



# FINANCIAL SERVICES

## Guidelines for Accounting for Smart Meter Costs

To:

Issued: February 2, 2009  
Last Update: December 18, 2009  
From: J. Nagy (ext. 5587)

The following guideline is provided to ensure that London Hydro is compliant with OEB accounting directives related to the installation and maintenance of smart meters and associated communication equipment, hardware and software.

Direction is provided for the recording of costs for both the capital purchase and installation of the smart meters, communication, system integration etc. and for incremental operating and maintenance cost such as training, customer communication, etc.

Any questions related to this guideline or activity not covered in the attached should be directed to Judith Nagy (ext. 5587) or Mike Chase (ext. 5750).

Updates to this guideline will be provided as required.

### **SUMMARY OF CAPITAL PROJECT COMPONENTS AND CHARGE NUMBERS**

BU	Work Order	Description
<b>Individual Revenue Meters (Smart Meters)</b>		
2793	2793600	Purchase and installation of smart meters
2793	2793601	Repair/replace broken meter base
2793	2793760	Meter installation tools
<b>Communication Equipment</b>		
2793	2793330	Purchase and installation of all components of communication equipment
<b>Master Station and Integration</b>		
2793	2793750	Computer software
2793	2793760	Computer hardware
<b>Program Management –</b>		
2793	2793100	Project Management

Use the Chart of Accounts 2000 series Object list when coding the object account within the above work orders.

Object listing is available at Public\Finance Info\Chart of Accounts\Chart of Accounts Information.xls.

## **CAPITAL PROJECT COMPONENTS - DETAILED DESCRIPTIONS**

### **Individual Revenue Meters (Smart Meters)**

Smart meter units installed at customers' premises outfitted with a FlexNet radio module for communicating with the closest transceiver. Anticipated deployment in 2009 is 81,000 units at \$175 average installation cost.

#### **Purchase and installation of smart meters - Work order: 2793600**

##### ***Includes:***

- Direct labour and associated costs (such as trucking) related to the installation of a new smart meter (i.e. either replacing an old meter or installing one at a new location)

NOTE: Direct labour is defined as either London Hydro personnel or contractor service used to complete the meter installation on site. Therefore, general supervision is NOT considered to be direct labour. If incremental supervision costs are incurred see the Incremental OM&A expense section of this document for proper cost distribution.

#### **Repair/replace broken meter base (customer owned equipment) - Work order: 2793601**

##### ***Includes:***

- Direct labour and associated costs (such as trucking) for either London Hydro personnel or contractor service used for on site repair/replacement of broken meter base
- Materials and parts related to the above

NOTE: If an external contractor performs the repair or replacement, invoices must provide a breakdown of cost components (labour, materials, parts, etc.), as well as the number of repairs/replacement, and location of the repair. When processing the invoice, the contractor labour and material costs must be shown separately. London Hydro must prepare statistics for the repairs/replacements and location in order to complete cost allocation.

IMPORTANT TO NOTE: the Ontario Energy Board will review, approve, and/or disallow any expenses not meeting their guidelines. Any disallowed costs will be expensed to the business area where the expenses were incurred.

#### **Meter installation tools - Work order: 2793760**

##### ***Includes:***

- Fieldworker SmartPoint handheld installation tool purchase.

### **Communication Equipment**

Components: 9 Transceivers, FlexNet wireless LAN, Backhaul WAN, including IBM consulting

All components accumulated in this one work order. Include direct labour and associated costs, collectors, repeaters, radio license, activation fees, and installation costs. All Purchase Orders and Invoices must note which component is being purchased. Components will be separated on a reconciliation statement prepared by Finance.

#### **FlexNet Wireless LAN (Local Area Network) - Work order: 2793330**

- Wireless communication between the individual revenue meters and the FlexNet transceivers
- May include radio license

**FlexNet Transceivers (9) - Work order: 2793330**

- Each 9 transceivers include antenna, tower, and radio transmitter/receiver.

**Backhaul WAN (Wide Area Network) - Work order: 2793330**

- Interconnects the FlexNet Master Station with the 9 FlexNet Transceiver sites.
- May include activation fees

**Master Station and Integration**

Components: Hardware, Software, Interface software development and testing.

A centralized computer system (at 111 Horton Street) that provides a user interface and will receive and process meter readings from all smart meters connected to the system. It is interfaced to both the provincial MDM/R and SAP CIS.

