



2015 Electric Bond Issue

December 15, 2014 Pre-Council Work Session

Electric Capital Improvement Program

Electric 5 Year CIP Funding Plan: FY15 - FY19*

CIP Number	PROJECT DESCRIPTIONS						PROJECT TOTAL
		FY15	FY16	FY17	FY18	FY19	
EL0003/9	Contingency	\$700,000	\$400,000	\$300,000	\$300,000	\$300,000	\$2,000,000
EL0021	Distribution Transformers and Capacitors	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$8,000,000
EL0027	Underground Conversion	\$0	\$0	\$0	\$0	\$0	\$0
EL0049	Load Management	\$0	\$0	\$90,000	\$90,000	\$90,000	\$270,000
EL0052	Street Light Additions	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$800,000
EL0053	New Electric Connections	\$800,000	\$1,000,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,400,000
EL0082	Fiber Optic System	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
EL0101	Replacement of Existing Transmission System	\$100,000	\$150,000	\$150,000	\$150,000	\$150,000	\$700,000
EL0107	Replacement of Existing Underground	\$250,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,450,000
EL0115	Substation Feeders	\$250,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,450,000
EL0116	Residential Expansion	\$800,000	\$800,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,200,000
EL0117	Commercial Expansion	\$900,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,700,000
EL0118	Replacement of Existing Overhead	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$3,500,000
EL0121	New South Side 161/13.8 kV Substation	\$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000
EL0148	Transmission Project - Mill Creek, Grindstone & Perche	\$5,000,000	\$5,000,000	\$8,000,000	\$0	\$0	\$18,000,000
EL0151	Power Plant Substation Upgrades	\$1,500,000	\$0	\$0	\$0	\$0	\$1,500,000
EL0153	Replace Circuit Breakers	\$0	\$0	\$0	\$250,000	\$250,000	\$500,000
EL0170	Potential Property Purchase - Tract B	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
EL0175	Landfill Generator Unit 4	\$0	\$0	\$1,600,000	\$0	\$0	\$1,600,000
EL0180	Downtown Streetlights	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
EL0182	Mercury Vapor Streetlight Replacement	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
EL0183	Boiler & Upgrades	\$1,500,000	\$400,000	\$0	\$0	\$0	\$1,900,000
EL0184	Future Substation Transformer	\$0	\$200,000	\$200,000	\$200,000	\$200,000	\$800,000
EL0186	CEC - Distributed Control Systems	\$1,500,000	\$0	\$0	\$0	\$0	\$1,500,000
EL0187	EMS Upgrade	\$850,000	\$0	\$0	\$0	\$0	\$850,000
EL0189	Replace Substation Switchgear	\$0	\$0	\$0	\$350,000	\$0	\$350,000
EL0190	Power Plant Control Center Upgrades	\$0	\$340,000	\$0	\$0	\$0	\$340,000
EL0192	Substation Transformer Replacement	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,500,000
EL0193	Extend Hinkson Creek Substation Feeders	\$0	\$0	\$0	\$5,000,000	\$0	\$5,000,000
EL0194	Substation Upgrades-Grindstone & Perche	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
EL0198	Underground Distribution in Transmission Corridor	\$0	\$2,500,000	\$2,500,000	\$0	\$0	\$5,000,000
EL0199	Relocation of Distribution Lines	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$900,000
EL0200	Distribution Automation	\$0	\$150,000	\$0	\$0	\$0	\$150,000
EL0201	Reconfiguration of Substation Feeders	\$1,400,000	\$1,450,000	\$4,300,000	\$0	\$0	\$7,150,000
Total Bond Funding For Projects		\$24,850,000	\$17,040,000	\$24,190,000	\$13,390,000	\$8,040,000	\$87,510,000



Presentation Outline



- Financial status
- Cash reserve policy
- Funding Capital Improvement Program
- Bond projects review
- Rate impact projects

