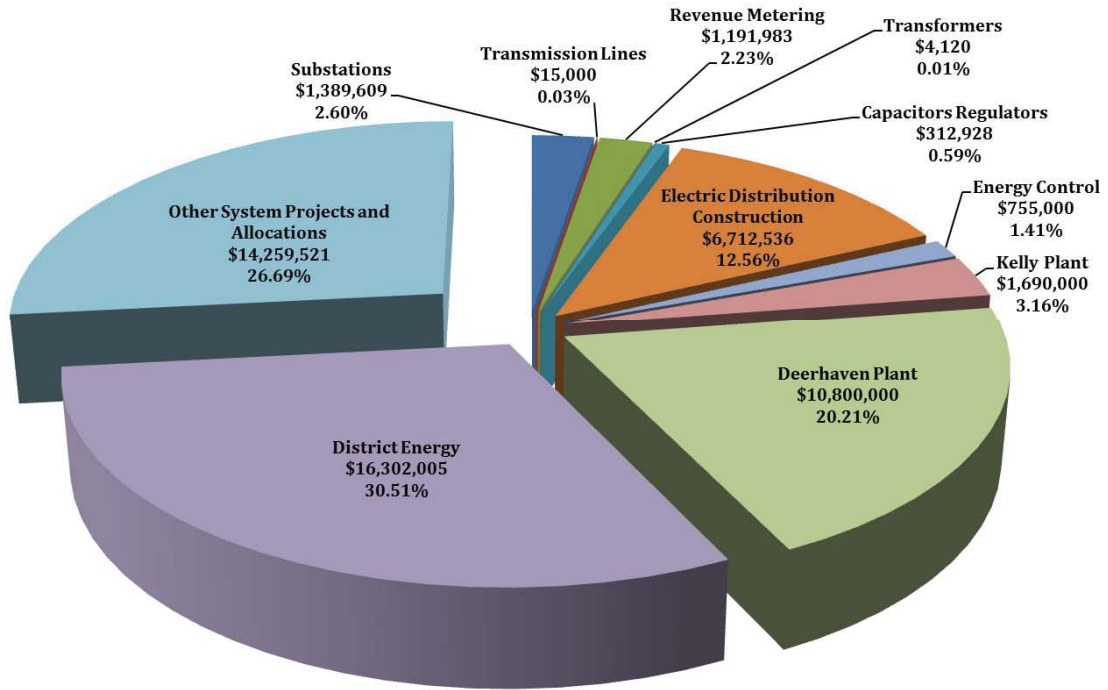


Section F – Capital Projects

Electric System
FY16 Revised Budget



Electric Projects	Revised 2016
Substations	\$ 1,389,609
Transmission Lines	15,000
Revenue Metering	1,191,983
Transformers	4,120
Capacitors Regulators	312,928
Electric Distribution Construction	6,712,536
Energy Control	755,000
Kelly Plant	1,690,000
Deerhaven Plant	10,800,000
District Energy	16,302,005
Other System Projects and Allocations	14,259,521
Total Projects	\$ 53,432,702

Electric System

Energy Supply Major Projects FY16

- Energy Supply's capital budget for FY16 represents a total investment of \$12.49 million of which \$10.8 million is allocated to the Deerhaven Generating Station account and \$1.69 million allocated to the JRK Generating Station account. The drivers for the majority of the investments fall into three categories:
 - Regulatory and Compliance
 - Reliability (including life-cycle management)
 - Efficiency

JRK Generating Station Major Projects FY16

- Refurbishment of the JRK Unit 8 Cooling Tower is a multi-year life-cycle management project addressing safety, efficiency and reliability. In FY16, 25 percent of the distribution fill and fill structure for all four cells will be replaced. Unit 8 Cooling Tower Refurbishment - \$400,000.
- Decommissioning of assets no longer in service is a multi-year responsibility with the retirements of Combustion Turbine Units 1, 2 and 3 and Steam Unit 7. About \$300,000 will be used to dismantle Cooling Tower 7 and assessment of asbestos for further remediation.
- The other Combined Cycle projects at the JRK plant include:
 - Replacement of the silencer for the high pressure (HP) valve (end of life, affects ability to meet noise levels consistent with a downtown location) - \$150,000.
 - Installation of a generator rotor ground detector (safety and property protection) - \$125,000.
 - Improvements to the Combustion Turbine 4 Generation Step-up Transformer T-33 including refurbishment of bushings for reliability and addition of disconnects for isolation to correct a safety deficiency - \$205,000.