**Computer Software - Work order: 2793750**

***Includes:***

- Master Station (Sensus RNI) software and installation, Interface software development and testing between the Sensus RNI master station and London Hydro's corporate SAP CIS system, the provincial MDM/R, and other London Hydro operational computer systems.

**Computer Hardware - Work order: 2793760**

***Includes:***

- Computer hardware including blade chassis and computing blades.

**Program Management**

IBM consultants contracted for their expertise in the smart meter system field: AMI Consultant, AMI Project Advisor, and Solution Architect.

These costs will be proportionately distributed among the major components once the smart meter system installation is completed.

**Project Management - Work order: 2793100**

***Includes:***

- Consulting for the smart meter project management, strategic planning, project status reporting

## **INCREMENTAL OM&A COST**

The Ontario Energy Board is clear that ONLY INCREMENTAL expenses directly related to the operating or maintenance of smart meters will qualify for special smart meter accounting. All other operating and maintenance costs should be charged to the regular business unit and subledger.

- OEB requires “**INCREMENTAL**” operating, maintenance and administrative expenses to be captured in a separate regulatory variance account for future disposition through the rate setting process.
- The OEB applies an extremely restrictive interpretation to the term “incremental” as was observed during the transitional cost recording and recovery process. To assist in identifying incremental costs, the following guidelines should be applied:
  - Operating and maintenance labour for an employee is NOT incremental if the employee was on staff before this initiative and has simply been reassigned from his/her normal job function to work on this project
  - Temporary staff hired to work exclusively on this project, or hired to backfill for fulltime staff working on this project are incremental costs, but it will be extremely difficult to justify this claim if these employees remain employed at London Hydro after the project is completed.
  - All non labour costs must be new expenditures that can be easily identified and quantified and exclusively related to the smart meter start-up phase of the project.
  - Incremental operating costs which are considered ongoing expenses after the installation is completed, and eventually will become regular operating activities, should be included here
  - Incremental supervision overtime, if any, should be charged to home business unit

## **SUMMARY OF INCREMENTAL OM&A ACTIVITIES AND CHARGE ACCOUNTS**

BU	Work Order	Description
91	8910011	Smart Meter Operating expenses
91	8910012	Smart Meter Maintenance expenses

Use the Chart of Accounts 7000 and 8000 series Object list when coding the object account within the above work orders.

Object listing is available at Public\Finance Info\Chart of Accounts\Chart of Accounts Information.xls.

## **INCREMENTAL OM&A DETAILED DESCRIPTIONS**

### **Smart Meter Operating and Maintenance Expenses – Electric Meter Department**

The separation of incremental operating and maintenance costs should follow the same definitions currently used by the electric meter department.

Use the Chart of Accounts 7000 series Object list when coding to the object account

#### ***Includes:***

- incremental labour and associated costs
- incremental contracted services
- incremental operating administration costs
- incremental meter reverification costs and similar expenses should be charged to maintenance

## **FlexNet Technology ongoing Licensing Fees**

### ***Includes:***

- incremental Licensing Fees based on the number of revenue meters and transceivers in active service

## **Software Maintenance**

### ***Includes:***

- incremental software maintenance support expense (requires periodical renewal)
- initial software license may be included in the software purchase price and capitalized

## **Hardware Maintenance**

### ***Includes:***

- incremental hardware maintenance and server support (requires periodical renewal)

## **Customer Communication Expenses**

### ***Includes:***

- incremental customer communication and education, project communication costs

## **Program Management Costs**

### ***Includes:***

- incremental program management costs ongoing in nature, procurement, etc.