Financial Status

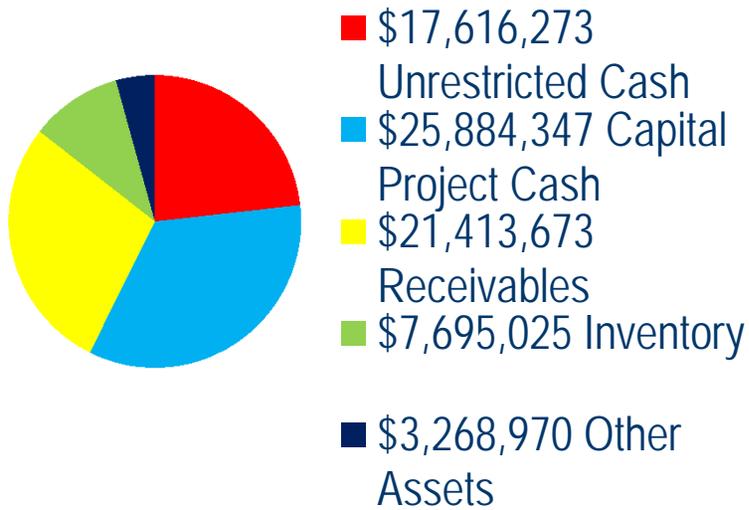


- City of Columbia uses Generally Accepted Accounting Principles (GAAP) guidelines
- Line item in Comprehensive Annual Financial Report for “unrestricted” funds
- Confusing term because most of the money has been allocated
 - Includes money for capital projects, receivables & equipment inventory
- Is there over \$70 million available to spend? NO

Details of Unrestricted Fund

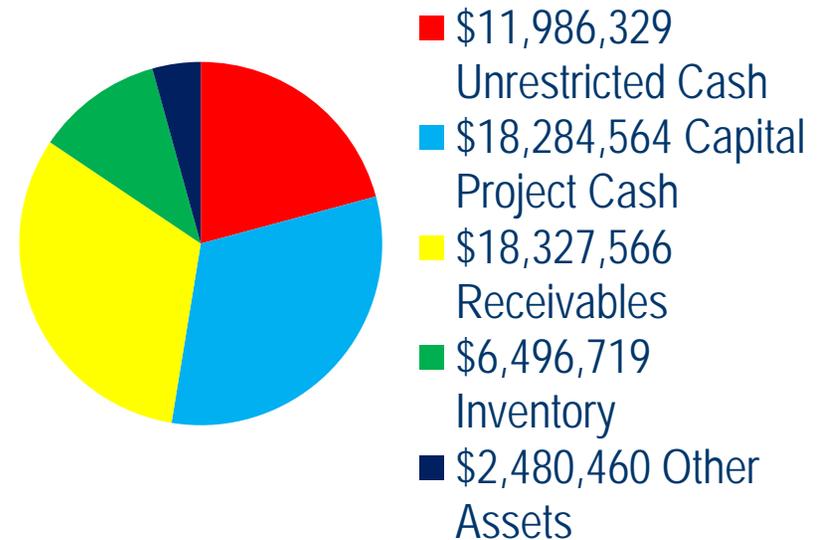
Numbers from the Sept. 2014 preliminary financial statement. Audited #s available early 2015

FY2014 Water & Electric



Total = \$75,878,288

FY2014 Electric Only



Total = \$57,575,638

- Keep finances of water and electric separate so customers are paying for the cost of either water or electricity
- **Actual cash available in electric is \$11,986,329 (Sept. 2014)**

Cash Reserve Policy



- Dipping below cash reserve target
 - 20% of expenditures + capital projects for next year
 - Needed for unplanned expenditures: unfunded mandates, revenue shortfalls, emergencies, etc.
 - Adhering to policy helps bond rating
- Bond rating agencies take cash reserve policy into account
 - Better bond rating = better financing rate

FY13 Cash Reserve Status



FY 13 Minimum Cash Position			
Operating Expenses	\$112,597,109		
PILOT	\$14,470,651		
Interest Expense	\$8,338,802		
Miscellaneous Expense	\$670,727		
Operating Transfers	\$821,774		
Principal On Debt	\$6,545,000		
FY13 Expenditures w/o CIP	\$143,376,849	FY13 Actual Cash Position	
20% of Expenditures	\$28,675,370	Cash and Marketable Securities	\$30,330,446
FY14 CIP Transfer	\$16,946,000	Inventory	\$7,075,260
Minimum Cash Position	\$45,621,370	Year End Cash Position	\$37,405,706