Deerhaven Generating Station Major Projects FY16

- At Deerhaven \$5.67 million of the investment is for Deerhaven Steam Unit 2 (DH2) and \$2.2 million for Combustion Turbine 3 (CT3). The remaining Deerhaven capital budget will be invested in Deerhaven Steam Unit 1 (DH1), Deerhaven Process Plant, General Plant, System Control and Power 2020.
- The Energy Supply capital budget annually includes funds for replacement of DH2 AQCS components and equipment (i.e. SCR catalyst replacement, baghouse bag replacements, etc.) that are necessary to maintain efficiency, reliability, and to comply with environmental regulatory air emissions requirements.
 - Baghouse bags and cage replacements for 6 compartments-\$1,000,000
 - SCR Catalyst Replacement - \$500,000
- Deerhaven Steam Unit 2 bottom ash weir seal refurbishment will require an investment of \$450,000.
- Refurbishment of the DH2 Cooling Tower is a multi-year life-cycle management project addressing safety, efficiency and reliability. In FY16, three cells are scheduled to be rebuilt-\$750,000.
- The Energy Supply capital budget addresses electrical system life cycle management for the precipitator electrical building. This project will span two years starting in FY16, with an investment of \$400,000 and a total project investment of \$1,600,000.
- The west pulverizer is scheduled to have the roll wheels changed out. Roll wheels are the grinding component for a pulverizer and are expected to be changed out based on wear and inspection results every few years - \$350,000.
- Rebuild of the west boiler feed water pump is scheduled as part of prudent life-cycle management-\$250,000.
- Two switchyard breakers (breaker 686 and 687) that feed DH2 are scheduled for replacement as part of life-cycle management - \$150,000.
- One of DH1 Generation Step-Up Transformers (T-61) requires a replacement of the radiator, control cabinet and wiring - \$150,000.

- Energy Supply's capital budget includes funding for Deerhaven Combustion Turbine 3 (CT3) replacement parts in preparation for CT3's major inspection in FY17. Purchasing portions of the capital spares over two years is required in order to fully prepare for this major work. The capital spares include combustion liners and second stage nozzles. CT3 Replacement Parts - \$2,150,000.
- Investment is required for Deerhaven to meet current fire protection compliance. About \$800,000 is allocated to this project; \$350,000 for an emergency-start automatic diesel fire pump and the remaining to address piping and supply. This is part of a multi-year process towards compliance which started last year. These investments are to reduce the risk category rating with our insurance carriers for premium reduction.
- The total allocation of projects at the process plant which provides for the zero discharge of water from the facility is \$550,000. These projects include upgrade of chemical feeders and controls.
- The coal handling system will have incremental refurbishment of belts, supports and equipment - \$240,000.
- System Control requires an investment of \$420,000 for unit commitment software to improve economic and efficiency of dispatching.*
- Power 2020 is budgeted for \$250,000 in FY16.*

**Unit commitment software and Power 2020 are allocated to Deerhaven for accounting purposes and may be subject to future reallocation.*

District Energy Major Projects FY16

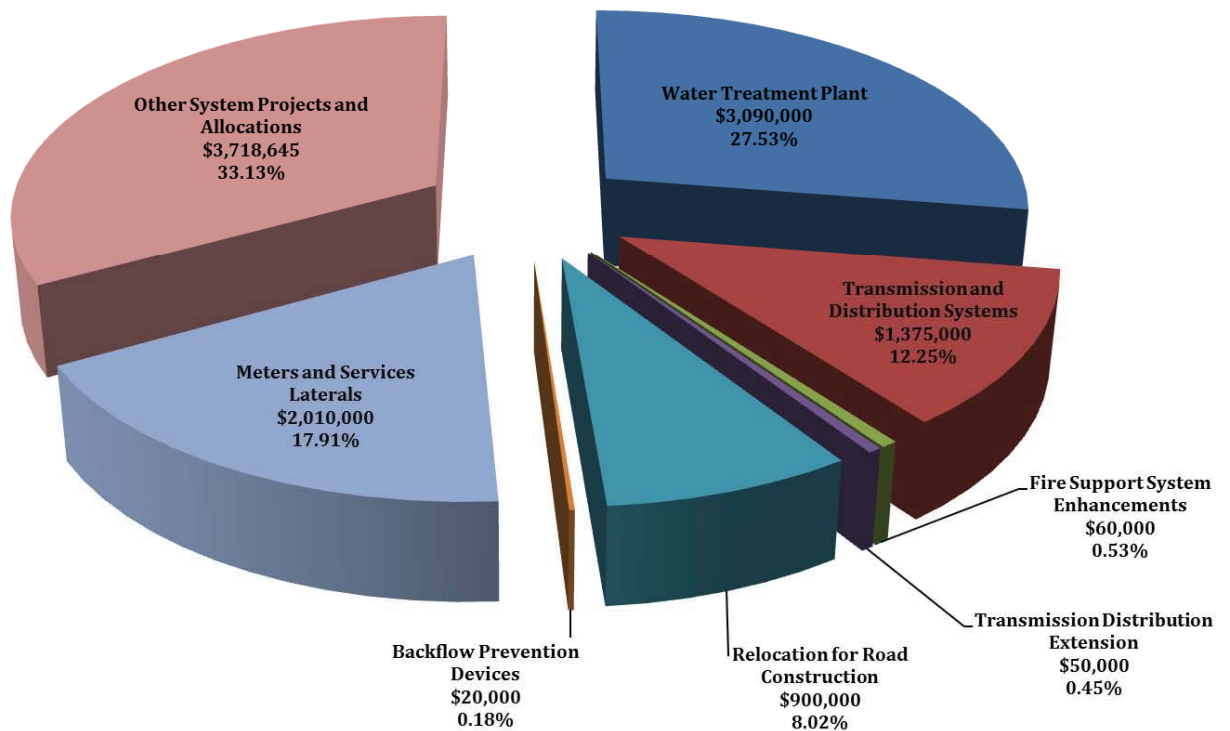
- The South Energy Center will add electrical and chilled water capacity to support the new UF Health Heart & Vascular and Neuromedicine hospital currently under construction. GRU will invest in capital assets including a reciprocating natural gas-fired engine, a backup diesel generator, a chiller, cooling towers, transformers, circuit breakers, and other ancillary equipment. The total budget for the project is \$28.5 million, of which \$16.3 million is budgeted in FY16.
- GRU will begin to install piping and conduit from the hospital site to the South Energy Center in July 2015. GRU will purchase, install, and commission equipment at the South Energy Center in a phased approach through the end of 2017. The new hospital will open in early 2018.
- Capital investments in the South Energy Center are recovered from UF Health in accordance with GRU's contract with UF Health. Net revenues from the South Energy Center flow back to GRU's electric fund, helping to provide rate relief to all GRU electric customers.
- Funds for the investment in the South Energy Center were approved during the November 6, 2014 City Commission meeting.

Energy Delivery Major Projects FY16

- Transmission and distribution substation improvement projects are necessary to ensure excellent system reliability, quality of service and customer satisfaction. These projects will typically focus on work related to circuit breaker replacements, auxiliary equipment enhancements and relay and control upgrades. The proposed budget is approximately \$1.38 million.
- Distribution automation projects focus on system reliability and service quality with the end result being fewer service interruptions and enhanced customer satisfaction. Such work will typically involve mid-circuit fault interrupting devices, power factor correcting and voltage regulating devices. The proposed budget is approximately \$312,000.
- Distribution system improvement projects are necessary to ensure excellent system reliability, quality of service and customer satisfaction. Such work will typically focus on work related to circuit breaker replacements, auxiliary equipment enhancements and relay and control upgrades. The proposed budget is approximately \$1.19 million.

