

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2017-2019 Biennium **Version: AF - AGENCY FINAL REQUEST**

IT Project : KHNE TV Transmitter

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	FY16 Appr/Reappr	FY18 Request	FY19 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

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2017-2019 Biennium **Version: AF - AGENCY FINAL REQUEST**

Expenditures

IT Project Costs	Total	Prior Exp	FY16 Appr/Reappr	FY18 Request	FY19 Request	Future Add
Other Operating 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 Operating Costs	0	0	0	0	0	0
Capital Expenditures						
Hardware	348,000	0	0	348,000	0	0
Software	0	0	0	0	0	0
Network	0	0	0	0	0	0
Other	17,000	0	0	17,000	0	0
Subtotal Capital Expenditures	365,000	0	0	365,000	0	0
TOTAL PROJECT COST	365,000	0	0	365,000	0	0

Funding

Fund Type	Total	Prior Exp	FY16 Appr/Reappr	FY18 Request	FY19 Request	Future Add
General Fund	365,000	0	0	365,000	0	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	365,000	0	0	365,000	0	0
VARIANCE	0	0	0	0	0	0

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2017-2019 Biennium **Version: AF - AGENCY FINAL REQUEST**

IT Project: KHNE TV Transmitter

EXECUTIVE SUMMARY:

NET seeks funding to replace the television transmitter at KHNE (Hastings). The present transmitter is a 21-year old Inductive Output Tube (IOT) liquid cooled model that was modified for DTV transmission in 2003. IOT transmitters are no longer manufactured and the tubes are very difficult to acquire. The IOT at KHNE was last replaced in 2014 with a spare tube that was shipped from France. The new solid state transmitter will be a much more energy efficient solid state transmitter which will be upgradeable to the impending ATSC 3.0 broadcast standard. Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. Any outage would also effect satellite and central Nebraska cable subscribers.

Attachments:

NITC KHNE TV Transmitter Replacement.doc

GOALS, OBJECTIVES, AND OUTCOMES (15 PTS):

The goal is to replace present IOT transmitter with a solid state television transmitter. Solid state television transmitter is more energy efficient and is more reliable. It will also be upgradable to the impending ATSC 3.0 broadcast standard. Replacing KHNE TV transmitter will allow us to maintain a reliable and sustainable broadcasts in central Nebraska for over the air dissemination and further redistribution by cable and DBS via over the air pickup. The measurement and assessment methods will be monitoring and feedback from NET viewers, local cable and DBS headend. The project should positively impact the NET operating budget which by reducing annual operating and maintenance costs. NET will build an efficient organization through advanced technology.

This project will recognize efficiencies in operating and maintenance cost, and utility savings.

PROJECT JUSTIFICATION / BUSINESS CASE (25 PTS):

The new solid state transmitter is energy efficient and reliable. It will reduce both operating and maintenance cost. NET viewer, local cable and DBS headend over the air pick up will benefit from increased uptime. The new transmitter will be upgradeable to the impending ATSC 3.0 broadcast standard.

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2017-2019 Biennium **Version: AF - AGENCY FINAL REQUEST**

IOT transmitters are no longer manufactured. The IOT and other parts are very difficult to acquire. Doing nothing will risk significant broadcast television service outages and incur high maintenance cost.

TECHNICAL IMPACT (20 PTS):

The present IOT transmitter is no longer manufactured and the tubes and other parts are very difficult to acquire. Solid state television transmitter is easier to maintain, energy efficient, it requires less maintenance and lower service cost.

The solid state transmitter is technologically future proof and upgradable to impending ATSC 3.0 standard, the new standard for TV transmission.

The new television transmitter meets industry standard and upgradable to ATSC 3.0 standard.

The new television transmitter is completely compatible with existing institutional infrastructure.

PRELIMINARY PLAN FOR IMPLEMENTATION (10 PTS):

NET is planning to purchase a solid state television transmitter, its installation and proof of performance thru competitive bidding process. NET is the project sponsor. NET Television viewers, local cable and DBS headend in central Nebraska are the stakeholders.

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 2 weeks from receipt of the system.

IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2017-2019 Biennium **Version: AF - AGENCY FINAL REQUEST**

No additional training or staff development is required for the replacement. Operations will be seamless to present day workflow. Operational familiarity to the new transmitter will be gained thru involvement of on-site transmitter installation and proof of performance.

No additional support is required, other than routine operational maintenance.

RISK ASSESSMENT (10 PTS):

Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. Any outage would also effect satellite and central Nebraska cable subscribers.

This purchase will be made under the State Purchasing Guidelines to minimize risk. Any assistance with contractual parties will have bonding and insurance requirements to assure protection to the State of Nebraska.

FINANCIAL ANALYSIS AND BUDGET (20 PTS):

Total Cost is estimated at \$365,000 in FY2018. See details in Financial Tab above. Also under Capital Construction Projects of this Budget System.

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests for Information Technology Projects

2017-2019 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. **ALSO NOTE** that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	KHNE TV Transmitter Replacement
Agency/Entity	NETC (Nebraska Educational Telecommunications Commission)

**Project Proposal Form
2017-2019 Biennial Budget**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission (“NITC”) is required by statute to “make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel...” Neb. Rev. Stat. § 86-516(8). “Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions.” Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at <http://nitc.ne.gov/standards/>. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the “IT Project Proposal” section. The tabs in the “IT Project Proposal” section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. **ALSO NOTE** that for each “IT Project Proposal” created in the NBRRS, the submitting agency must prepare an “IT Issue” in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

**Project Proposal Form
2017-2019 Biennial Budget**

General Information

Project Title	Replacement of IOT Transmitters
Agency (or entity)	NETC (Nebraska Educational Telecommunications Commission)

Contact Information for this Project:

Name	Ling Ling Sun
Address	1800 N 33rd
City, State, Zip	Lincoln, NE
Telephone	402-472-9333
E-mail Address	lsun@NETnebraska.org

Executive Summary

Provide a one or two paragraph summary of the proposed project. This summary will be used in other externally distributed documents and should therefore clearly and succinctly describe the project and the information technology required.