FY14 Cash Reserve Status



FY14 Minimum Cash Position			
Operating Expenses	\$115,752,356		
PILOT	\$14,882,103		
Interest Expense	\$7,932,591		
Miscellaneous Expense	\$356,789		
Operating Transfers	\$1,919,444		
Principal On Debt	\$6,665,000		
FY14 Expenditures w/o CIP	\$147,508,283	FY14 Preliminary Cash Position	
20% of Expenditures	\$29,501,657	Cash and Marketable Securities	\$17,423,096
FY15 CIP Transfer	\$5,100,000	Inventory	\$7,832,823
Minimum Cash Position	\$34,601,657	Year End Cash Position	\$25,255,919

FY15 Cash Reserve Status



FY15 Minimum Cash Position			
Operating Expenses	\$124,512,107	FY15 Projected Cash Position	
PILOT	\$15,111,000	Actual Cash FY14 Year-End	\$17,423,096
Interest Expense	\$7,174,035	Total Revenue-FY15 Budget	\$155,629,992
Miscellaneous Expense	\$0	Total Expenditures-FY15 Budget	(\$161,452,669)
Operating Transfers	\$325,000	Add Depreciation-FY15 Budget	\$14,330,527
Principal On Debt	\$6,745,000	FY15 CIP from Enterprise Funds	(\$5,950,000)
FY15 Expenditures w/o CIP	\$153,867,142	FY15 Principal On Debt	(\$6,745,000)
20% of Expenditures	\$30,773,428	Projected Cash FY15 Year-End	\$13,235,946
FY16 CIP Transfer	\$8,140,000	Inventory FY15 Year-End	\$7,832,823
Minimum Cash Position	\$38,913,428	Total Cash Position-FY15 Year-End	\$21,068,769

Why borrow money?



- Allows for smaller, more stable rate increases
- Generates funds for capital projects without negatively impacting cash for daily operations
- Capital projects are expensive and have a long life span
- Bond funding ensures future users of the system pay for the projects they are benefiting from

Funding Background



- Water & Light uses a combination of revenue & bond funding to pay for large capital projects.
- No tax revenue or general fund revenue is used
- Last bond issue for electric system improvements was in 2006 for \$60 million
- 2011 bond issue only for Columbia Energy Center – no rate increases
- Proposing \$63 million bond issue in April 2015 to fund capital improvement projects

Capital Project Funding Sources



Fiscal Year	Enterprise Revenue	Bond Funding
FY2015	\$5,650,000	\$19,200,000
FY2016	\$5,240,000	\$11,800,000
FY2017	\$5,740,000	\$18,450,000
FY2018	\$5,440,000	\$ 7,950,000
FY2019	\$5,440,000	\$ 2,600,000
Total CIP Projects	\$27,510,000	\$60,000,000

Total funding = \$87,510,000

Capital Improvement Program



Tools for Long-Term Planning

- Federal & State mandates
- Integrated Resource Plan
- Evaluation of peak usage circuit loadings
- Address expected patterns of customer and usage growth
- Planned replacements of existing system

