

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2019-2021 Biennium **Version: AF - AGENCY FINAL REQUEST**

IT Project : Radio Transmission Project

General Section

Contact Name : Ling Ling Sun	E-mail : lsun@NETnebraska.org	Agency Priority : 1
Address : 1800 North 33rd St	Telephone : 402-472-9333	NITC Priority :
City : Lincoln		NITC Score :
State : Nebraska	Zip : 68503	

Expenditures

IT Project Costs	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
Contractual Services						
Design	0	0	0	0	0	0
Programming	0	0	0	0	0	0
Project Management	0	0	0	0	0	0
Data Conversion	0	0	0	0	0	0
Other	0	0	0	0	0	0
Subtotal Contractual Services	0	0	0	0	0	0
Telecommunications						
Data	0	0	0	0	0	0
Video	0	0	0	0	0	0
Voice	0	0	0	0	0	0
Wireless	0	0	0	0	0	0
Subtotal Telecommunications	0	0	0	0	0	0
Training						
Technical Staff	0	0	0	0	0	0
End-user Staff	0	0	0	0	0	0
Subtotal Training	0	0	0	0	0	0

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Expenditures

IT Project Costs	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
Other Project Costs						
Personnel Cost	0	0	0	0	0	0
Supplies & Materials	0	0	0	0	0	0
Travel	0	0	0	0	0	0
Other	0	0	0	0	0	0
Subtotal Other Project Costs	0	0	0	0	0	0
Capital Expenditures						
Hardware	376,000	0	0	260,000	116,000	0
Software	0	0	0	0	0	0
Network	0	0	0	0	0	0
Other	14,000	0	0	10,000	4,000	0
Subtotal Capital Expenditures	390,000	0	0	270,000	120,000	0
TOTAL PROJECT COST	390,000	0	0	270,000	120,000	0

Funding

Fund Type	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
General Fund	390,000	0	0	270,000	120,000	0
Cash Fund	0	0	0	0	0	0
Federal Fund	0	0	0	0	0	0
Revolving Fund	0	0	0	0	0	0
Other Fund	0	0	0	0	0	0
TOTAL FUNDING	390,000	0	0	270,000	120,000	0
VARIANCE	0	0	0	0	0	0

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EXECUTIVE SUMMARY:

NET is requesting an appropriation to replace an aging FM antenna and aging feed line at KTNE (Alliance) and also the aging feed line at KRNE (Merriman). The antenna at KTNE is 28 years old and needs to be replaced. Transmission line repairs at KTNE over the last two years totaled \$56,443 and KRNE repairs have totaled \$44,000 over the last four years. Replacing this equipment and older components would be done to reduce rising maintenance costs and to eliminate downtime. Also, the NET FM system is the State of Nebraska's primary relay system for the Emergency Alert System. Total costs for this project are estimated at \$390,000, split \$270,000 in FY2020 for KTNE with the remaining \$120,000 in FY2021 for KRNE.

Delaying the completion of this final phase any further would continue to increase off-air downtime at these sites and increase annual operating expenses for repairs, maintenance and supplies. The project would begin the summer of 2019 and proceed through the fall (weather and tower crews permitting) at KTNE. Work on the KRNE site would begin summer of 2020 and run through the fall of 2020. Delaying the work heightens the risk that tower crews will be difficult to schedule and may be more expensive due to on-going demand related to spectrum repacking adjustments on television towers and a nationwide shortage of tower crews.

GOALS, OBJECTIVES, AND OUTCOMES (15 PTS):

The goal is to replace the 28 year old antennas and feed line at KTNE (Alliance) and also aging feed line at KRNE (Merriman). The NET Radio listeners, Nebraska commercial broadcasters and Nebraska residents relying on "over the air" Emergency Alerts will benefit from this project. The replacement of the FM antennas and feed lines will increase reliability and reduce operating costs. The measurement and assessment methods will be monitoring and feedback from NET Radio listeners and Nebraska commercial broadcasters that use NET Radio as their primary EAS monitoring station. The project should positively impact the NET operating budget by reducing annual maintenance costs.

This project is being done to maximize the reliability and uptime of the radio system NET has the obligation of managing on behalf of the State of Nebraska.

PROJECT JUSTIFICATION / BUSINESS CASE (25 PTS):

NET has a statutory requirement to provide broadcast services as well as distribute emergency notifications across the state of Nebraska. Purchasing and installing new hardware will greatly increase reliability, efficiency, and reduce maintenance costs. NET intends to start these projects as soon as funds are available due to ongoing demands related to spectrum repacking adjustments on television towers and a nationwide shortage of tower crews. The nature of this project allows few solutions other than replacement of hardware. By doing nothing the broadcast areas will have interruptions in service performance for NET Radio and the State Primary and State Relay of the Nebraska Emergency Alert System (EAS). This Project is in compliance with the Nebraska Emergency Management Agency's (NEMA) Nebraska State EAS Plan, which states "The Nebraska SP/SR network is comprised of all Nebraska Educational Telecommunications Network radio transmitters, plus KVNO radio in Omaha. State Relay (SR) stations must be configured to automatically transmit statewide EAS alerts from the State Primary (SP) as quickly as possible."

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TECHNICAL IMPACT (20 PTS):

The project will replace 28 year old technology with new efficient and reliable hardware. NET has completed a multi-year project replacing all of the main FM Transmitters, and have documented a substantial reduction in maintenance costs while increasing network reliability. The replacement of the FM Antennas and Feed Lines will help complete the upgrade to the statewide system, maintain current coverage, reduce repairing cost, and increase reliability. The replacement will use the most recent industry standard technology and hardware. It should take these systems beyond the next decade. The replacement equipment is considered Industry Replacement Standard for this type of system. These systems are completely compatible with existing power and physical construction of NET's towers and buildings. Any significant upgrades to federally regulated towers would cause the structures to no longer be "grandfathered" under previous tower safety standards. The towers will have to be upgraded to the most current federal tower safety guidelines.

PRELIMINARY PLAN FOR IMPLEMENTATION (10 PTS):

NET is planning to purchase and install FM antennas and feed lines. NET is the project sponsor. NET Radio listeners and Nebraska commercial broadcasters that use NET Radio as their Primary EAS monitoring station are the stakeholders. NET will enter into contract with a qualified insured tower maintenance contractor to install the FM Antennas and Feed Lines. NET will act as the project manager for this project. The major deliverable for this project is the removal of the old system and replacement of the new system. The time frame for this work is eight (8) days per FM Antenna and Feed Line from receipt of system and getting the tower crew on site. Funds will be requested for KTNE being completed in FY2020 and KRNE to be completed in FY2021. No additional support is required, other than routine operational maintenance. No additional training or staff development is required. Operations will be seamless to present day workflow.

RISK ASSESSMENT (10 PTS):

The FM antenna and Feed Lines need to be replaced soon or NET Radio Listeners, Nebraska Commercial Broadcasters, and Nebraska residents relying on "over the air" Emergency Alerts will experience additional downtime and diminished reception. The broadcast industry is impacted by the FCC mandated repack and the availability of qualified manufacturers and installers and will be affected for new projects in next 3 years. This purchase will be made under the State Purchasing Guidelines to minimize risk. Any assistance with contractual parties will have bonded and insurance requirements to assure protection to the State of Nebraska.

FINANCIAL ANALYSIS AND BUDGET (20 PTS):

Total Cost is estimated at \$390,000. \$270,000 in FY2020 and \$120,000 in FY2021. See details in Financial Tab above. Also under Capital Construction Projects of this Budget System.

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