NET seeks funding to replace the television transmitter at KHNE (Hastings). The present transmitter is a 21-year old Inductive Output Tube (IOT) liquid cooled model that was modified for DTV transmission in 2003. IOT transmitters are no longer manufactured and the tubes are very difficult to acquire. The IOT at KHNE was last replaced in 2014 with a spare tube that was shipped from France. The new solid state transmitter will be a much more energy efficient solid state transmitter which will be upgradeable to the impending ATSC 3.0 broadcast standard. Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. Any outage would also effect satellite and central Nebraska cable subscribers.

Goals, Objectives, and Projected Outcomes (15 Points)

1. Describe the project, including:
 - Specific goals and objectives;
 - Expected beneficiaries of the project; and
 - Expected outcomes.

The goal is to replace present IOT transmitter with a solid state television transmitter. Solid state television transmitter is more energy efficient and is more reliable. It will also be upgradable to the impending ATSC 3.0 broadcast standard. Replacing KHNE TV transmitter will allow us to maintain a reliable and sustainable broadcasts in central Nebraska for over the air dissemination and further redistribution by cable and DBS via over the air pickup.

2. Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.

The measurement and assessment methods will be monitoring and feedback from NET viewers, local cable and DBS headend. The project should positively impact the NET operating budget which by reducing annual operating and maintenance costs.

**Project Proposal Form
2017-2019 Biennial Budget**

3. Describe the project's relationship to your agency comprehensive information technology plan.

NET will build an efficient organization through advanced technology. This project will recognize efficiencies in operating and maintenance cost, and utility savings.

Project Justification / Business Case (25 Points)

4. Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).

The new solid state transmitter is energy efficient and reliable. It will reduce both operating and maintenance cost. NET viewer, local cable and DBS headend over the air pick up will benefit from increased uptime. The new transmitter will be upgradeable to the impending ATSC 3.0 broadcast standard.

5. Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.

IOT transmitters are no longer manufactured. The IOT and other parts are very difficult to acquire. Doing nothing will risk significant broadcast television service outages and incur high maintenance cost.

6. If the project is the result of a state or federal mandate, please specify the mandate being addressed.

Technical Impact (20 Points)

7. Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.

The present IOT transmitter is no longer manufactured and the tubes and other parts are very difficult to acquire. Solid state television transmitter is easier to maintain, energy efficient, it requires less maintenance and lower service cost.

8. Address the following issues with respect to the proposed technology:
- Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.

The solid state transmitter is technologically future proof and upgradable to impending ATSC 3.0 standard, the new standard for TV transmission.

- Address conformity with applicable NITC technical standards and guidelines (available at <http://nitc.ne.gov/standards/>) and generally accepted industry standards.

The new television transmitter meets industry standard and upgradable to ATSC 3.0 standard.

- Address the compatibility with existing institutional and/or statewide infrastructure.

**Project Proposal Form
2017-2019 Biennial Budget**

The new television transmitter is completely compatible with existing institutional infrastructure.

Preliminary Plan for Implementation (10 Points)

9. Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.

NET is planning to purchase a solid state television transmitter, its installation and proof of performance thru competitive bidding process. NET is the project sponsor. NET Television viewers, local cable and DBS headend in central Nebraska are the stakeholders.

NET will act as the project manager for this project.

10. List the major milestones and/or deliverables and provide a timeline for completing each.

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 2 weeks from receipt of the system.

11. Describe the training and staff development requirements.

No additional training or staff development is required for the replacement. Operations will be seamless to present day workflow. Operational familiarity to the new transmitter will be gained thru involvement of on-site transmitter installation and proof of performance.

12. Describe the ongoing support requirements.

No additional support is required, other than routine operational maintenance.

Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. Any outage would also effect satellite and central Nebraska cable subscribers.

Transmitter procurement.

14. Identify strategies which have been developed to minimize risks.

This purchase will be made under the State Purchasing Guidelines to minimize risk. Any assistance with contractual parties will have bonding and insurance requirements to assure protection to the State of Nebraska.

**Project Proposal Form
2017-2019 Biennial Budget**

Financial Analysis and Budget (20 Points)

15. Financial Information

The “Financial” information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an “IT Issue” in the NBRRS to request funding for the project.)



Worksheet in Project
Proposal Form.xls

Nebraska Information Technology Commission
 Project Proposal Form
 Section 8: Financial Analysis and Budget

	Prior Expended	FY2017 Appr/Reappr	FY2018 Request	FY2019 Request	Future	Total
1. Personnel Costs						\$ -
2. Contractual Services						
2.1 Design						\$ -
2.2 Programming						\$ -
2.3 Project Management						\$ -
2.4 Other						\$ -
3. Supplies and Materials						\$ -
4. Telecommunications						\$ -
5. Training						\$ -
6. Travel						\$ -
7. Other Operating Costs						\$ -
8. Capital Expenditures						
8.1 Hardware			\$ 348,000.00			\$ 348,000.00
8.2 Software						\$ -
8.3 Network						\$ -
8.4 Other(contingency)			\$ 17,000.00			\$ 17,000.00
TOTAL COSTS	\$ -	\$ -	\$ 365,000.00	\$ -	\$ -	\$ 365,000.00
General Funds						\$ -
Cash Funds						\$ -
Federal Funds						\$ -
Revolving Funds						\$ -
Other Funds						\$ -
TOTAL FUNDS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -