

# 2014 Utility Systems Bond Program



**Signal Butte Water Treatment Plant Operations Building**



## 2014 Utility Systems Bond Program

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## Introduction

### City of Mesa 2014 Utility Systems Bond Election

**When is the bond election?** The utility systems bond election questions will be on the November 4, 2014 General Election ballot for City of Mesa residents.

**What bonds are being voted on?** The ballot will include four separate questions on whether to authorize the sale of bonds to pay for projects to maintain or enhance the City's water, wastewater, natural gas, and electricity utility systems (see the four ballot questions on page 5). The City typically issues bonds to finance large public infrastructure projects. Most recently, Mesa voters authorized utility system bonds in 2006 and 2010. State law requires that the issuance of utility bonds be authorized by a majority of the City's voters (Arizona Revised Statutes §9-523).

**What happens if a utility bond question is approved?** If an election question is approved, the City will be authorized to sell bonds to pay for identified capital projects to support that utility. The City continually reviews and assesses infrastructure needs and only sells bonds as needed to complete projects that meet identified needs. Projects are approved individually by the City Council as part of the City's normal contract award process.

**How would the bond funding be used?** The bonds would pay for projects to maintain and reinforce the current utility systems, replace aging infrastructure to ensure efficient operations, and expand the systems to meet the needs of residential and commercial customers. The purpose of replacing of the oldest portions of the systems is to increase the reliability of the services provided to residents. Expansion of the existing utility systems supports residential and business growth. More detail on the types of projects that are likely to be constructed if the bonds are approved is provided in the following sections of this document.

**What is different about this utility bond election from the previous utility bond election?** The 2014 utility bond election includes the construction of a new water treatment plant and the expansion of an existing wastewater treatment plant to accommodate the City's growth, especially in southeast Mesa.

Signal Butte Water Treatment Plant – Construction of a new plant with capacity to treat 24 million gallons of water per day in order to serve customers in the southeastern portion of the City. The plant would utilize surface water from the Central Arizona Project (CAP) canal, which would reduce reliance on well water so that it is conserved for use during drought conditions. The new plant would provide redundant capacity for the Brown Road water treatment plant which currently services both northeast and southeast Mesa. It is anticipated that design and construction of the project would take four years to complete.

Greenfield Water Reclamation Plant Expansion – Expansion of capacity at the existing plant in order for the City of Mesa to treat an additional 10 million gallons of wastewater per day in

order to meet increasing demand. The Greenfield water reclamation plant is jointly-owned by Gilbert, Queen Creek, and Mesa, with Mesa serving as the managing partner.

**What happens if a utility bond question is not approved?** If an election question is not approved, the City would maintain, replace, and enhance the utility systems to the extent possible with current resources. It is anticipated that the delivery of utility services would become less reliable and more expensive as the systems continue to age. New growth might be limited in some cases by the lack of additional utility system capacity.

**Why use bonds to finance the projects?** The City does not have current resources sufficient to pay for projects that provide infrastructure for future needs. Financing capital projects with bonds allows the cost of large projects to be spread out over future years, the years during which the infrastructure is being used. Bond financing allows the residents that will be living in the city and that will benefit from the projects in the future to pay for the infrastructure as it is used.

**How are utility bonds repaid?** Utility bonds are repaid through the utility rate charges paid by each utility's customers. The anticipated debt service payments were included in the projected utility rates presented to the City Council on April 17, 2014.

## City of Mesa Utility Systems – 2014 Bond Election Questions

PURPOSE: WATER SYSTEM REVENUE BONDS

AMOUNT: \$315,700,000

Shall Mesa, Arizona, be authorized to issue and sell utility systems revenue bonds of the City in the principal amount of \$315,700,000 to provide funds to improve, extend and provide improvements for the City's water system inside or outside the City including treatment, pumping, storage, transmission facilities, buildings, equipment and other water properties of any kind, and pay costs thereof? The bonds shall be payable solely from the revenues of the City's utility systems, bear interest not exceeding 10% per annum, and pay principal over not more than 30 years from the date issued.

PURPOSE: WASTEWATER SYSTEM REVENUE BONDS

AMOUNT: \$178,200,000

Shall Mesa, Arizona, be authorized to issue and sell utility systems revenue bonds of the City in the principal amount of \$178,200,000 to provide funds to improve, extend and provide improvements for the City's wastewater system inside or outside the City including treatment, pumping, storage, recharge, reuse, transmission facilities, buildings, equipment, furnishings and any other property of any kind, and pay costs thereof? The bonds shall be payable solely from the revenues of the City's utility systems, bear interest not exceeding 10% per annum, and pay principal over not more than 30 years from the date issued.

PURPOSE: ELECTRICAL SYSTEM REVENUE BONDS

AMOUNT: \$27,000,000

Shall Mesa, Arizona, be authorized to issue and sell utility systems revenue bonds of the City in the principal amount of \$27,000,000 to improve, extend and provide improvements and betterments for the City's electrical system, including the transmission facilities, buildings, furnishings and equipment and any other property of any kind, and pay costs thereof? The bonds shall be payable solely from the revenues of the City's utility systems, bear interest not exceeding 10% per annum, and pay principal over not more than 30 years from the date issued.

PURPOSE: GAS SYSTEM REVENUE BONDS

AMOUNT: \$59,100,000

Shall Mesa, Arizona, be authorized to issue and sell utility systems revenue bonds of the City in the principal amount of \$59,100,000 to improve, extend and provide improvements for the City's gas system inside or outside the City including pressure regulating, transmission and safety facilities, buildings, equipment and furnishings and any other property of any kind, and pay costs thereof? The bonds shall be payable solely from the revenues of the City's utility systems, bear interest not exceeding 10% per annum, and pay principal over not more than 30 years from the date issued.

## Water System

<b>Lifecycle Replacement/Reliability</b>	<b>\$63.3 million</b>
<b>Contractual Obligations</b>	<b>\$46.5 million</b>
<b>Customer Demand in Southeast Mesa</b>	<b>\$197.3 million</b>
<b>Customer Demand – Citywide</b>	<b>\$8.6 million</b>

*Dollar amounts shown are estimates based on the types of projects planned.*

Various water system improvements.



## **Water System Projects**

### **Lifecycle Replacement/Reliability**

*Lifecycle replacements serve to protect capital infrastructure investments in order to improve reliability and reduce service disruptions.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### **Asset Management**

**Brown Road Water Treatment Plant Miscellaneous Improvements**

**Brown Road Water Treatment Plant Rehabilitation**

**City Well #7 Re-drill**

**City Well #13 Re-drill**

**City Well #8 Re-drill and Equip**

**City Well #9 Re-drill and Equip**

**Pump Motor & VFD Replacements/Rehabilitation**

**Water Meter Vault Rehabilitation**

**Waterline Replacement Quarter Sections 13C, 21A, and 21D**

**Waterline Replacement Quarter Sections 28B and 28D**

**Waterline Replacement Quarter Section 39C – Phase I**

**Waterline Replacement Quarter Section 55A**

**Waterline Replacement Quarter Section 55D**

**Waterline Replacement Quarter Section 91D**

**Waterline Replacement Quarter Section 93D**

## **Water System Projects**

**Lifecycle Replacement/Reliability (continued),**

**Waterline Replacement Quarter Sections 13C, 21A, and 21D**

**Waterline Replacement Quarter Sections 21D, Clark, and Pepper**

**Waterline Replacement Quarter Sections 28B and 28D**

## **Water System Projects**

### **Contractual Obligations**

*Contractual obligations are commitments that the City is legally required to fulfill. These commitments allow the City to utilize water treatment capacity at the Val Vista Water Treatment Plant managed by the City of Phoenix, and draw additional water from the Central Arizona Project canal.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### **Val Vista Pipelines**

