility/project, which cannot be easily classified into the above three categories.
- 3 This account will include all direct plant/facility/project costs associated with regulatory compliance, including:
 - a) Labor and expenses associated with formal cases before regulatory commissions, or other regulatory bodies.
 - b) All costs associated with monitoring and compliance including such issues as:
 - i. Monitoring pollutants
 - ii. Landfills/Disposal facilities

ER4 – Other cont'd

This includes all costs associated or flowing from the water licensing approval process that must be actioned on an ongoing basis.

- c) Permits, such as discharge permits and stand alone licenses (not water licenses)
 - d) All fines or costs associated with non-compliance issues under regulation.
- Note: Costs associated with Licensing and Re-licensing are considered Investments and should be directed to either Investment 1 or Investment 2 as appropriate to the member utility.
 - Note: Only costs to maintain and manage ongoing issues under the licenses should be included in the ER expense Category.
- 4 Costs associated with environmental stewardship such as demonstrations, exhibits, lectures, and other programs designed to instruct the public in the safe, economical, environmentally friendly and efficient use of energy.

5.3.4 Annual O & M Expenditures: Land and Water Rentals/fees

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
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COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes

LAND AND WATER RENTALS/FEES

- All costs associated with utilizing water as a fuel, within hydroelectric operations.
- All costs/fees associated with land utilization as it relates specifically to hydroelectric operations.
- Cost of water purchased from others including water tolls paid reservoir companies
- Periodic payments for licenses, permits, or fees to any governmental agency, for water rights or payment, based on the use of water.

LW1 Land Rentals/Fees

- All costs/fees associated with land utilization as it relates specifically to hydroelectric operations.
- Periodic payments for licenses, permits, or fees to any governmental agency for the use of land

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 All land use charges such as rent, property taxes, community taxes, and special annual payments to municipalities, school boards or other local government agencies.
- 2 Utilizing FERC definitions – items previously categorized as account 540 – Rent. This category will also include any annual FERC fees or adjustments as may be levied.

LAND AND WATER RENTALS/FEES

LW 2 Water Rentals/Fees

- All costs/fees associated with using water as a fuel within hydroelectric operations
- Cost of water purchased from others including water tools paid to reservoir companies
- Periodic payments for licenses, permits or fees to any government agency for water rights or payments based on the use of water

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- 1 All costs associated with the utilization of water as a fuel.
- 2 May include periodic payments for headwater benefits or for detriments to others.
- 3 Costs that may be categorized as ‘water for power’.
- 4 All payments made to other entities for water utilized for fish passage or habitat improvement downstream of the plant/facility/project- – note HPC policy – that this is not to include lost opportunity costs.

5.3.5 Annual O & M Expenditures: Administration

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
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SUB-COST CATEGORY:	Sub-component of the Cost Category (applies to Investment section only). Costs will be rolled up to this level from the Expense Type Category.
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COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes

ADMINISTRATION

This section captures administrative costs directed at supporting operations in HBU. These costs are further broken into two categories:

- A1 - costs driven by plant activities, and
- A2 - costs driven by HBU activities

For reporting purposes, the A1 and A2 differentiation should be done using attribution rules rather than strict reliance on Company's treatment of the costs as "directly charged" (A1) or "allocated costs" (A2). The problem with the latter definitions used previously was that they relied strictly on quoted words and, in some instances, it led to inconsistencies in reporting since various companies applied different cost treatments. For instance, a company that did not "charge" or did not "allocate" costs of administrative services provided from a corporate labor pool was this way directed not to report such costs at all. To avoid such problems, the definitions are now shifted to attribution rules. In other words, if according to the rules below, certain cost belongs to A1 (or A2) category, it should be reported as such regardless of how it is treated by the company internally.

The check lists of A1/ A2 cost items and activities remain unchanged. For convenience, both lists are now merged into one. The following are the attribution rules to be applied:

A1 Administration – Direct

The cost belongs to A1 category if it is driven by plant activities (i.e. cost is attributable to plant activities). Typically, A1 costs are directly dependent on the volume of business at the plant. Prime examples of A1 costs can be a) HR staff that processes records of plant employees, investigates safety incidents etc. or b) finance staff preparing business plan submissions or c) asset management staff preparing an investment plan.

