State Radio Sustainable Funding

Proposal for Consideration

South Dakota Public Safety Communications Council

10/24/2018

A proposal to replace a portion of State Radio general funds with a sustainable funding source that will allow for the operations and maintenance/upgrade of the statewide public safety radio network.

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Executive Summary

Radio communications for public safety in South Dakota have been in use from the 1940's to present and is integral to the operations of those who protect and serve the public.

During the 1970's to 1990's communication between state, local, tribal, and federal first responders had become fractured because of the lack of a modern infrastructure in the state. This lack of radio coordination resulted in interoperability issues between the different levels of first responders, becoming painfully apparent during disasters.

The Spencer tornado response of 1998 highlighted these communications difficulties, and eventually drove the introduction of HB1292 during the 1999 legislative session creating a single unified communications system for first responders.

In October of 2003 the system of 35 networked sites was made available for first responders. Over the past 14 years the system has grown to 54 sites utilized by around 20,000 state, local, tribal, and federal radios, with an average of over 2,000,000 calls per month.

The technology underpinning the system is now 17 years old and components of the current operating platform will be out of support and need to be updated by 2023. This technology update will replace the balance of the components not updated in earlier planned phases of this process. The quoted (10-2017) cost for this final phase is $9,241,839.

The radio system governing body, (South Dakota Public Safety Communications Council or SDPSCC) has observed the cyclic fiscal nature of maintaining such a large and comprehensive system, and the issues associated with the request of one-time general funds to expand the system to meet the users' needs. The SDPSCC has determined that the flexibility of a sustainable funding mechanism and revolving fund better fits the dynamic nature of maintaining such a critical system. This document outlines the sustainable method proposed by the SDPSCC to provide a long-term funding model and a reduced dependence upon state general funds.

Looking ahead at the future of Land Mobile Radio (LMR) communications? Technologies such as FirstNet and the advancing commercial wireless industry show promise as an auxiliary service, but the industry in general agrees that first responders will continue to use voice delivered over an LMR system as the primary means of communication for that group for the foreseeable future. Factors lacking in commercial systems such as rural coverage, the ability to communicate user to user without requiring a network or system, and a form factor that fits how first responders operate will drive current LMR system operators to maintain and upgrade those systems.

I. Current Network Funding

The current funding for the State Radio program is sustained by an annual request to the legislative body for general funds to maintain the network. In the past there has not been in place a depreciation mechanism to replace or update components of the network as the system requires, and requests for additional funding to the base or other financing methods were required for each additional upgrade.

The current State Radio general fund budget is broken out as follows:

Personal Services: $773,154
Travel: $95,250
Contractual Services: $1,181,600
Supplies and Materials: $119,550
Capital Assets: $609,543
Other: $300,000
Total: $3,079,097

In basic terms, this budget "keeps the lights on". This involves keeping the network operational, paying the utilities, and paying the salaries of those working to keep the network operational. Because of the cyclic nature and very high cost of technology refreshes and significant repairs, this method is not well suited to managing the technology as there is no means to accommodate peak cyclic or emergency demands without additional requests.

II. Upcoming Network Requirements

The current system and certain components will fall out of vendor support by 2023. The one-time cost to bring the network hardware and software up to current standards is estimated at **$9,241,839**.

We have been working with our system vendor to provide us an avenue for the future that levelled out the cyclic cost nature of technology that we utilize. To provide a more stable budget, the vendor has proposed a solution that would keep the system hardware and software current ongoing with a maintenance agreement. The estimate for this program is **$900,000 annually**. Unless other provisions are made, a one-time request of $9.2M+ and a recurring request of $900,000 in general funds will be made in the 2023 budget request for State Radio.

III. Existing Obligations

In keeping with the cyclic nature of maintaining complex communications systems, upgrades were required to the system between 2012 and 2014. A total of $12,324,945 was expended to

upgrade the network control equipment, connected dispatch consoles, and radio repeaters at the tower sites. This funding was secured through a municipal lease/buyback program, with an annual payment of **$821,663**. The final payment is scheduled for July 2028, and the principle balance as of 7-1-2018 was **$6,686,378.**

IV. Researching Funding Methods

The Bureau of Information/State Radio Communications was requested by the Appropriations Committee during the 2017 legislative session to "return with a plan" for sustainable funding. As the representative governance for the communications system, the SDPSCC is responsible for determining an equitable means of providing that plan, and has been involved in the research and determination of the methodology. The process to develop a plan required research into what other states were utilizing to provide a sustainable funding source to maintain their interoperable radio networks. The most common methods of sustainable funding encountered were user fees, telephone line surcharges, and a booking/citation surcharge.

A. User Fees

User fees are a common source of revenue utilized by a number of states to support their communications networks. This means of financing puts the burden of funding on the agencies providing the services, rather than those receiving the services. Rates are assessed by either an annual or monthly rate, or some states employ a usage-based rate. Michigan and Ohio are examples of states utilizing this revenue source.

B. Telephone Line Surcharge

Telephone line surcharge revenue for the maintenance of statewide communications systems are sometimes referred to as "the other half of a 911 call". The public to 911 dispatch communication is typically recognized as the "initial 911 call", with the dispatch to responder providing assistance as the completion of that call. Rates vary greatly across the states that do utilize this revenue source. Minnesota and Utah are two regional examples of states using this approach.

C. Citation/Booking Surcharges

A less commonly used method of system funding is the use of a surcharge on traffic citations and jail booking fees. Florida utilizes this method to augment their statewide radio network budget. This is an approach that typically is better suited to high population areas.

V. SDPSCC Plan Recommendation

The SDPSCC had three primary considerations, what to fund, how to fund that, and how/when to implement. During the June 2018 meeting the SDPSCC accepted a motion for and passed by voice vote to request a $.42 surcharge per the calculations below.

A. What to Fund

The SDPSCC decided that the most appropriate elements to request funding from a sustainable source were those components that directly impacted the network itself and those using it. The suggested budget was broken out as:

Administration

Administrative costs are those associated with the management and personnel needed to provide available and reliable operations. Those costs include, but are not limited to: personnel, travel, office space, supplies & maintenance and training. Those items in the current BIT/State Radio budget total **$1,035,804.**

Administration

510101-510209	Personal Services	773,154
520301-520315	Travel	95,250
520418	Computer Services	18,000
520416	Workshop Registration	3,500
520420	Central Services	70,000
520423	Janitor & Maintenance	35,000
520449/520451	Space Rental & Storage	34,000
520502	Office Supplies	2,500
520505	Buildings & Grounds Supplies	2,000
520506	Janitor Supplies	750
520535	Postage	1,000
520533	Reference Materials	100
520537	Clothing	250
520531/520532	Printing	200
520455	Garbage & Sewer	100
		1,035,804

Operations

Operational costs are those that directly impact the delivery of the services to the users of the system. Those costs include but are not limited to: engineering services, system hardware and software vendor support, utilities and telecommunications costs associated with the tower sites, site building and tower maintenance, repairs parts & supplies, generator fuel, and required test equipment. This amount also covers the municipal lease/buyback payments from earlier planned phases of the upgrade. Those items outlined in the Current BIT/SRC budget total **$2,043,293.**