Enterprise Revenue Funding of Capital Projects



Electric 5 Year CIP Funding Plan: FY15 - FY19*

CIP Number	PROJECT DESCRIPTIONS						PROJECT TOTAL
		FY15	FY16	FY17	FY18	FY19	
Replacement & Upgrade of Existing Infrastructure							
EL0021	Distribution Transformers and Capacitors	\$600,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,200,000
EL0027	Underground Conversion	\$0	\$0	\$0	\$0	\$0	\$0
EL0049	Load Management	\$0	\$0	\$90,000	\$90,000	\$90,000	\$270,000
EL0082	Fiber Optic System	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
EL0101	Replacement of Existing Transmission System	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
EL0107	Replacement of Existing Underground	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
EL0115	Substation Feeders	\$250,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,450,000
EL0118	Replacement of Existing Overhead	\$350,000	\$100,000	\$100,000	\$100,000	\$100,000	\$750,000
EL0180	Downtown Streetlights	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
Total		\$1,200,000	\$1,100,000	\$1,190,000	\$1,190,000	\$1,190,000	\$5,870,000
System Modernization							
EL0182	Mercury Vapor Streetlight Replacement	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$400,000
EL0187	EMS Upgrade	\$850,000	\$0	\$0	\$0	\$0	\$850,000
EL0190	Power Plant Control Center Upgrades	\$0	\$340,000	\$0	\$0	\$0	\$340,000
EL0192	Substation Transformer Replacement	\$0	\$0	\$300,000	\$0	\$0	\$300,000
EL0199	Relocation of Distribution Lines	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$900,000
EL0200	Distribution Automation	\$0	\$150,000	\$0	\$0	\$0	\$150,000
Total		\$950,000	\$790,000	\$600,000	\$300,000	\$300,000	\$2,940,000
System Expansion							
EL0052	Street Light Additions	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$600,000
EL0116	Residential Expansion	\$800,000	\$800,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,200,000
EL0117	Commercial Expansion	\$900,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,700,000
EL0170	Potential Property Purchase - Tract B	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
EL0184	Future Substation Transformer	\$0	\$200,000	\$200,000	\$200,000	\$200,000	\$800,000
EL0053	New Electric Connections	\$800,000	\$1,000,000	\$1,200,000	\$1,200,000	\$1,200,000	\$5,400,000
Total		\$3,500,000	\$3,350,000	\$3,950,000	\$3,950,000	\$3,950,000	\$18,700,000
Total Projected Revenue Funding For Projects		\$5,650,000	\$5,240,000	\$5,740,000	\$5,440,000	\$5,440,000	\$27,510,000

Enterprise Revenue Funded Projects



- These projects are reviewed during annual budget process
- Projects funded in this category can be subject to change
- Can vary amount from enterprise revenue if another funding source is secured

Enterprise Revenue Funded Projects



- Replacement & upgrade of existing infrastructure: \$5,870,000
 - Most projects in this category a combination of bond & revenue funding
 - Downtown street lights & potential substation feeders all funded through enterprise
- System Modernization: \$2,940,000
 - Mercury vapor streetlights, Energy Management System, control center upgrades, relocation of lines & distribution automation all funded with enterprise funds
- System Expansion: \$18,700,000
 - Majority of projects funded from revenue so projects/funding allocations can be revised