A2 Administration – Indirect

The cost belongs to A2 category if it is driven by Hydro Business Unit activities (i.e. cost is attributable to HBU activities). Usually, the A2 costs are considered fixed i.e. are less (if any) dependent on the volume of business at the plants. Prime examples of A2 costs can be a) HR staff dealing with Hydro Business Unit policies, employment standards, generic safety issues or b) finance staff that integrates Hydro Business Unit plans or c) asset management/ finance staff that prepares business case analyses guidelines.

Principles & Guidelines

1. All administrative costs that are related to operating plants or managing Hydro Business Unit should be reported
2. Costs that are driven by corporate or parent company activities (i.e. above HBU level) are not to be reported
3. Reported admin costs should be categorized as A1 or A2 based on the cost drivers.
4. Accuracy of reporting should be commensurate with the cost.

It is important to note that it is the cost driver (type of work) that determines whether the cost belongs to A1 or A2 category. Work center location, position on the organizational chart or the way costs are reported internally are often very useful in assigning costs to A1/ A2 categories. However, it should be remembered that in case of differences, it is the cost driver that ultimately governs.

Apportioning of costs (cost allocation) should be done when administrative services are provided to a group of plants from staff that is physically stationed at a single location or another plant.

If case administrative service provider is located outside of Hydro Business Unit, for example in Corporate or external company, such costs must also be reported. Examples include organizations where HR/ finance/ accounting groups organizationally belong to a corporate unit (outside Hydro Business Unit), yet, perform plant work (A1) and/or Hydro Business Unit work (A2).

There are organizations that report administrative costs as burden on other labor (for e.g. as burden on operations & maintenance). In such cases, it is necessary to unburden the “other labor” i.e. accordingly reduce operations and maintenance costs, and shift these costs to A1/ A2 categories.

It is also possible that some or all of the administrative costs are absorbed at the corporate level without passing them down to production centers. It will usually take place when the organization does not consider production centers as profit or cost centers. In situations like this, it is necessary to estimate these costs and report accordingly. Such estimates should be based on sound accounting principles and the methods should be verified not less frequently than once every 2 years (Consult Database Management Subcommittee if needed).

If corporate costs are directly associated with a specific task/project or assignment at a facility, and for some reasons, cannot be appropriately classified against Operations, Maintenance, Environment & Regulatory or Lands and Water Rental/Fees, then they should be reported in A2 (Database Management Subcommittee should be consulted on the appropriateness of such reporting).