520407	Engineering & Consultant	30,000
520434	Computer Software Maintenance	260,000
520453	Telecommunications Services	550,000
520454	Electricity	125,000
520457	HVAC repairs	1,500
520458	Shipping	1,000
520459	Insurance premiums	6,750
520462	Taxes & Licensing	1,000
520496	Other Contractual	250
520507	Lumber & Lumber Supplies	250
520508	Hardware Supplies	5,000
520509	Painting Supplies	250
520525	Radio/TV Supplies	100,000
520545	Vehicle Maintenance	1,750
520551	Heating Fuel	3,000
520555	Safety Devices	250
520556	Rock, Sand, Gravel	500
520559/520560	Maintenance Supplies	1500
520580	State Shop Gas	250
520721	Tower & grounds improvements	12,043
520790/520796	Computer Hardware/Software	26,000
520767	Monitoring Equipment (Audio/Visual)	12,000
520785/520822	Equipment Lease/Purchase	850,000
520749	Telephone Equipment	2,500
520746/520782	Maint/Test equipment	7,500
520422	Equipment Maintenance	45,000
		2,043,293

Update/Growth (FY24 & beyond)

It is the intent of the SDPSCC to "normalize" the network budget for the statewide radio system. Looking ahead, the network utilizes towers dating back to the 1960's & 1970's that are approaching end of life. In addition to the existing infrastructure there are areas of the state that are underserved and additional sites are required to address those areas. In order to level out the cyclic nature of supporting a large system, the state has been offered a maintenance plan that would provide future hardware and software updates, allowing for a predictable, long-term budget. The annual estimated budget for these items is **$1,368,000.**

System Update-Automatic (SUA)	900,000
Add-One Site/Year	500,000
Add-One Tech (Depending on growth)	80,000
Replace 1 Obsolete Tower/Year	100,000
Remove current support for SUA	-212,000
	1,368,000

The alignment with the goals to keep the sustainable fees related to system operations and expansion led the SDPSCC to include the combined operations and Update/Growth budget as a target for a sustainable funding number. That figure is subject to change or modification based upon the path ahead, but for budgeting purposes the figure is **$3,411,293**.

B. How to Fund the Plan

Applying the target figure of $3,411,293 to the three identified methods for generating sustainable funding:

B.1 User Fees

Dividing the current number of radios into the target figure for sustainable funding, the estimated fee annually per radio would be $171.76. The concern with this funding method is that radios not used on a daily basis or maintained for emergencies might be removed from the system to reduce agency costs. This potentially could increase the cost of the remaining radios and be a less-stable revenue source.

B.2 Telephone line Surcharge

The number of telephone lines and devices in the state subject to the 911 charges is listed in the South Dakota 911 Commission annual report. The 2016 report indicated that 816,110 lines and devices were subjected to the 911 surcharge. Dividing the target revenue figure by the number of lines/devices results in an approximate figure of $.35 a month per device and line.

B.3 Citation/Booking Fee Surcharge

The 103,993 average for traffic citations over the past 3 years would not make this approach feasible as it would add another $33 per citation.

B.4 SDPSCC Recommendation

The SDPSCC recommended the telephone line surcharge as they felt it was the least burdensome and the most equitable for the public served by first responders utilizing the radio system.

C. Potential for Solution

$.42 per line/device would accumulate:
FY21 $4,113,194
FY22 $6,183,095
FY22 $8,252,996
FY23 $10,322,897

This remaining level of approximately $1.08M would accommodate inflationary changes in the current operating budget and increases on the upgrade quoted in 2017. After the 2024 Fiscal Budget year, this amount would support the anticipated operating and ongoing upgrade costs.
Points to consider:

- The upgrade figure of $9,241,839 was as an engineered estimate in 2017.
- Each site we add is another $20,000 in direct costs + additional vendor support.
- Depending upon the location and number of FirstNet sites added in the state, our capital costs may be less and operational more if we can lease sites rather than build.
- Depending upon the integration of LTE and LMR, there may be some efficiency we can garner from that.
- This process has been in place starting in 2011. Earlier planned upgrades have been implemented in an effort to reduce the one-time impact in 2023. All system users have been informed of the requirement to upgrade or replace their radios, hopefully allowing agency budgets to accommodate that requirement over a period of years rather than in an emergency situation.
- Without the upgrade, after 2023 in the event of a system failure we can no longer be assured of having the parts to return to service, and have been formally notified by the vendor that no technical assistance will be available.