#### **Val Vista Water Treatment Plant**

#### **White Mountain Apache Water Settlement**

## **Water System Projects**

### **Customer Demand in Southeast Mesa**

*New infrastructure would support customer demand and may leverage commercial economic development opportunities. Possible opportunities include both redevelopment and infill projects.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

**Desert Well #18 Equip**

**Desert Well #19 Drill and Equip**

**Desert Well #20 Drill and Equip**

**Desert Wells Ground Water Facilities**

**Desert Wells Zone Well Site Acquisition**

**Economic Development (Eastmark)**

**Elliot Road: Hawes Road to Sossaman Road**

**Elliot Road: Signal Butte Road to Hawes Road**

**Falcon Field Pump Station at Signal Butte Water Treatment Plant**

**Future Well #1 on Crismon between Elliot Road and Warner Road**

**Future Well #2 on Crismon Road at Warner Road**

**Meridian Road 12-inch Waterline: Guadalupe Road South to SRP Easement**

**Non-Potable Well for Southeast Mesa, Drill and Equip**

**Signal Butte 30-inch Desert Well Waterline; Warner Road to Ray Road**

**Signal Butte Raw Water Line**

**Signal Butte Road: Ray Road to Williams Field Road**

## **Water System Projects**

**Customer Demand in Southeast Mesa (continued),**

**Signal Butte Road: Rueben Avenue to Warner Road**

**Signal Butte Water Treatment Plant**

**Signal Butte Well Collection Pipeline – Desert Well #18 to Rueben Avenue**

**Signal Butte Well Collection Pipeline – Desert Well #18 to Warner Road**

**Waterline under Roosevelt Water Conservation District Canal at Warner Road**

**Water Infrastructure Improvements at Northeast Area of Gateway Airport**

**Well Collection Pipeline – Desert Wells #7 to Pecos Road**

**Well Collection Pipeline – Desert Wells #8 to Desert Wells #7**

## Water System Projects

### Customer Demand – Citywide

*The City would continue to invest in infrastructure in established areas of Mesa to support infill, redevelopment, and new economic development projects. New infrastructure would support customer demand and may leverage commercial economic development opportunities.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### Transfer Station 3 Improvements

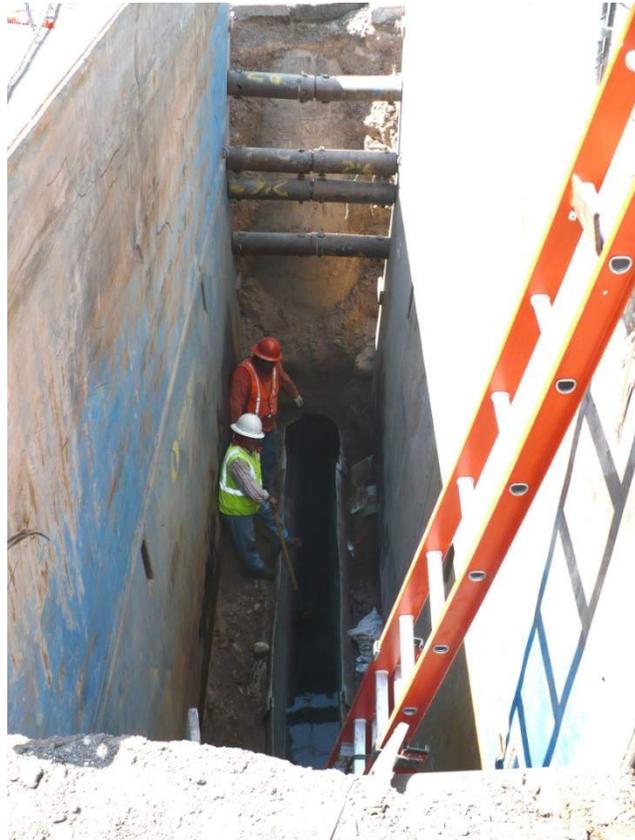
### Water Extension and Oversize Mains

## Wastewater System

<b>Lifecycle Replacement/Reliability</b>	<b>\$32.6 million</b>
<b>Contractual Obligations</b>	<b>\$20.4 million</b>
<b>Customer Demand in Southeast Mesa</b>	<b>\$122.8 million</b>
<b>Customer Demand – Citywide</b>	<b>\$2.4 million</b>