Bond Revenue Funding of Capital Projects



Electric 5 Year Bond Funding Plan: FY15 - FY19

CIP Number	PROJECT DESCRIPTIONS						PROJECT TOTAL
		FY15	FY16	FY17	FY18	FY19	
Replacement & Upgrade of Existing Infrastructure							
EL0021	Distribution Transformers and Capacitors	\$600,000	\$800,000	\$800,000	\$800,000	\$800,000	\$3,800,000
EL0082	Replacement/Upgrade of Fiber Optic System	\$0	\$0	\$0	\$0	\$0	\$0
EL0101	Replacement of Existing Transmission System	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
EL0107	Replacement of Existing Underground	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,250,000
EL0118	Replacement of Existing Overhead	\$350,000	\$600,000	\$600,000	\$600,000	\$600,000	\$2,750,000
EL0153	Replace Circuit Breakers	\$0	\$0	\$0	\$250,000	\$250,000	\$500,000
EL0189	Replace Substation Switchgear	\$0	\$0	\$0	\$350,000	\$0	\$350,000
EL0192	Substation Transformer Replacement	\$300,000	\$300,000	\$0	\$300,000	\$300,000	\$1,200,000
Total		\$1,600,000	\$2,050,000	\$1,750,000	\$2,650,000	\$2,300,000	\$10,350,000
New Transmission & Substation Project							
EL0121	Mill Creek 161/13.8 kV Substation	\$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000
EL0148	Mill Creek, Grindstone & Perche Interconnection	\$5,000,000	\$5,000,000	\$8,000,000	\$0	\$0	\$18,000,000
EL0194	Substation Upgrades-Grindstone & Perche	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
EL0198	Underground Distribution in Transmission Corridor	\$0	\$2,500,000	\$2,500,000	\$0	\$0	\$5,000,000
EL0201	Substation Feeders Reconfiguration	\$1,400,000	\$1,450,000	\$4,300,000	\$0	\$0	\$7,150,000
Total		\$12,400,000	\$8,950,000	\$14,800,000	\$0	\$0	\$36,150,000
System Modernization							
EL0151	Power Plant Substation Upgrades	\$1,500,000	\$0	\$0	\$0	\$0	\$1,500,000
EL0183	Natural Gas Boiler 8 Upgrades	\$1,500,000	\$400,000	\$0	\$0	\$0	\$1,900,000
EL0186	Columbia Energy Center - Controls Upgrade	\$1,500,000	\$0	\$0	\$0	\$0	\$1,500,000
Total		\$4,500,000	\$400,000	\$0	\$0	\$0	\$4,900,000
System Expansion							
EL0175	Landfill Generator Unit 4	\$0	\$0	\$1,600,000	\$0	\$0	\$1,600,000
EL0193	Extend Hinkson Creek Substation Feeders	\$0	\$0	\$0	\$5,000,000	\$0	\$5,000,000
Total		\$0	\$0	\$1,600,000	\$5,000,000	\$0	\$6,600,000
EL0009	Contingency Funds	\$700,000	\$400,000	\$300,000	\$300,000	\$300,000	\$2,000,000
Total Bond Funding for Projects		\$19,200,000	\$11,800,000	\$18,450,000	\$7,950,000	\$2,600,000	\$60,000,000

Bond Projects



Replacement & Upgrade Infrastructure: \$10.35 million

- Replacement of existing transmission, underground and overhead
 - Example: some underground direct buried and failing
- Transformers, capacitors, circuit breakers and switchgear are equipment within the system
- One substation transformer cost \$600,000 + installation

Bond Projects



Transmission line & substation project: \$36.11 million

- To meet federal reliability standards, fines up to \$1 million a day for non-compliance
- Includes fund for undergrounding distribution lines along transmission corridor
- Reconfiguring existing substations to balance the load throughout town
- Located in south but benefits entire system

Bond Projects



System Modernization: \$4.9 million

- Power plant substation upgrades
 - for system support
- Natural gas upgrades
 - for new regulations, already partially funded
- Columbia Energy Center controls
 - Equipment to control operations of units from 2001
 - Built to work with Ameren's system, problematic for ours

Bond Projects



System Expansion: \$6.6 million

- Landfill gas generator #4
 - Lowest cost renewable resource plus provides base load power
- Hinkson Creek substation
 - Provides another electric circuit for central city area

Bond related expenses



- Contingency for project overruns & inflation: \$2 million
- Total Cost of issuing bonds: \$6 million
 - Cost of issuance and reserve requirement
 - Removed 2nd bond financing costs, will fund with enterprise revenue
- \$3.1 Million for bond cost
- \$2.9 Million as enterprise revenue cost

April 2015 ballot issue



- Total: \$63.1 million
- Rate increases: total 6%
 - 3% in FY 2015
 - 2% in FY 2017
 - 1% in FY 2018
- If it doesn't pass, will need to make more dramatic rate increases (estimate 20%-25%)
- Some reduction might be able to occur in 5 years

Bond Project



- Staff refined bond project list
 - Delayed some projects past the 5 year bond funding window
 - McBaine transmission line section
 - Work associated with proposed road projects
 - Other undergrounding projects
- W&L Advisory Board worked with staff to move some projects to enterprise funding list
 - Street lights, substation feeders, fiber optic, control room and contingency funds
 - W&L Advisory Board advised council to approve ballot issue for bond funding of project list

Electric Residential Rate Comparison

** Columbia rates do not include a summer discount for load management*