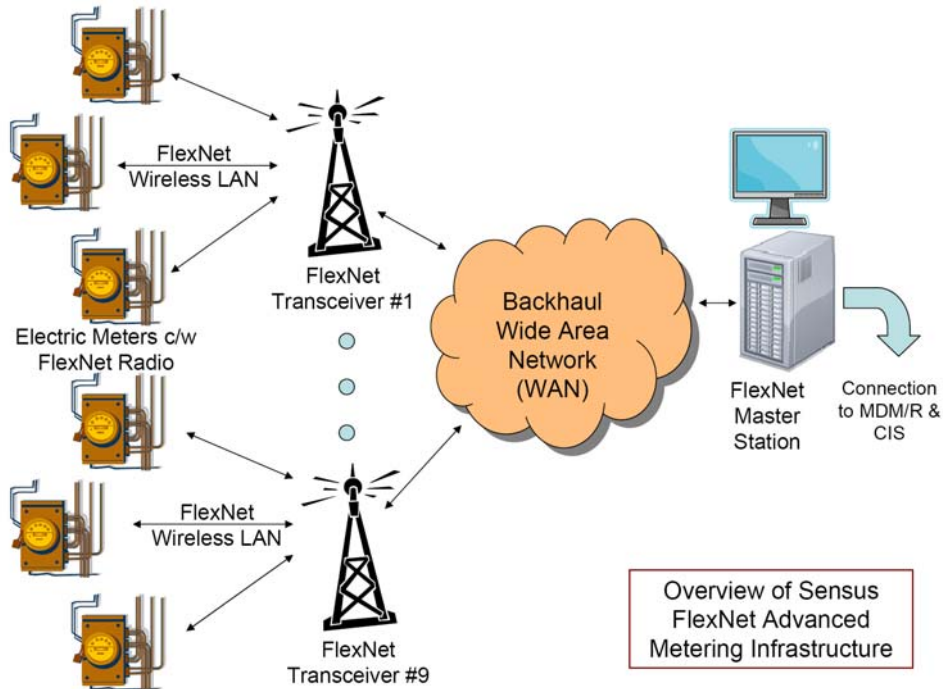
## **Change Management including Training Expenses**

### ***Includes:***

- incremental consulting or training facilitator costs
- incremental course fees attended by London Hydro employees
- incremental travel, accommodation, meal expenses
- incremental staff attending training should charge their time to this charge account

NOTE: Non-incremental London Hydro staff attending training should NOT charge time outside of their home business unit.

## Definitions



- AMCC** Advanced Metering Control Computer that is used to retrieve or receive and temporarily store meter reads before or as they are being transmitted to the MDM/R. The information stored in the AMCC is available to log maintenance and transmission faults and issue reports on the overall health of the AMI to the distributor.
- AMCD** Advanced Metering Communication Device that is housed either under the meter's glass or outside the meter. It transmits meter reads from the meter directly or indirectly to the AMCC.
- AMI** Advanced Metering Infrastructure. It includes the meter, AMCD, LAN, AMRC, AMCC, WAN and related hardware, software and connectivity required for a fully functioning system that complies with the AMI Functional Specification. With some technologies, an AMI does not include AMRCs. An AMI does not include the MDM/R.
- AMRC** Advanced Metering Regional Collector that collects meter reads over the LAN from the AMCD and transmits these meter reads to the AMCC.
- LAN** Local Area Network is the communication network that transmits meter reads from the AMCD to the AMRC.
- MDM/R** The Meter Data Management and meter data Repository functions within which meter reads are processed to produce rate-ready data and are stored for future use.
- WAN** Wide Area Network is the communication network that transmits meter reads from the AMRC to the AMCC or, in some systems from the AMCD directly to the AMCC, and from the AMCC to the MDM/R.

## LONDON HYDRO CAPITAL EXPENDITURE ACCOUNTS

**FOR USE WITH CAPITAL WORK ORDERS ONLY**

Object	Level of Detail (LOD)					Account Description	How to Use
	3	4	5	6	7		
2000		4	<b>Fixed Assets - CWIP</b>				
2100			5	<b>Labour Expenses</b>			
2101				6	Regular	<b>ALL LABOUR COSTS WILL BE CHARGED TO THE WORK ORDER THROUGH THE PAYROLL SYSTEM ONLY</b>	
2102				7	Regular - Full Time		
2103				7	Regular - Part Time		
2104				6	Planned Overtime		
2105				6	Unplanned Overtime		
2106				6	Shift Pay		
2110				6	Benefit Overhead Allocation		
2118				6	Lieu Time		
2150			5	<b>Asset Acquisition</b>			
2151				6	Asset Acquisition	<b>USED WHEN ASSET IS ACQUIRED AS OPPOSED TO BEING CONSTRUCTED</b>	
2152				6	Hardware		
2153				6	Software		
2200			5	<b>Purchased Services</b>			
2201				6	Contractor Services	<b>ALL SERVICES PURCHASED RELATED TO CAPITAL PROJECTS SHOULD BE CHARGED WITHIN THIS CATEGORY</b>	
2202				6	Inspection Services		
2203				6	Site Excavation Services		
2204				6	Disposal Services		
2205				6	Equipment & Vehicle Rentals		
2206				6	Consulting Services		
2300			5	<b>Materials and Supplies</b>			
2301				6	Switches	<b>THIS CATEGORY IS USED TO IDENTIFY THE TYPES OF PRODUCT USED IN THE CONSTRUCTION OF CAPITAL ASSETS -- THE MATERIALS CAN BE DIRECT PURCHASES OR STORES ISSUES</b>	
2302				6	Construction Materials		
2304				6	Electrical Supplies		
2305				6	Sand, Gravel, Topsoil		
2306				6	Concrete Products		
2307				6	Conductors		
2308				6	Hardware & Attachments		
2310				6	Miscellaneous Supplies		
2312				6	Poles		
2313				6	Transformers		
2314				6	Water heaters		
2315				6	Elec Meters/Metering Units		
2316				6	Street Light Supplies		
2395				6	Stores Overhead		
2400			5	<b>Internal Cost Allocations</b>			
2401				6	Transportation Hourly Rate	<b>ALL INTERNAL DEPT. ALLOCATIONS WILL BE CHARGED TO EACH WORK ORDER IN THIS AREA</b>	
2402				6	Major Equipment Hourly Rate		
2404				6	Engineering Overhead		
2450			5	<b>Capital Cost Recovery</b>			
2451				6	Capital Cost Recovery		
2499				6	CWIP - Close to Fixed Assets	for Finance use only	