*Dollar amounts shown are estimates based on the types of projects planned.*

Various wastewater system improvements.



## **Wastewater System Projects**

### **Lifecycle Replacement/Reliability**

*Lifecycle replacements serve to protect capital infrastructure investments in order to improve reliability and reduce service disruptions.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### **6th Street Sulfide Control Station Rehabilitation**

#### **Asset Management**

**Baseline Interceptor Sulfide Control Station**

**Center Street: University Drive to 9th Place**

**Eagle Crest Lift Station Rehabilitation**

**Falcon Field Airport Improvements**

**Greenfield Plant Equipment Replacement**

**Greenfield Plant Improvements**

**Lift Station Equipment Replacement**

**Northwest Plant Equipment Replacement**

**Northwest Plant Grit Removal**

**Odor Control Station Equipment Replacement**

**Sewer Line Rehabilitation**

**Small Wastewater Line Repair/Replacement**

**Southeast Plant Equipment Replacement**

**Star Valley Lift Station/Sulfide Control Station Rehabilitation**

**Wastewater Manhole Rehabilitation**

## Wastewater System Projects

### Contractual Obligations

*Contractual obligations are commitments that the City is legally required to fulfill. This commitment represents the City's contribution for operating costs and capital improvements at the 91<sup>st</sup> Avenue Wastewater Treatment Plant, located in and managed by the City of Phoenix. Mesa sends wastewater to this facility for treatment.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### 91st Avenue Wastewater Treatment Plant – City of Mesa Share

## **Wastewater System Projects**

### **Customer Demand in Southeast Mesa**

*New infrastructure to support customer demand and may leverage commercial economic development opportunities. Possible opportunities include both redevelopment and infill projects.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### **Economic Development (Eastmark)**

**Ellsworth Road Sewer – Elliot Road to Ray Road**

**Ellsworth Road Sewer – Ray Road to Williams Field Road**

**Ellsworth Road Sewer – Williams Field Road to Old Pecos Road**

**Greenfield Water Reclamation Plant Expansion**

**Pecos Road Relief Sewer – Ellsworth Road to Power Road**

**Rittenhouse Sewer Phase II – Power Road to East Mesa Interceptor**

**Warner Road Sewer – Power Road to Ellsworth Road**

**Wastewater Infrastructure Improvements at Northeast Area of Gateway Airport**

**Wastewater Oversize and Extensions**

**Williams Field Road Sewer – Ellsworth Road to Mountain Road**

## Wastewater System Projects

### Customer Demand – Citywide

*The City would continue to invest in infrastructure in established areas of Mesa to support infill, redevelopment, and new economic development projects. New infrastructure would support customer demand and may leverage commercial economic development opportunities.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

