Alamo Area Regional Radio System (AARRS) Update

INTRODUCTION BY:
Dr. Cris Eugster
COO

PRESENTED BY:
Rudy Garza
Senior VP Distribution Services & Operations, Energy Delivery Services

Vivian Bouet
Interim CIO, Enterprise Information Technology

February 18, 2019

Informational Update
AGENDA

• STRATEGIC PARTNERSHIP
• AARRS OVERVIEW
• AARRS COMPONENTS
• AARRS TIMELINE
• CONNECTION OVERVIEW
• COST-RECOVERY APPROACH
• DESIGN APPROACH
STRATEGIC PARTNERSHIP

• Collaboration between local agencies provides value to the community
• Opportunity for future initiatives to support SmartSA
AARRS OVERVIEW

• Jointly built, owned & operated:
  • City of San Antonio 56%
  • CPS Energy 22%
  • Bexar County 22%

• CPS Energy Board approved $22M in January 2018 to construct land based radio system between 2019-2021

• Benefits include:
  • Improved radio coverage
  • Interagency interoperability in emergency situations
  • Forecasted lower construction and operations costs

• Primary users: City police, County sheriffs, fire, emergency first responders, CPS Energy first responders, troubleshooters, and field teams
<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Tower Sites</td>
<td>Locations that have one or more antennas connected to a radio base station</td>
</tr>
<tr>
<td>Communication Connections</td>
<td>Connects radio tower sites, controllers, &amp; consoles that carry data which enables radio communications</td>
</tr>
<tr>
<td>Control Panels &amp; Consoles</td>
<td>Locations with dispatch consoles for monitoring &amp; communication to devices</td>
</tr>
<tr>
<td>Radios &amp; Field Devices</td>
<td>Mobile devices used for radio communications</td>
</tr>
</tbody>
</table>
AARRS TIMELINE

<table>
<thead>
<tr>
<th>CY 2018</th>
<th>CY2019</th>
<th>CY2020</th>
<th>CY2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS Energy Board Approved</td>
<td>Design Approved</td>
<td>Construction &amp; Installation Q1’19-Q2’20</td>
<td>System &amp; Coverage Testing Q2’20-Q2’21</td>
</tr>
<tr>
<td>JAN ‘18</td>
<td>JAN ‘19</td>
<td>Build Out AARRS Connections</td>
<td>Cutover Q2-Q3’21</td>
</tr>
</tbody>
</table>

AARRS
CPS Energy
CONNECTION OVERVIEW

Currently:

- CPS Energy provides connection for City/County radio system
- AARRS requesting CPS Energy to provide connection for new system because of:
  - ✔️ Reliability
  - ✔️ Resiliency
  - ✔️ Security

Going Forward:

- Will recover cost of construction & support
- Finalize agreement with AARRS & CoSA
COST-RECOVERY APPROACH BASED ON EQUIPMENT & CORE NETWORK UTILIZATION

• Includes recovery for:
  • Capital:
    • Electronic equipment
  • Operations & maintenance:
    • Equipment maintenance
    • Monitoring & troubleshooting
    • Repairs
    • Contingency
• Reoccurring true-up to actuals
## DESIGN APPROACH

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Design Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Stability</td>
<td>3-year true up to actuals</td>
</tr>
<tr>
<td></td>
<td>Contingency funds</td>
</tr>
<tr>
<td>Connection Reliability</td>
<td>Historical performance</td>
</tr>
<tr>
<td></td>
<td>Pro-active capacity planning</td>
</tr>
<tr>
<td></td>
<td>Life-cycle management</td>
</tr>
<tr>
<td>Access Protection</td>
<td>Standard security procedures</td>
</tr>
<tr>
<td></td>
<td>Integrated security monitoring &amp; response plan</td>
</tr>
</tbody>
</table>
Thank You
AARRS Component Legend

- **Circuit** - Two network ports that have been configured to transmit data packets directly. *Unit of measure for cost recovery.*
- **Controller Site** - A location that has radio network controllers installed.
- **Radio Site** - A location that has one or more antennae’s connected to a radio base station.
- **Console Site** - A location with dispatch consoles for monitoring and communication to devices.
- **Microwave Site** - A location that has microwave equipment used to create connections to remote radio sites.

Circuit - Two network ports that have been configured to transmit data packets directly. *Unit of measure for cost recovery.*

Controller Site - A location that has radio network controllers installed.

Radio Site - A location that has one or more antennae’s connected to a radio base station.

Console Site - A location with dispatch consoles for monitoring and communication to devices.

Microwave Site - A location that has microwave equipment used to create connections to remote radio sites.