- Distribution system main line extensions and improvement projects (overhead and underground) are necessary to deliver service to new or existing developments. The proposed budget for this work is \$450,000.
- System expansion projects (typically underground) are necessary to deliver service within new residential, commercial and industrial developments. Service lines and associated equipment are also included in this budget category. The proposed budget for this work is approximately \$1.35 million.
- System lighting projects include roadway work initiated by the City of Gainesville, Alachua County or FDOT and rental lighting which is initiated by the development community and individual customers. GRU standardized LED lighting solution early in FY15 in addition to metal halide and high pressure sodium light sources. The proposed budget for all lighting work is approximately \$476,000.
- Aging overhead and underground distribution system components, some elements of which are more than 50 years old, will be systematically and proactively renewed or replaced to maintain GRU's excellent system reliability, quality of service and customer satisfaction. Planned work extends throughout GRU's service area and includes planned renewal and replacement work such as overhead neighborhood infrastructure reconstruction, underground primary voltage cable rejuvenation and the replacement of obsolete switchgear. The proposed budget is approximately \$2.17 million.
- Damaged and defective distribution system components, including poles, overhead and underground conductors, and transformers resultant from severe weather, accident and damage by others are replaced systematically and upon discovery. The proposed budget is approximately \$1.4 million.
- The FY16 budget includes funding needed to initiate the replacement of the utility's existing Outage Management System (OMS) with a new state-of-the-art application. Replacement of the OMS will ensure that this mission critical system remains highly reliable, efficient and customer focused. The proposed budget is \$100,000 in FY16.

**Water System
FY16 Revised Budget**



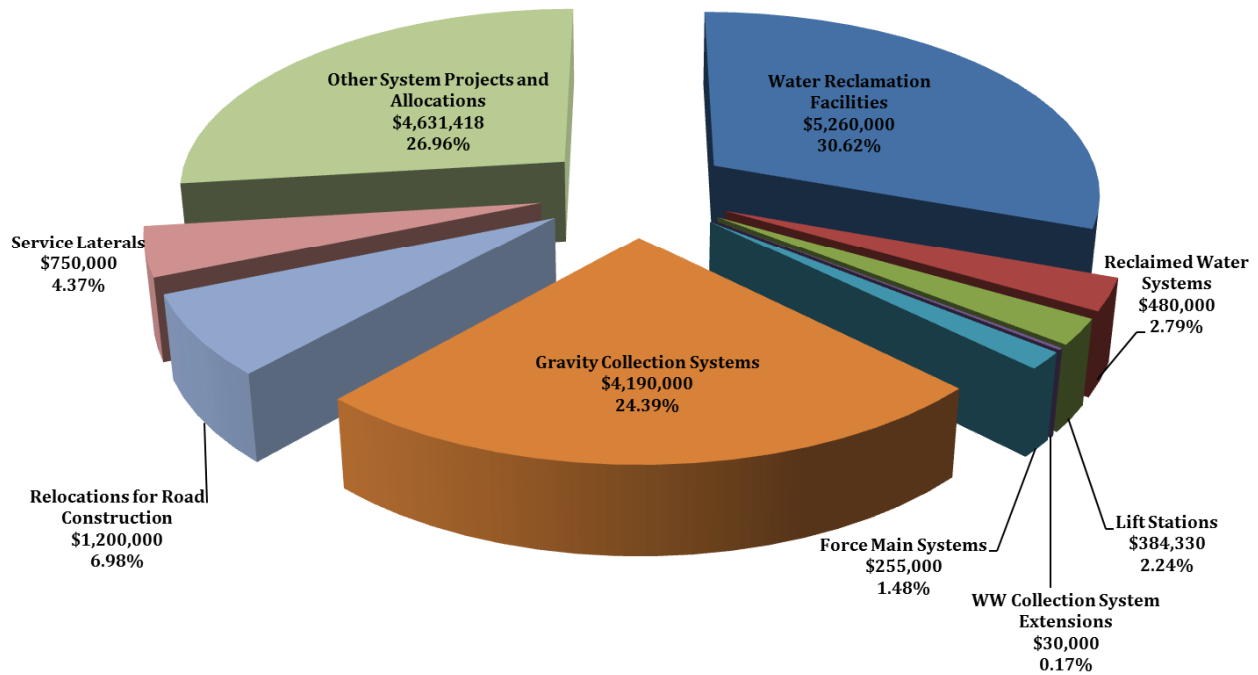
Water Projects	Revised 2016
Water Treatment Plant	\$ 3,090,000
Transmission and Distribution Systems	1,375,000
Fire Support System Enhancements	60,000
Transmission Distribution Extension	50,000
Relocation for Road Construction	900,000
Backflow Prevention Devices	20,000
Meters and Services Laterals	2,010,000
Other System Projects and Allocations	3,718,645
Total Projects	\$ 11,223,645