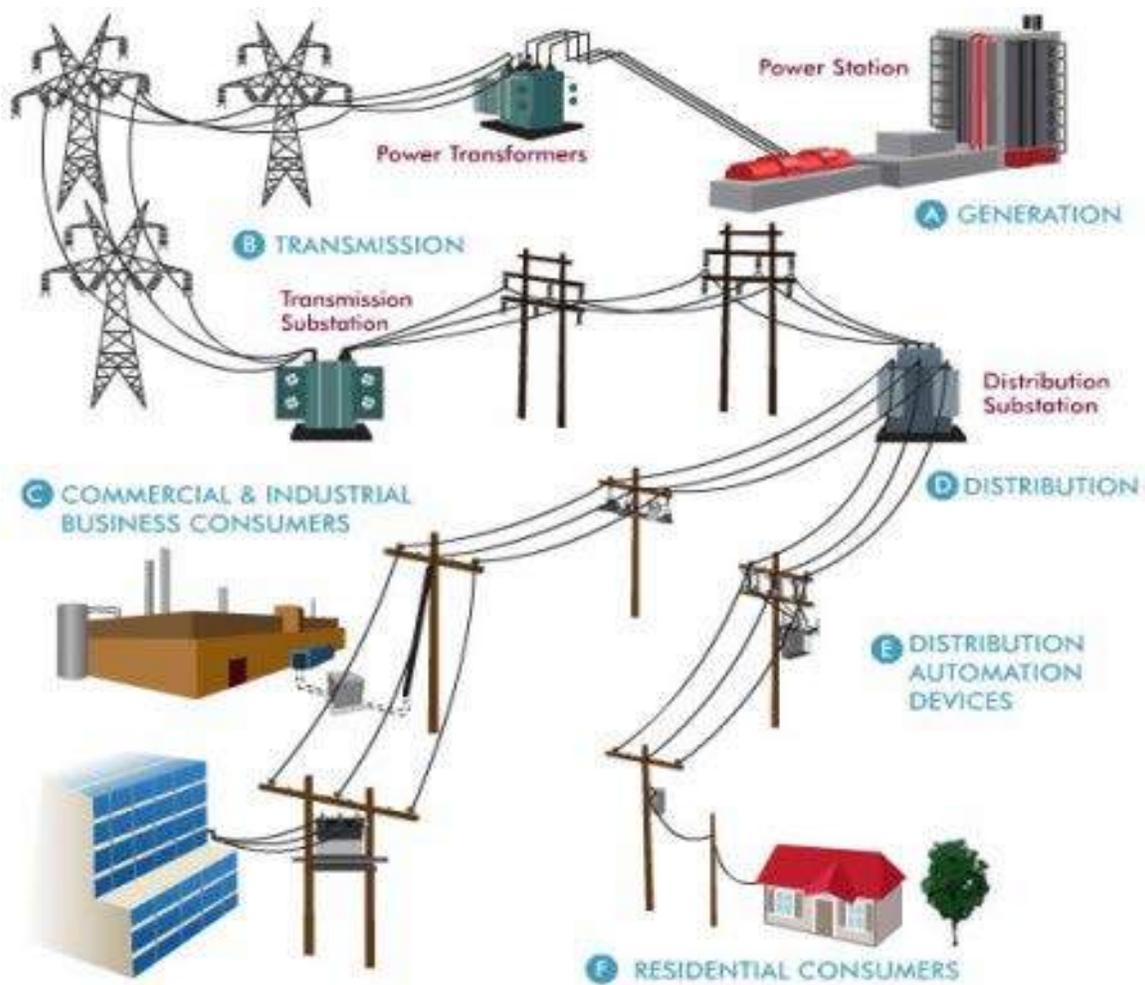
### Septic to Sewer Program

## Electric System

Lifecycle Replacement	\$8.7 million
System Reinforcement	\$12.5 million
Customer Demand	\$5.8 million

*Dollar amounts shown are estimates based on the types of projects planned.*

### Electric Generation/Transmission/Distribution System



## Electric System Projects

### Lifecycle Replacement

*Replacement of infrastructure in order to support reliable system operation and efficient, uninterrupted delivery of service to customers.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

