

# Gila County

## Energy Conservation Project

July 30, 2013

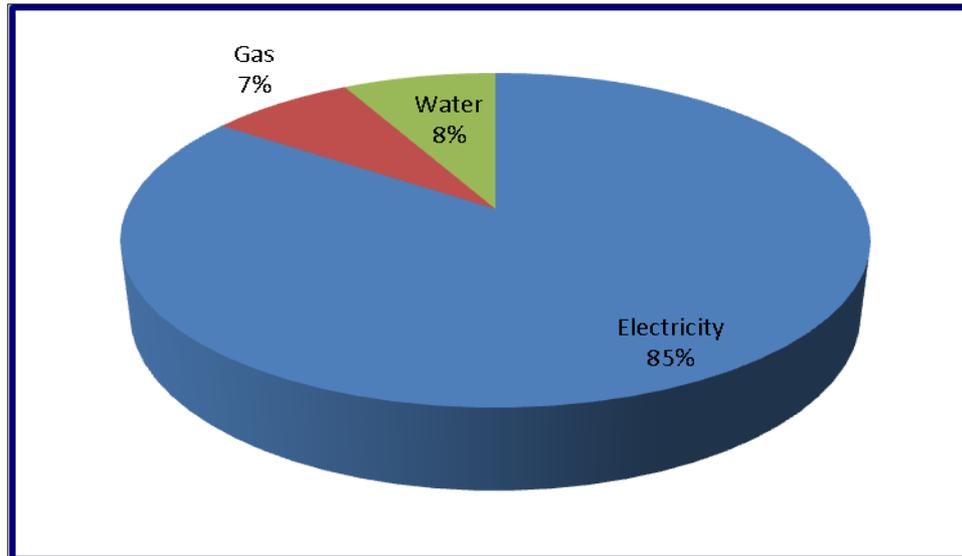


# Facilities Included in Audit

| Facility                        |
|---------------------------------|
| <b>Globe Facilities</b>         |
| Courthouse                      |
| Sheriff & Jail                  |
| Women's Dorm                    |
| Juvenile Detention Center       |
| Guerrero Complex                |
| Central Heights Complex         |
| Fairgrounds (Exhibit Hall Only) |
| New Operations Facility         |
| Michaelson Building             |
| <b>Payson Facilities</b>        |
| Payson Complex                  |
| Roosevelt Substation            |
| Sheriff's Office                |
| Public Works                    |
| Transportation                  |

# Utilities Snapshot

| Utility       | Existing Annual Costs | Proposed Annual Cost Avoidances | Reduction  |
|---------------|-----------------------|---------------------------------|------------|
| Electricity   | \$ 440,776            | \$ 65,291                       | 15%        |
| Natural Gas   | \$ 38,801             | \$ 1,255                        | 3%         |
| Water         | \$ 41,161             | \$ 18,778                       | 46%        |
| <b>Total:</b> | <b>\$ 520,738</b>     | <b>\$ 89,011</b>                | <b>17%</b> |



# Features and Benefits

- **Controls System Upgrade (Courthouse and Central Heights)**
- **Lighting Upgrades (3,809 Fixtures)**
- **Water Conservation (361 Fixtures)**
- **Local Job Creation**
- **Environmental Benefits**
- **Ameresco Guaranteed Savings**
- **Budget Neutral**



# Energy Conservation Measure Matrix

Table 4-1. ECM Matrix

|         |                            | GLOBE FACILITIES       |                             |                   |                    |                  |                         |                                 |                         | PAYSON FACILITIES   |                |                      |                         |                     |                            |
|---------|----------------------------|------------------------|-----------------------------|-------------------|--------------------|------------------|-------------------------|---------------------------------|-------------------------|---------------------|----------------|----------------------|-------------------------|---------------------|----------------------------|
| ECM No. | Description                | Gila County Courthouse | Globe Sheriff's Office Jail | Women's Detention | Juvenile Detention | Guerrero Complex | Central Heights Complex | Fairgrounds (Exhibit Hall & RV) | New Operations Facility | Michaelson Building | Payson Complex | Roosevelt Substation | Payson Sheriff and Jail | Payson Public Works | Payson Transportation Dept |
| 1       | Lighting/Lighting Controls | X                      | X                           | X                 | X                  | X                | X                       | X                               | X                       | X                   | X              | X                    | X                       | X                   | X                          |
| 2       | Water Retrofit             | X                      | X                           | X                 | X                  | X                | X                       | X                               |                         | X                   | X              | X                    | X                       | X                   | X                          |
| 3       | Direct Digital Controls    | X                      |                             |                   |                    |                  | X                       |                                 |                         |                     |                |                      |                         |                     |                            |

# Lighting Retrofit

- Retrofit 3,809 fixtures at 14 sites
- T-12 Fluorescent Lamps to T-8
- De-Lamp Select Fixtures Through the Use of Reflectors (1,062)
- Install Compact Fluorescent Technology (159)
- Install Occupancy Sensors (375)
- Install LED Technology (86)
- Implement Exterior Lighting Upgrades