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

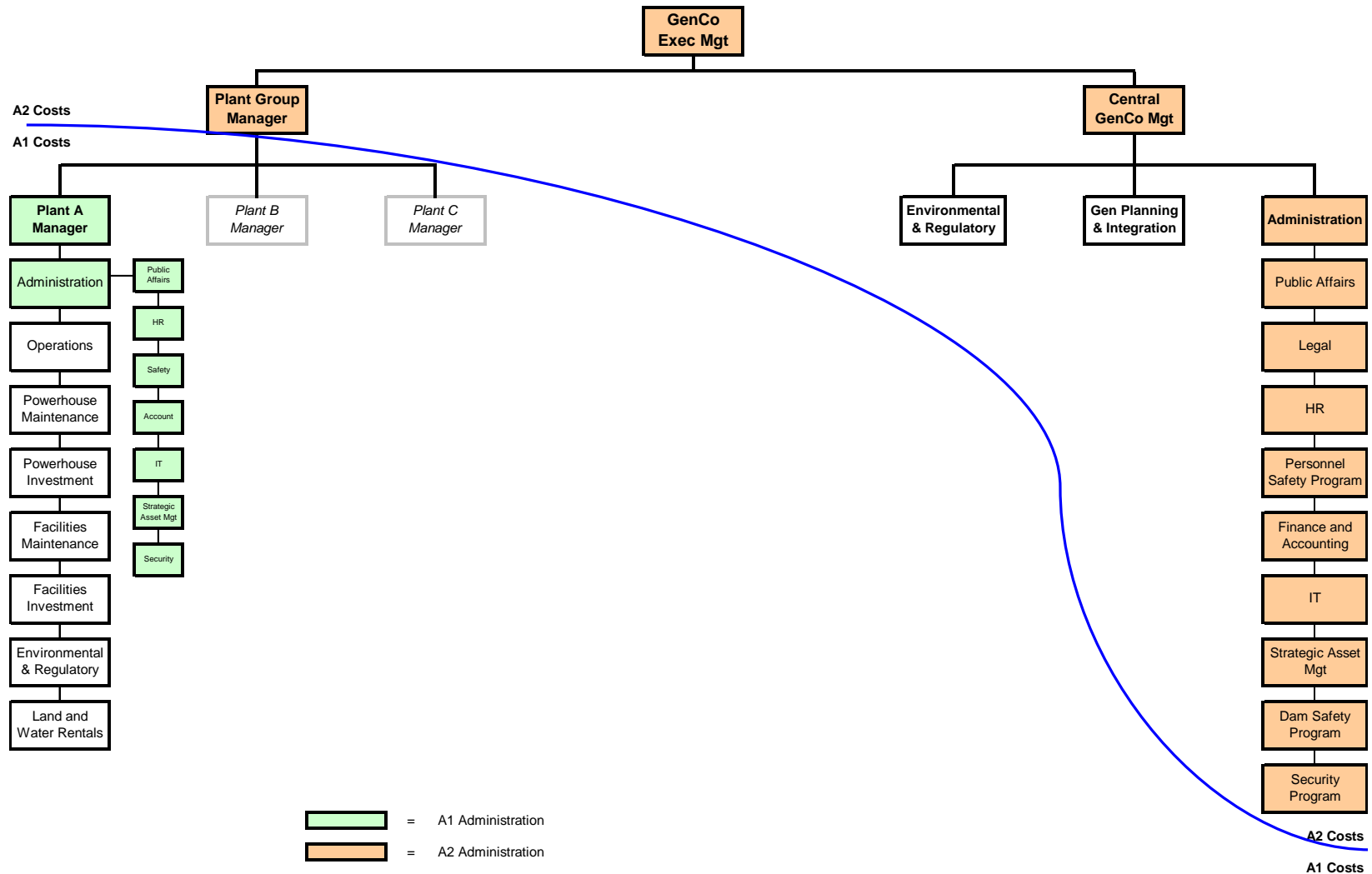
Cost items to be included in this category are:

- 1 Accounting/ Finance/ Asset Management/ Planning / Business Services
- 2 Human Resources/ Training & Development/ Health and Safety including local management of the Health and Safety Program such as:
 - a) Monitoring work, projects, general safety compliance
 - b) First aid supplies
 - c) Safety equipment
 - d) Decontamination activities and reporting.
 - e) Local safety training including program development and instruction
 - f) Industrial Hygiene issues such as asbestos management, confined space, WHMIS (Workplace Hazardous Materials Information System).
- 3 Security costs which are not incidental to normal work activities, including:
 - a) Guarding and patrolling plant and yard
 - b) Operation and Maintenance of Security Equipment
 - c) Cost of materials and equipment
- 4 Public Relations and Community involvement including such items as:
 - a) Road closures
 - b) Public announcements/advertisements in paper or other media
 - c) Community and local government liaison (includes Public and Stakeholder meetings)
- 5 Purchasing/ Supply / Warehousing (to be charged to A1 or A2 according to the attribution rules outlined above)

- 6 Legal (costs associated with routine day-to-day operation of the plant will be charged to A2. Where there are special issues, such as land claims, settlement work on water or property rights etc, these may be directed to the appropriate Cost Category as is determined by the nature of the work (example 1: large maintenance contract with heavy legal costs may be directed to maintenance; example 2: large environment and regulatory costs for fish or First Nations issues may be directed to ER1 or ER3).
- 7 Management/ Supervision (to be charged to A1 or A2 according to the attribution rules outlined above. In addition, costs that are not easily associated with any of the other cost categories can be charged to A2)
- 8 General clerical work
- 9 Information technology and communication services including computers, data transfer, telephone, radio, microwave communications, network support, equipment repairs and rental fees. This category does not include major maintenance or installation of equipment which should be charged to M1 or M2.
- 10 Office supplies and expenses, including printing, postage, stationary etc.
- 11 Transportation expenses not directly associated with other cost categories, including meals and incidental expenses
- 12 Workers Compensation
- 13 Insurance costs (will be charged to A1 according to appropriate risk factors. Consult Database Management committee if any issues arise)
- 14 Costs associated with maintaining utility owned Town-sites which are not easily classified to Operations, Maintenance, or Environment and Regulatory.