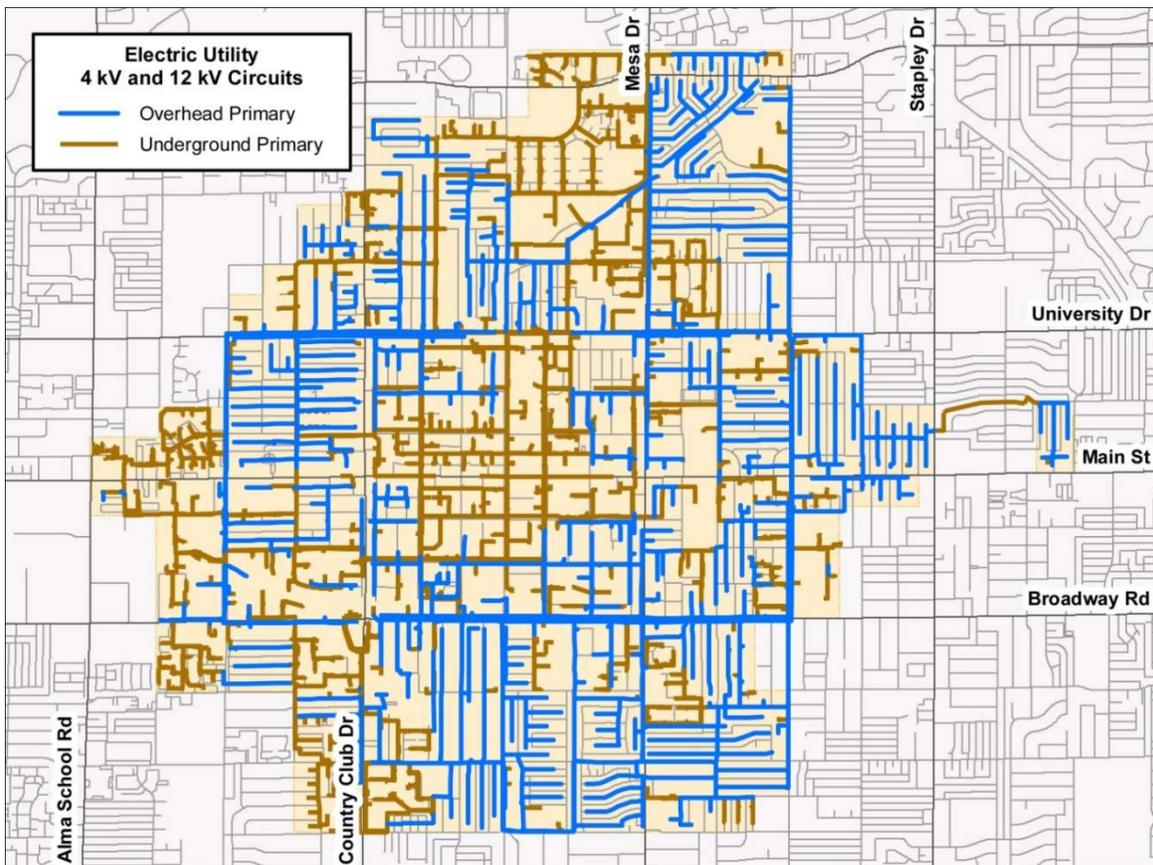
### Electric Distribution – Overhead

### Electric Metering

### Electric Substation Improvements

### Electric Transmission

The City of Mesa electric utility provides service to the approximately five square miles shown below. The remainder of the City is served by Salt River Project.



## Electric System Projects

### System Reinforcement

*Capital improvements that enhance the reliability and resilience of the system.*

*Example:*

*Underground electric distributions systems can be safer and more reliable than comparable overhead systems*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### Electric Distribution – Underground

#### Electric Generation

#### Mesa Drive: 8th Avenue to Main Street

## Electric System Projects

### Customer Demand

*Projects that support customer demand and leverage commercial economic development opportunities. Possible opportunities include both redevelopment and infill projects.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