## LONDON HYDRO OPERATING and MAINTENANCE EXPENSE ACCOUNTS

*FOR USE WITH OPERATING and MAINTENANCE WORK ORDERS ONLY*

Object	Level of Detail (LOD)				Account Description	How to Use
	4	5	6	7		
<b>7000</b>	<b>4</b>	<b>Operating and Maintenance Expenses</b>				
7001		5	Prior Yr. Billable Service Balance Forwards			
7002			6	Prior Year Balance Forward		<b>UNBILLED PRIOR YEAR BALANCES</b>
<b>7100</b>		<b>5</b>	<b>Labour Expenses</b>			
7101			6	Regular	<b>ALL LABOUR COSTS WILL BE CHARGED TO THE WORK ORDER THROUGH THE PAYROLL SYSTEM ONLY</b>	
7102			7	Regular - Full Time		
7103			7	Regular - Part Time		
7104			6	Planned Overtime		
7105			6	Unplanned Overtime		
7106			6	Shift Pay		
7110			6	Benefit Overhead Allocation		
7118			6	Lieu Time		
<b>7200</b>		<b>5</b>	<b>Purchased Services</b>			
7201			6	Contractor Services	<b>ALL SERVICES PURCHASED RELATED TO OPERATING &amp; MAINTENANCE ACTIVITIES SHOULD BE CHARGED WITHIN THIS CATEGORY</b>	
7202			6	Inspection Services		
7203			6	Site Excavation Services		
7204			6	Disposal Services		
7205			6	Landscaping Services		
7206			6	PCB Elimination Services		
7207			6	Major Equipment Rentals		
7208			6	Shipping Charges		
7209			6	Accident Report		
7210			6	Wholesale Metering Point Expenses		
7211			6	Technology License Fees		
<b>7300</b>		<b>5</b>	<b>Materials and Supplies</b>			
7301			6	Switches	<b>THIS CATEGORY IS USED TO IDENTIFY THE TYPES OF PRODUCT USED AS A PART OF REGULAR OPERATING ACTIVITIES -- THE MATERIALS CAN BE DIRECT PURCHASES OR STORES ISSUES</b>	
7302			6	Construction Materials		
7304			6	Electrical Supplies		
7305			6	Sand, Gravel, Topsoil & Sod		
7306			6	Concrete and Concrete Products		
7307			6	Conductors		
7308			6	Hardware, Attachments & Terminators		
7310			6	Miscellaneous Supplies		
7311			6	Traffic Supplies		
7312			6	Poles		
7313			6	Transformers		
7315			6	Meters & Metering Units		
7316			6	Street Light Supplies		
7395			6	Stores Overhead		
<b>7400</b>		<b>5</b>	<b>Internal Cost Allocations</b>			
7401			6	Transportation Hourly Rate	<b>ALL INTERNAL DEPT. ALLOCATIONS WILL BE CHARGED TO EACH WORK ORDER IN THIS AREA</b>	
7402			6	Major Equipment Hourly Rate		
7404			6	Engineering Overhead		
<b>7500</b>		<b>5</b>	<b>Cost Recoveries</b>			
7501			6	Billable Services Cost Recoveries	<b>COSTS BILLED TO 3RD PARTIES</b>	