Water System

Major Projects FY16

- Design of a new electrical building with new Motor Control Centers (MCCs) began in FY15 and construction is anticipated to be completed in FY18. The existing MCCs have been in service since 1976. The project will also include replacing the 1,000 kW plant engine generator set. In addition, the Murphree Water Treatment Plant Stormwater Management Plan will be updated for the water plant site.
- GRU is implementing an Infrastructure Improvement Area (IIA) in the Innovation District and surrounding area. GRU is making water distribution, reclaimed water distribution, and wastewater collection system improvements within defined areas ahead of development in order to ensure that capacity is available to serve future redevelopment. In order to recover expenditures, GRU is developing a charge to be paid by development projects within the IIA. The policy will ensure that capacity is made available when it is needed, that the improvements are performed as efficiently and cost-effectively as possible, and that the cost of these improvements is allocated fairly between development projects.
- The Depot Avenue Segment 4 roadway project consists of rebuilding SE 7th Avenue from Lewis Oil Company at SE 7th Street east to Williston Road. GRU's work will include removing and replacing water mains and services. This work will begin in FY16 and be completed in FY17.
- GRU is continuing to invest in replacing galvanized and cast iron water mains throughout the service area. These efforts are designed to upgrade the water system and improve water pressure. The specific areas are selected by analyzing water pressures and known pressure issues to determine the most cost-effective improvement projects.
- The water meter changeout program is designed to identify and replace large and small meters with reduced accuracy or known issues with new meters. This program more accurately measures customer water usage, therefore correcting and increasing water revenue.

Wastewater System
FY16 Revised Budget



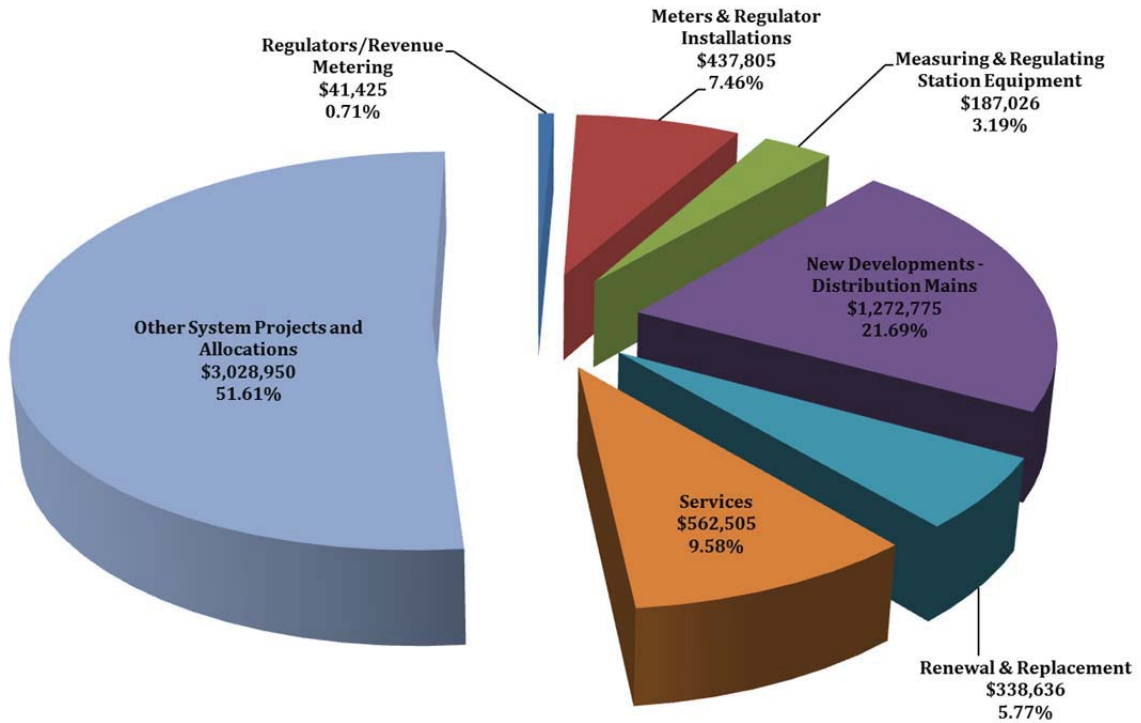
Wastewater Projects	Revised 2016
Water Reclamation Facilities	\$ 5,260,000
Reclaimed Water Systems	480,000
Lift Stations	384,330
WW Collection System Extensions	30,000
Force Main Systems	255,000
Gravity Collection Systems	4,190,000
Relocations for Road Construction	1,200,000
Service Laterals	750,000
Other System Projects and Allocations	4,631,418
Total Projects	\$ 17,180,748