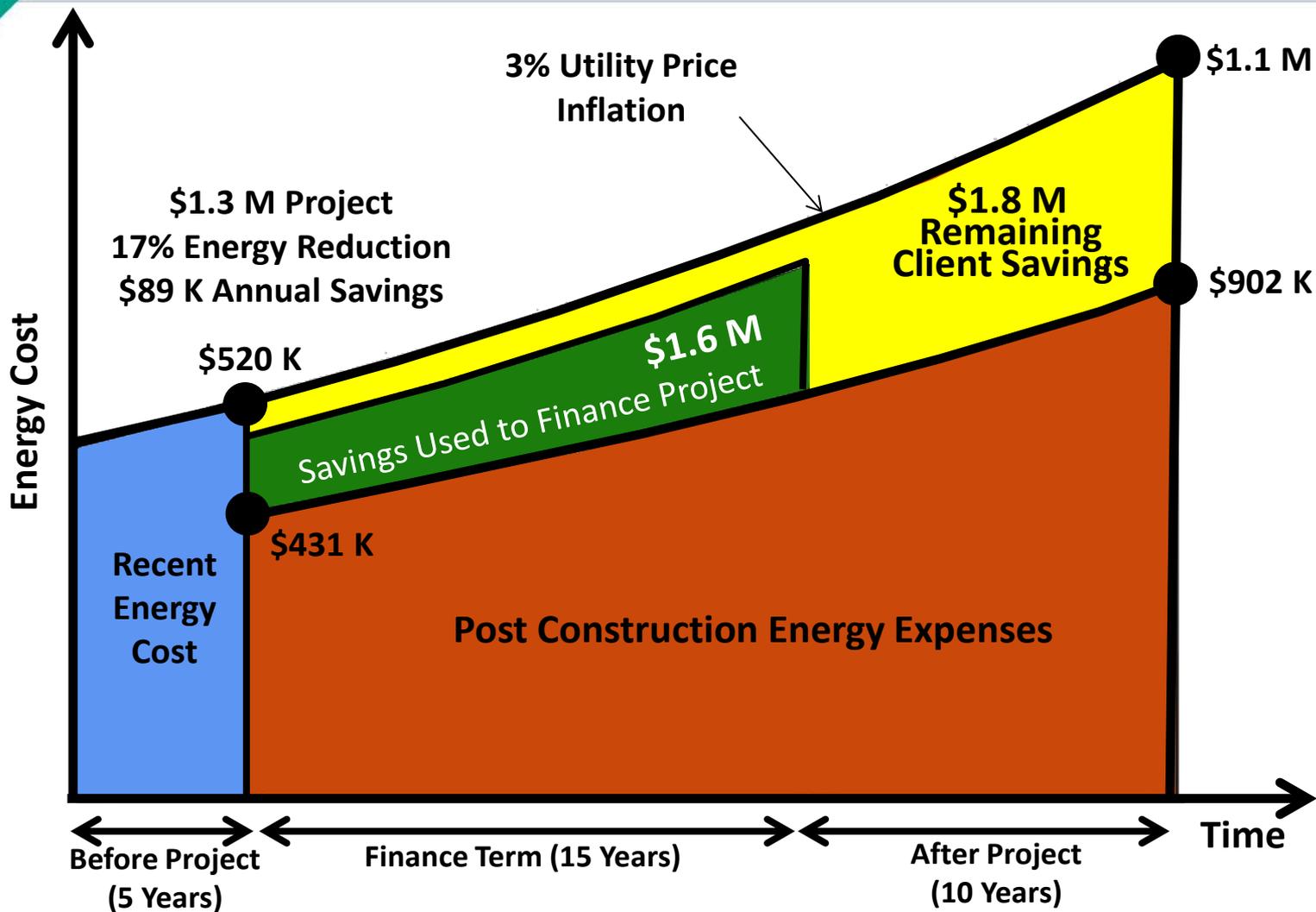


# Project Financial Snapshot

- Estimated Annual Utility Savings: **\$ 85,324**
- 15 Year Project Savings: **\$ 1,668,221**
- Estimated Project Cost: **\$ 1,338,980**
- Estimated Potential Rebates: **\$ 79,034**
- Average Annual Lease Payment: **\$ 105,541**
- Financing Term Length: **15 Years**
- Annual Estimated Financing Rate: **3.25%**



# Performance Contracting Cash Flow



## Additional Program Benefits

- All Improvements are Fully Funded by Guaranteed Reductions in Utility Cost – No Capital Costs for New Equipment
- Reduced Maintenance and Repair Costs during Equipment Warranty
- Project Savings are based on 2010 – 2011 Utility Costs with 3% annual escalation based on Historical Consumer Price Index Data 20 yr. Average
- Impact of APS requested 15% Electric Rate Increase not included in current cost reduction

# Environmental Benefits

Table 6-1. Environmental Impact

| Type of Pollution                | Pollutants Reduced   |
|----------------------------------|----------------------|
| <b>Carbon Dioxide Eliminated</b> | <b>1,125,628</b> lbs |
| <b>Sulfur Dioxide Eliminated</b> | <b>642</b> lbs       |
| <b>Nitric Oxide Eliminated</b>   | <b>1,037</b> lbs     |

Table 6-2. Reduction Equivalents

Reduction is equivalent to...



annual greenhouse gas emissions from removing **98** passenger cars from the road, or



CO<sub>2</sub> emissions from **56,640** gallons of gasoline consumed per year, or



CO<sub>2</sub> emissions from the energy use of **70** typical American homes for one year, or



planting and growing **14,020** trees per year for 10 years, or



greenhouse gas emissions avoided by not landfilling **175** tons of waste.

# Thank You

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