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**LONDON HYDRO GENERAL AND ADMINISTRATIVE ACCOUNTS**

**FOR USE WITH DEPT. BUSINESS UNITS AND/OR G&A WORK ORDERS**

Object	Level of Detail (LOD)				Account Description	How to Use
	4	5	6	7		
8000	4	<b>General &amp; Administrative Expenses</b>				
8100		5	<b>Department Labour Expenses</b>			
8101			6	Regular		<b>ALL LABOUR COSTS FOR THE BUSINESS UNIT'S PERSONNEL WILL BE CHARGED TO THESE ACCOUNTS VIA THE PAYROLL SYSTEM, IRREGARDLESS OF WHETHER THE LABOUR IS DIRECTLY FOR CAPITAL PROJECTS, BILLABLE SERVICES OR OPERATING ACTIVITIES</b>
8102			7	Regular - Full Time		
8103			7	Regular - Part Time		
8104			6	Planned Overtime		
8105			6	Unplanned Overtime		
8106			6	Shift Premium		
8107			6	Standby		
8108			6	Inclement Weather		
8109			6	WSIB / WCB		
8110			6	Sick Pay		
8111			6	Vacation		
8112			7	Vacation - Full Time		
8113			7	Vacation - Part Time		
8114			6	Other Paid Absences		
8115			6	Training		
8116			6	Corporate Benefit Expense		
8117			6	Personnel Agency Labour Expenses		
8118			6	Time in Lieu		
8120			6	Severance/Early Retirement		
8121		5	<b>Labour - Other BU's</b>			
8122			6	Regular - Full Time		<b>ALL LABOUR COSTS CHARGED TO THE BUSINESS UNIT FROM PERSONNEL OF OTHER BU'S WILL BE CHARGED HERE</b>
8123			6	Regular - Part Time		
8124			6	Premium Pays		
8125		5	<b>Department Labour Cost Recoveries</b>			
8126			6	Operating Labour Cost Recoveries		<b>ALL "DIRECT" LABOUR &amp; BENEFIT COSTS INCLUDED ABOVE WILL BE CREDITED HERE WHEN APPLIED TO THE APPLICABLE WORK ORDERS</b>
8127			6	Capital Labour Cost Recoveries		
8128			6	Billable Services Labour Cost Recoveries		
8129			6	G&A Labour Cost Recoveries		
8140			6	Benefit Overhead Allocation		
8150		5	<b>Corporate Benefit Expenses</b>			
8151			6	OMERS		<b>ALL CORPORATE BENEFIT COSTS ARE CAPTURED HERE AND ARE USED TO CREATE THE BENEFIT ALLOCATIONS TO ALL BUSINESS UNITS</b>
8152			6	CPP		
8153			6	EI - Employer's Portion		
8154			6	EI - Employee's Portion		
8155			6	LTD Insurance		
8156			6	Life Insurance		
8157			6	Employers Health Tax		
8158			6	Health Benefits		
8159			6	Retiree Benefits & Pensions		
8160			6	WSIB Administrative Expense		
8161			6	Retiree Benefits - Recoverable		
8162			6	Employee Future Benefit Costs		
8163			6	Employee OHIP Premiums		
8165			6	Maternity Leave Top Ups		
8166			6	Vacation Pay Adjustments		
8170			6	Misc. Benefits Expense		
8200		5	<b>Departmental Employee Expenses</b>			
8201			6	O/T Meal Allowance		<b>INCLUDES ALL DEPARTMENT EMPLOYEE COSTS NOT CONSIDERED TO BE LABOUR THAT CAN BE CHARGED THROUGH THE PAYROLL SYSTEM, STORES ISSUES OR DIRECT PURCHASES</b>
8202			6	Personal Auto Mileage		
8203			6	Corporate Clothing		
8204			6	Boot and Tool Allowance		
8205			6	Membership Dues		
8206			6	Trade License Fees		
8207			6	Employee Medical Expenses		
8208			6	Departmental Safety Supplies		
8250		5	<b>Corporate Employee Expenses</b>			
8251			6	Fitness Centre Expenses		<b>ALL CORPORATE EMPLOYEE EXPENSES THAT ARE NOT SPECIFICALLY RELATED TO A BUSINESS UNIT'S ACTIVITIES</b>
8252			6	Relocation/ Recruitment Expenses		
8253			6	Corporate Medical Expenses		
8255			6	LEAC / Employee Wellness		
8256			6	Recognition Gifts		

cont.