Wastewater System

Major Projects FY16

- The Paynes Prairie Sheetflow Restoration project (Sweetwater Wetlands Park) is a cooperative project between GRU and Public Works to meet the total maximum daily load (TMDL) for nitrogen at Alachua Sink and treat the City's stormwater run-off. Also, the Main Street Water Reclamation Facility will be upgraded for phosphorous removal (separate line item). Construction for this project was completed in FY15 and performance testing will begin in FY16 and continue for several years.
- The Biosolids Dewatering project is a direct result of a settlement agreement and consent order with Alachua County to cease the utility's current operation of applying Class-B biosolids at the Whistling Pines Ranch. A study conducted to determine available alternatives to land application showed that the viable alternatives required dewatering to a significantly higher level than the existing level (minimum of 20 percent solids rather than 5 percent solids). The dewatering project includes the construction of a facility utilizing centrifuge technology to dewater waste activated sludge from Kanapaha Water Reclamation Facility and Main Street Water Reclamation Facility. The project will be completed in early FY16 in order to meet the scheduled February 2016 compliance date.
- The installation of new bar screens at the Kanapaha Water Reclamation Facility will be the first step in preparing for a new biosolids dewatering facility. The new biosolids dewatering facility will utilize centrifuge equipment that operates at high speeds. The new screens will remove more debris from the waste stream, in turn protecting the treatment process and allowing the new dewatering centrifuges to operate properly. This installation will be completed in FY16 in order to be in place before the dewatering facility begins operation.
- The SW 20th Avenue/SW 61st Street project is being completed in conjunction with a county Public Works project. GRU will relocate existing force main and gravity main wastewater facilities. It is anticipated to be complete in FY16.
- Reclaimed water mains will be constructed to serve the Innovation District from the 500 to 900 block of SW 6th Street. This reclaimed water will be utilized for irrigation and the new chilled water system in Innovation Square.
- The NE 2nd Street from NE 10th Avenue to NE 16th Avenue project includes replacement of the existing sewer gravity main and manholes. This project is to reduce infiltration into the gravity collection system and renew the gravity collection system.
- GRU will continue to invest in rehabilitating aging infrastructure through trenchless technology including Cured In Place Pipe (CIPP) commonly referred to as sliplining. This technology allows GRU to improve the existing deteriorated pipe by installing a new pipe liner inside the existing pipe. This technique reduces the cost and disruption of opening a roadway to conduct repairs or replacements on existing sanitary sewer gravity collection mains.
- The NW 3rd Avenue and NW 12th Street gravity main improvement project will commence in FY16. This project is designed to improve gravity collection system capacity to serve future customers. The project is part of the Infrastructure Improvement Area (IIA) that was recently implemented.

