Utah Telecommunication
Open Infrastructure Agency

Request for Quote for
Optical Transport Network Upgrade
RFQ ENG2016001 – Network Engineering
July 5, 2016
July 5, 2016

The Utah Telecommunications Open Infrastructure Agency (UTOPIA) invites quotations on replacing our optical transport system. As further spelled out in the body of this document, UTOPIA is willing to consider quotations regarding service(s) offered and equipment.

UTOPIA will be replacing its current optical transport system to retire its current Movaz in order to ensure reliability and to bring new opportunities for growth in the future.

**THIS SOLICITATION WILL CLOSE ON JULY 20, 2016.**

Please use email to direct all questions to Aaron Roth (aroth@utopianet.org) with email copies of all correspondence to Jeff Meyer (jmeyer@utopianet.org) and Jamie Brotherton (jbrotherton@utopianet.org). All questions must be received prior to close of business on July 20, 2016 and will be answered by a follow up email to all known respondents.

We look forward to receiving your response.

Sincerely,

Roger Timmerman

Executive Director, UTOPIA
Request for Quotes

General Information........................................................................................................1
  Creation/History........................................................................................................1
  Membership/Organization/Governance .................................................................2
Scope of Project ...........................................................................................................2
  Requirements...........................................................................................................2
  Network Services .....................................................................................................2
  Site Information .......................................................................................................2-3
This Solicitation............................................................................................................3
  Proposal Organization ............................................................................................3
    Letter of Transmittal ..............................................................................................3
    Table of Contents ..................................................................................................4
    Executive Summary ...............................................................................................4
    Qualifications .........................................................................................................4
    Network Design ....................................................................................................4
    Costs ......................................................................................................................4-5
    Clarifications ...........................................................................................................5
    Proposal Submission ..............................................................................................5
Terms and Conditions .................................................................................................6
  Response Material Ownership ................................................................................6
  Propriety Information ..............................................................................................6
  Network Testing ......................................................................................................6
  Bid Price ...................................................................................................................6
  Project Acceptance .................................................................................................6
  Conflicts of Interest .................................................................................................6-7
  Incurring Costs ........................................................................................................7
  No Discrimination in Employment .........................................................................7
  News Releases ..........................................................................................................7
Selection Process .........................................................................................................7
  Evaluation Process and Criteria ............................................................................7
    Submission Conformance Review .........................................................................7
    Proposal Responsiveness Evaluation .....................................................................7
    Organizational Capacity Review ..........................................................................8
  Acceptance of Proposal .........................................................................................8
  False or Misleading Statements ..............................................................................8
Appendix A: Network Topology ..................................................................................9
Appendix B: Available Fiber Optic Characteristics Data ...........................................10
General Information

The Utah Telecommunication Open Infrastructure Agency (UTOPIA) is a political subdivision of the State of Utah created by an interlocal agreement among 16 municipalities for the purpose of solving the last mile challenge in telecommunications for its member cities. UTOPIA’s goal is to provide every household and every business within its boundaries access to advanced communications infrastructure, and to enable choice among services and service providers. To accomplish this objective, UTOPIA has built an open-access fiber optic network providing wholesale transport for retail telecommunications service providers. Currently, the 16 member cities account for a population base of more than 500,000 individuals, 150,000+ households, and 30,000+ businesses.

Creation/History

UTOPIA is a separate legal entity and political subdivision of the State of Utah. UTOPIA was created under the Utah Interlocal Cooperation Act and is governed by the First Amended and Restated Interlocal Cooperative Agreement of the Utah Telecommunication Open Infrastructure Agency, dated as of June 1, 2004 (the “Interlocal Cooperative Agreement”). House Bill 149 adopted by the Utah Legislature during its 2001 General Session and Senate Bill 6 adopted by the Utah Legislature during its 2004 General Session confirm the ability of municipal governments in the State of Utah to provide wholesale telecommunication services.

The Interlocal Cooperation Act authorizes local governmental units to make the most efficient use of their powers by enabling them to cooperate with other government units on the basis of mutual advantage to provide services and facilities that will best accommodate the needs and development of local communities. An entity so formed is a political subdivision of the state with power to, among other things, (i) own, acquire, construct, operate, maintain, and repair, or cause to be constructed, operated, maintained, and repaired, any facility or improvement provided for in its organization agreement, (ii) borrow money, incur indebtedness and issue revenue bonds or notes for the purposes for which it was created, and (iii) assign, pledge or otherwise convey as security or improvement within or without the State on terms deemed in the best interest of its participants.