Object	Level of Detail (LOD)				Account Description	How to Use
	4	5	6	7		
8300		5			<b>Employee Development</b>	
8301			6		Tuition and Course Materials	<b>CAPTURES ALL DEPARTMENT COSTS RELATED TO EMPLOYEE DEVELOPMENT -- THESE CAN BE PREPAID MANDATORY EMPLOYMENT COURSES OR PART OF THE EDUCATION GRANT PROGRAM ADMINISTERED BY HUMAN RESOURCES</b>
8302			6		Accommodation	
8303			6		Travel Expense	
8304			6		Personal Auto Mileage	
8305			6		Per Diem/Meal Expense	
8307			6		Professional Development Conference Fees	
8325		5			<b>Corporate Employee Development</b>	
8326			6		Corporate Training Programs	<b>TRAINING NOT SPECIFIC TO BU'S</b>
8350		5			<b>Meeting Expense</b>	
8351			6		Accommodation	<b>ALL MEETING EXPENSES COMMONLY REIMBURSED TO EMPLOYEES THROUGH EXPENSE ACCOUNT SUBMISSIONS</b>
8352			6		Travel Expense	
8353			6		Personal Auto Mileage	
8354			6		Per Diem/Meal Expense	
8356			6		Trade Show Expenses	
8400		5			<b>Business Equipment &amp; Communications</b>	
8401			6		Photocopier Equipment Lease	<b>ALL EXPENSES THAT RELATE TO SPECIFIC DEPARTMENT BUSINESS EQUIPMENT AND COMMUNICATIONS ARE CHARGED HERE IRREGARDLESS OF WHO BUDGETED FOR THE EXPENSES - A CORPORATE BUDGET ALLOCATION TO ALL DEPARTMENTS WILL BE MADE IN THE FUTURE</b>
8403			6		Other Equipment Lease	
8404			6		Telephone Equipment / Lines	
8406			6		Cellular Phones / Pagers / Radios	
8407			6		Office Equipment Purchases/Repairs	
8408			6		Software Expense	
8409			6		Hardware Maintenance Expense	
8410			6		Postage Expense	
8411			6		Courier Expense	
8450		5			<b>Vehicle Expenses</b>	
8451			6		Lease Expense / Fleet Hourly Rate	<b>ALL FLEET CHARGES TO DEPARTMENTS AND ANY DIRECT PURCHASES</b>
8454			6		License Fees	
8500		5			<b>Professional Services</b>	
8501			6		Advertising Expense	<b>PROFESSIONAL SERVICES CAN BE COMMON TO MANY DEPARTMENTS OR CAN BE SPECIFIC TO THE ACTIVITIES OF ONLY A FEW DEPARTMENTS-- THOSE WHICH ARE DEPARTMENT SPECIFIC SHOW THE SPECIFIC BUSINESS UNIT NOS.</b>
8502			6		Bank Service Charges	
8503			6		Legal Fees	
8504			6		Audit Fees	
8505			6		Consulting Fees	
8506			6		Security Services	
8507			6		Collection Agency Fees	
8508			6		Insurance Adjustor Fees	
8509			6		Credit Agency Fees	
8510			6		Offsite Storage	
8511			6		Disaster Recovery Expense	
8512			6		Payment Processor Fees	
8513			6		Mail Contractor Expense	
8514			6		Board Director Fees	
8515			6		Insurance Expense	
8516			6		Contractor Services	
8517			6		Waste Disposal Services	
8518			6		Recycling Expense	
8519			6		EBT Hub Expenses	
8520			6		Commission Fees	
8521			6		Bill Printing Services	
8522			6		Epost Contracted Services	
8523			6		Contract Collection Services	
8524			6		Contracted Meter Reading Services	
8530			6		Community Relations Advertising	
8550		5			<b>Building Expense</b>	
8551			6		Facilities Contractor Services	<b>EXPENSES FOR SERVICES AND SUPPLIES THAT ARE ASSOCIATED WITH THE MAINTENANCE OF ALL BUILDINGS AND SUBSTATIONS - SUPPLIES CAN EITHER BE DIRECT PURCHASES OR STORES ISSUES</b>
8552			6		Property Taxes	
8553			6		HVAC Expense	
8554			6		Utilities	
8555			6		Electrical	
8556			6		Painting	
8557			6		Janitorial Services	
8558			6		Landscape Expense	
8559			6		Snow Removal	
8560			6		Miscellaneous Maintenance	
8561			6		Plumbing / Sewer	
8563			6		Miscellaneous Supplies	
8564			6		Seasonal Cleaning	
8565			6		Furniture Maintenance	
8566			6		Interior Landscape	
8567			6		Elevator Maintenance	