**Gas System
FY16 Revised Budget**



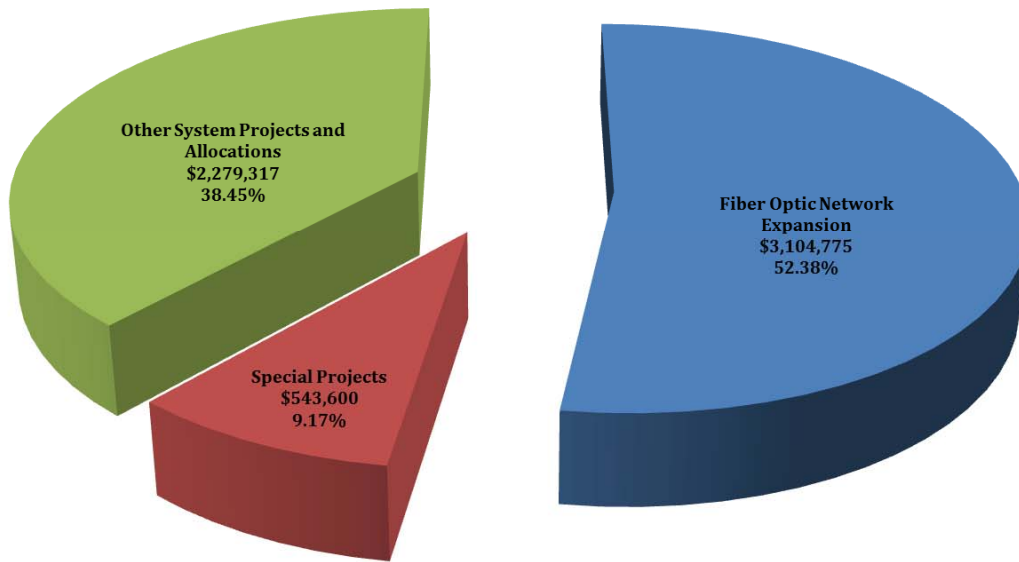
Gas Projects	Revised 2016
Regulators/Revenue Metering	\$ 41,425
Meters & Regulator Installations	437,805
Measuring & Regulating Station Equipment	187,026
New Developments - Distribution Mains	1,272,775
Renewal & Replacement	338,636
Services	562,505
Other System Projects and Allocations	3,028,950
Total Projects	\$ 5,869,122

Gas System

Major Projects FY16

- Meters and associated equipment are necessary to measure industrial customer energy consumption. Aging installations are also systematically and proactively renewed or replaced to promote and ensure billing accuracy. The proposed budget is \$41,425.
- Meters and associated equipment are necessary to measure residential and commercial customer energy consumption. Aging installations are also systematically and proactively renewed or replaced to promote and ensure billing accuracy. The proposed budget is \$437,805.
- Measuring and regulating station projects are necessary to promote and enhance system reliability, quality of service and customer satisfaction. The proposed budget for this work is \$187,026.
- System main line extensions and improvements are necessary to deliver service to new or existing developments. The proposed budget for this work is \$866,700.
- System expansion projects are necessary to deliver service within new residential, commercial and industrial developments. The proposed budget is \$406,075.
- Aging gas distribution system pipes are systematically and proactively renewed or replaced to improve system reliability, quality of service and customer satisfaction. The planned work to replace cast iron, black plastic and steel piping extends throughout the core of GRU's service area. FY16 will bring closure to the cast iron pipe replacement element of this renewal and replacement program. The proposed budget is \$338,636.
- Service lines and associated equipment are necessary to deliver service to new customers. Aging service pipes are systematically and proactively renewed or replaced to improve system reliability, quality of service and customer satisfaction. The proposed budget for this work is \$ 562,505.

GRUCom
FY16 Revised Budget



Telecommunications Projects	Revised 2016
Fiber Optic Network Expansion	\$ 3,104,775
Special Projects	543,600
Other System Projects and Allocations	2,279,317
Total Projects	\$ 5,927,692

GRUCom System

Major Projects FY16

- During FY16, GRUCom will continue to build fiber optic systems to new and/or existing tower locations and install the infrastructure required to support the growth in cellular carrier data transport. Funds for this initiative are included in the Network Expansion capital budget.
- GRUCom will continue to expand the recently announced Gigabit Internet access options GATOR NET product line. Funds for this initiative are included in the Network Expansion capital budget.
- GRUCom has proposed funding to expand the Public Safety Trunked Radio System (TRS) P25 functionality. Funds for this initiative are included in the GRUCom TRS upgrade budget.
- GRUCom will continue to invest in infrastructure within the Innovation District and other related areas throughout the community. Timing of new facilities will depend on private industry construction plans. The installation of the facilities will prepare GRUCom to provide leading-edge technology services in a timely and cost-effective manner. Funds for this project are included in the FY16 Network Expansion capital budget.
- GRUCom has initiated a Renewal and Replacement Program focused on the original fiber optic cable infrastructure. This cable has reached its functional lifespan and presents the potential for unscheduled outages due to failure. Fiber Optic Network Expansion budget includes funding for this project.

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