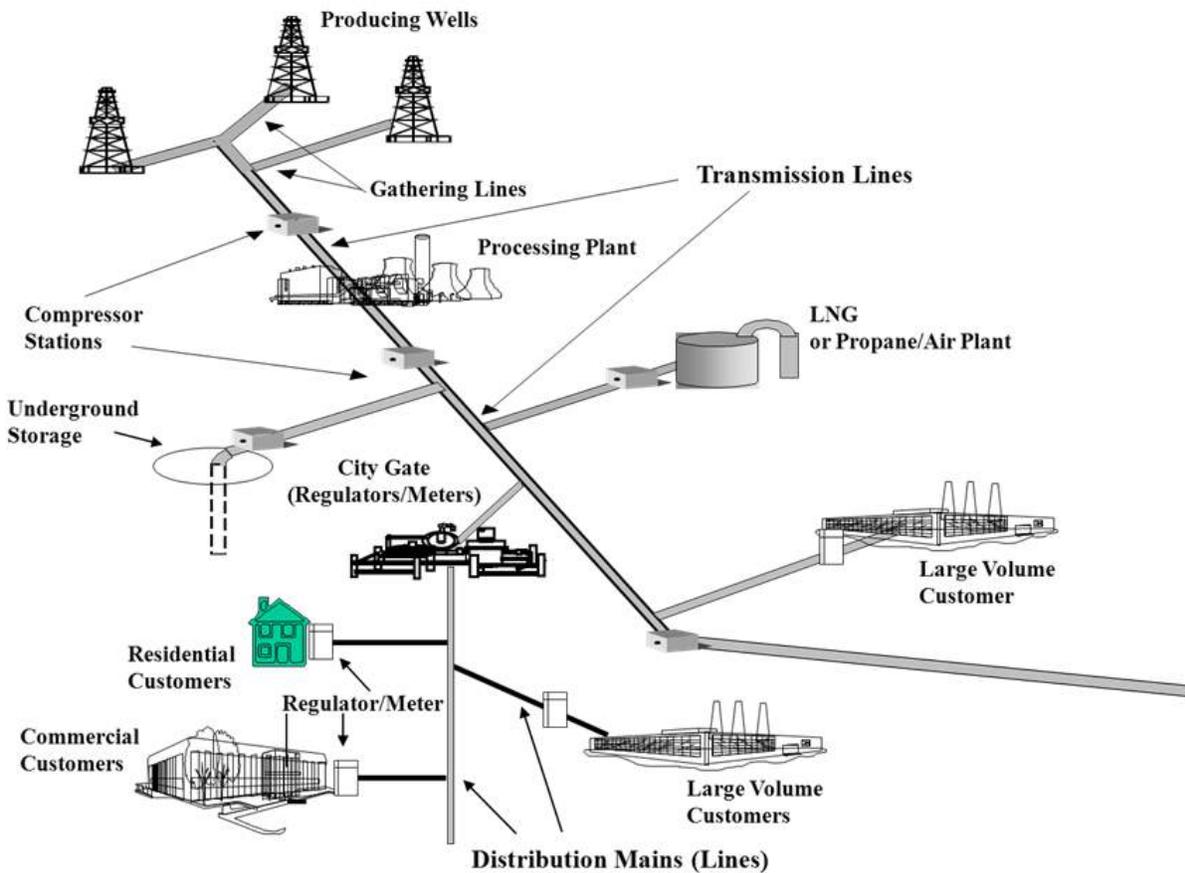
### Electric – New Services

## Natural Gas System

Lifecycle Replacement	\$22.6 million
System Reinforcement	\$12.3 million
Customer Demand	\$24.2 million

*Dollar amounts shown are estimates based on the types of projects planned.*

### Natural Gas Production/Transmission/Distribution System



## Natural Gas System Projects

### Lifecycle Replacement

*Replacement of infrastructure in order to support reliable system operation and efficient, uninterrupted delivery of service to customers.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### Aging Infrastructure Replacement