Following this page is a single page graphic, which depicts a generic Hydro Business Unit organizational structure and a sample of how Administration costs should be apportioned in the HPC database.

General Guidance on Administration Costs



5.3.6 Annual Investment Expenditures

Note: the following color legend applies to this section:

COST CATEGORY GROUPING:	Highest cost level reporting level (e.g. Operations, Maintenance etc)
COST CATEGORY:	Sub-component of the Cost Category Group. Costs will be rolled up to this level from the Expense Type Category.
SUB-COST CATEGORY:	Sub-component of the Cost Category (applies to Investment section only). Costs will be rolled up to this level from the Expense Type Category.
EXPENSE TYPE CATEGORY:	The level at which cost data is input. Sub-component of the Cost Category for Annual Operating Costs or Sub-Cost Category for Investment costs.
COST ITEM/ACTIVITIES:	Reference line items intended to provide guidance for data entry purposes

INVESTMENT

Those costs to the plant/facility/project, which by their nature, represent significant investments in the upgrade, replacement or refurbishment of equipment or infrastructure. (Example: generator rewinds).

As the accounting practices of member utilities vary both by type of work, size of project, and by year, the intent is to remove such large items from other HPC cost categories in support of improved comparisons and benchmarking.

I1 Major Expense: Non-Recurring

All non-recurring expense costs should be moved to I1 from other Cost Categories. This includes all costs charged to these projects in the current year. The HPC wishes to ensure that costs directed to the various cost categories are for regular, routine or ongoing items. This will allow more appropriate benchmarking of these important categories.

No material dollar limit has been placed on individual activities at this time. This matter is left to the judgment of the participating member utility.

*Non-recurring Maintenance may also be described as maintenance occurring on an extended cycle such as greater than 7 years.

* The rationale for separating these costs from O, M, ER, and A is that they may be quite significant and be treated differently from company to company and from year to year. One company will call a generator rewind capital and another will call it O & M. The hope is that each company's O, M, ER, & A costs will be more comparable in that they reflect the recurring cost of producing electricity at each member facility.

INVESTMENT SUB-CATEGORIES

Powerhouse

Costs included in this sub-category will reflect non-recurring expense costs, which are directed to the improvement, upgrade and refurbishment of the powerhouse.

Dam/Reservoir/General

Costs included in this sub-category will reflect non-recurring expense costs, which are directed to the improvement, upgrade and refurbishment of the dam/reservoir/general.

Environment and Regulatory

Costs included in this sub-category will reflect non-recurring expense costs which are directed to the improvement, upgrade and refurbishment of equipment, structures or land in support of environmental and regulatory issues.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees etc

COST ITEMS/ACTIVITIES:

Member utilities are provided a level of discretion in classification of these costs but the spirit and intent is as follows:

- Non- Capitalized items
- Extra-ordinary expense items such as:

- Generator work
 - Rewinds
 - Re-wedge
- Turbine work
 - Runners
- Transformers
- Circuit Breakers
- Governors
- Civil Structures
- Gates

I2 & I3 Capital

This section captures capital investment costs such as costs related to Land, Structures, Improvements, and Equipment. For US Investor Owned Utilities, capital costs are usually those that are reported under FERC 300 series accounts. This includes all direct costs, allocations, overheads, and capitalized interest. If you did a roll-forward of your company's Hydro Property, plant and equipment accounts from the previous year and balance to the current year-end balance, I2 would equal your current year additions.

Note: this section applies only to plants already in operation and to plants under construction.

In general, capital costs are well defined within generating utilities. Should any questions arise in regards to what is and what is not a capital cost, please bring it up to the attention of the Hydro Productivity Committee for resolution. Capital costs are further broken into two categories:

I2 – Sustaining

These are capital costs encountered in maintaining existing assets in good running condition. They usually include replacements and may or may not include technological improvements that extend equipment useful life. However I2 costs do not include costs related to plant capability increase. Such costs should be reported in I3 (below).

I3 – Improvements & Additions to Plant Capability

Capital costs intended **to increase** unit or plant generating capability.

Examples of I2 costs include:

- Capital (major) turbine work
- Capital (major) generator work
- Licensing and re-licensing fees (not ongoing yearly costs)
- Runner replacement (it is acceptable to include 100% of costs associated with small/immaterial MW capacity increase)

Examples of I3 costs include:

- Construction of new units
- Construction of a new water ways (e.g. tunnel) to increase plant generating capability
- Other water way works (e.g. changing path of a river) that materially increases plant production
- Major MW capacity increases

Notes:

1. Capital costs should be reported only for plants already in operation and not for plants under construction.
2. Regulatory costs can be either I2 or I3 depending on whether they maintain the status quo or introduce a new standard of performance.
3. In general, a 4% materiality level is recommended; if generating capability increases by less than 4%, the investment should be classified entirely as I2; if the change is 4% or greater, it should be classified entirely as I3.
4. When it is difficult to distinguish between I2 and I3, consider the primary goal of the capital expenditure: Sustainability (I2) or Improvement & Addition to plant capability (I3). In some situations, it may be acceptable to split the costs between I2 and I3. Please contact HPC for any further clarification/advice.

INVESTMENT SUB-CATEGORIES

Powerhouse

Costs included in this sub-category will reflect capital costs which are directed to the refurbishment (I2) and/or improvement (I3) of the powerhouse.

Dam/Reservoir/General

Costs included in this sub-category will reflect capital costs which are directed to the refurbishment (I2) and/or improvement (I3) of the dam/powerhouse/general.

Environment and Regulatory

Costs included in this sub-category will reflect capital costs which are directed to the refurbishment (I2) and/or improvement (I3) of equipment or structures in support of environmental and regulatory issues.

EXPENSE TYPE CATEGORIES:

LABOR

- All Regular, Permanent Staff
- All temporary staff, hiring hall, part-time or casual staff, (this will include long term assigned staff or longer term contract staff or where the individual looks and acts like permanent labor).
- All appropriate loadings, such as benefits, concessions, payroll taxes etc
- Overtime

CONTRACTS

- All contract labor
- All contracts without labor
- Consultants

OTHER

- Employee related expenses
- Materials
- Fees, etc.

COST ITEMS/ACTIVITIES:

Cost items to be included in this category are:

- Your Company's Capital Program
 - The following are several items which have been identified as appropriate to include in this category if charged to capital projects.
- 1 Station one lines as part of capital investment work
 - 2 Isolation schematics as part of capital investment work
 - 3 Licensing and Re-licensing fees (not ongoing costs)

5.3.7 Capital Asset Information

In addition to capturing annual capital expenditures (both I2 and I3), the HPC seeks to collect information on the current asset values of the plants being submitted to the database. This information can then be used to provide an approximation of the plant's accounting "age", or remaining life, and combined with the annual capital expenditures can illustrate the degree to which a utility is reinvesting in its assets/plants. There are two input parameters for capital asset information, **Fixed Asset Value** and **Accumulated Depreciation**, and detailed definitions of each can be found below.

FIXED ASSET VALUE

- The current, long-term value of property that a company owns and uses in the production of its income and is not expected to be converted into cash in the current or upcoming accounting period (fixed assets are sometimes collectively referred to as "Plan").
- The figure reported should reflect the total fixed asset value at the end of the data submission year and should *only* include the value of those assets for which annual O&M and capital expenditures are reported (i.e., do not include the value of assets associated specifically with navigation, transmission, and other functions that are not benchmarked).

ACCUMULATED DEPRECIATION

- The total amount of depreciation, over the years, that has been recorded for a fixed asset since its date of acquisition or entry into service.
- The figure reported should reflect the total accumulated depreciation of the asset at the end of the data submission year and should *only* include the accumulated depreciation of those assets for which annual O&M and capital expenditures are reported (i.e., do not include the accumulated depreciation of assets associated specifically with navigation, transmission, and other functions that are not benchmarked).