#### Gas Main Replacements – Magma Service Area

#### Infrastructure Replacement – Quarter Section 91D

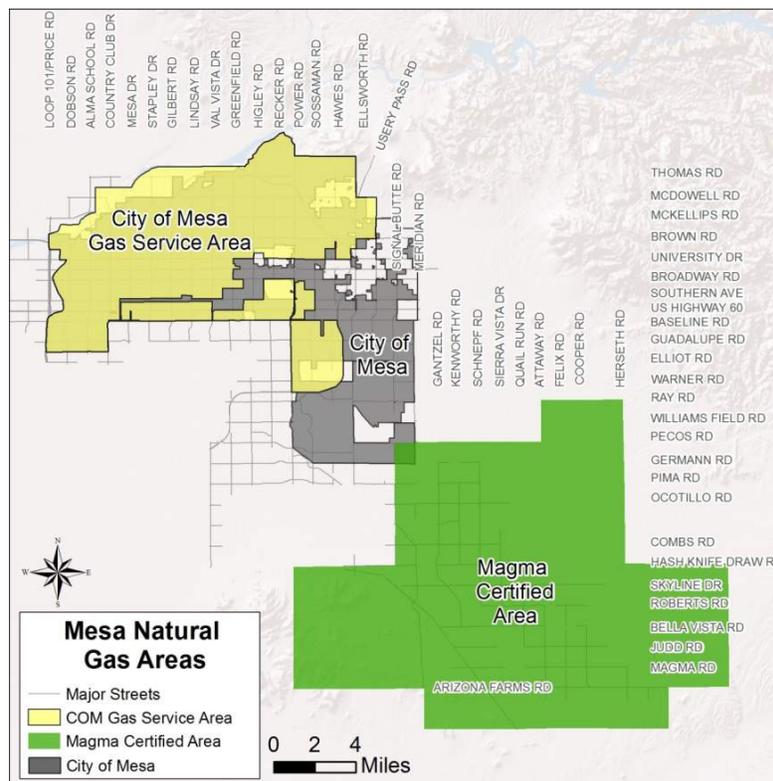
#### McKellips Road and Val Vista Drive Intersection Improvements

#### Mesa Drive: Main Street to University Drive

#### Southern Avenue & Country Club Drive Intersection Improvements

#### Southern Avenue and Stapley Drive Intersection Improvements

The City of Mesa provides natural gas service to a large portion of the City and to the Magma service area located in Pinal county. The two service areas are shown in yellow and green on the map below.



## **Natural Gas System Projects**

### **System Reinforcement**

*Capital improvements that serve to enhance the reliability and resilience of the system.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### **Cooper Road Gas Main Replacement**

#### **District Regulator Station Security**

**District Regulator Station; Greenfield Road and McDowell Road**

**District Regulator Station; Hawes Road, McKellips Road, to Hermosa Vista Drive**

**District Regulator Station; Higley Road, McDowell Road to Thomas Road**

**District Regulator Station; Power Road and Elliot Road**

**District Regulator Station; Skyline Drive at Circle Cross Ranch**

#### **High Pressure Gas Main Installations**

**Meridian Road and Combs Road Pipe Replacement**

**Meridian Road and Queen Creek Road Gas Regulator Station 97 Redesign**

**Meridian Road Intermediate Pressure Cross-Tie**

**Power Road and Brown Road Cross-Tie**

**SCADA System for Natural Gas Distribution**

**Southern Avenue: Greenfield Road to 48th Street**

## Natural Gas System Projects

### Customer Demand

*Projects that support customer demand and may leverage commercial economic development opportunities. Possible opportunities include both redevelopment and infill projects.*

*Below is a list of projects that is representative of the types of projects that are planned. Actual projects are subject to change based on the priorities of the City and available funding.*

### Gas Meters

#### Gas System New Mains

#### Gas System New Services

#### Magma Communications Tower Upgrade

#### Magma Service Area Utility Service Center

#### McDowell Road: 80th Street to Hawes Road

#### McKellips Road: North Boulder Mountain Road to 98th Place