In addition to the specific powers enumerated above which UTOPIA possesses by virtue of being a separate legal entity created under the Interlocal Cooperation Act, UTOPIA’s members may contract with UTOPIA to perform any government service, activity or undertaking which the members themselves are authorized to perform.

To help facilitate growth, the cities have formed another inter-local entity, called UIA (The Utah Infrastructure Agency) as a separate entity to grow the UTOPIA network and provide more oversight on the growth of our community-owned fiber optic network in our cities. It also makes it easier for other cities
that are interested in having this kind of network to join down the road.

The UIA is a political subdivision of the State of Utah and was created in June 2010. Nine cities created the agency (Brigham City, Centerville, Layton, Midvale, Murray, Orem, Payson, and West Valley City).

**Membership/Organization/Governance**

UTOPIA currently has 16 member cities: Brigham City, Cedar City, Cedar Hills, Centerville, Layton, Lindon, Midvale, Murray, City of Orem, Payson, Perry, Riverton, Tremonton, Vineyard, Washington, West Valley City (collectively, the “Members”). UTOPIA is governed by a Board of Directors (the “Board”).

**Scope of Project**

UTOPIA is accepting quotations from vendors to fulfill our needs as outlined below.

**Requirements:**

The proposed system will replace all equipment from West Valley to St. George (including Payson) as illustrated in Appendix A. West Valley, Payson, Blundell, and St. George will be Add/Drop locations for the network. Elberta will be a 3 degree Add/Drop location. All other sites can be glass-through or ILA sites if required. The system should use 40 or 44 channel fixed optical add/drop multiplexers at any Add/Drop locations. Fiber characteristic data is located in Appendix B. Please note that the majority of spans contain SMF LEAF submarine fiber and have negative dispersion.

**Network Services:**

The proposed system should include the following services across the network.

- West Valley to Payson – 100Gbps Ethernet Client Side / 100g Coherent Line Side
  - The client side optic shall be a 100GBase-SR10 (850nm transmit for multi-mode fiber) in West Valley and Payson.
- West Valley to Blundell – 10x10Gbps Ethernet Client Side / 100g Coherent Line Side
  - Three (3) 10Gbps client circuits will be in use from day one.
    - 10Gbps 1310nm transmit optics for single-mode fiber are required for all three circuits.
- Blundell to St. George – 10x10Gbps Ethernet Client Side / 100g Coherent Line Side
  - One of the 10Gbps client circuits starting in West Valley and ending in Blundell on the 10x10Gbps Ethernet transponder will be cross-connected to the transponder facing St. George in Blundell.
    - 10Gbps 1310nm transmit optics for single mode fiber are required for the client hand-off in St. George.

If your design can support 200g Coherent line services with 100Gbps/10x10Gbps client services and you wish to use this transponder in place of a 100g Coherent Line services in the quote; please note the change in Section 3 of your response. A 200g Coherent line service is not required for this project.

**Site Information:**

The following sites have 23” wide racks and support -48v DC Power.

- Lehi
- Scipio
- Fillmore
- Blundell
The following sites have 19” wide racks and support 120v AC Power (-48v DC Power can be made available if required)

- Escalante
- New Castle
- Gunlock

Any exceptions needed for power support should be clearly noted in Section 3 of your response.

**The Solicitation**

Quotes must follow the format prescribed below and must include the requested information. **THIS SOLICITATION WILL CLOSE ON JULY 20, 2016.** The following table outlines UTOPIA’s planned calendar of major events related to the RFQ distribution, quotation submission, evaluation, and selection processes.

1. RFQ announced to prospective respondents - 7/05/2016
2. Last day for submissions of written questions – 7/12/2016
3. Responses to question as required – 7/14/2016
4. Last day for submissions of responses – 7/20/2016

UTOPIA reserves the right in its sole discretion to amend the above schedule. Proposals must follow the format prescribed below and must include the requested information.

**Proposal Organization**

The proposal must be organized and indexed in the following format and must contain, as a minimum, all items below in the sequence indicated:

- a. Letter of Transmittal
- b. Table of Contents
- c. Section 1: Executive Summary
- d. Section 2: Qualifications and Experience
- e. Section 3: Network Design
- f. Section 4: Costs

Within each section of their proposal, respondents must address the items in the order in which they appear in the RFQ.

**Letter of Transmittal**

A single original signed letter of transmittal must accompany the proposal. The letter must:

- a. Identify the submitted organization
- b. Identify the name and title of the person authorized to contractually obligate the organization
- c. Identify the name, title, and telephone number of the person authorized to negotiate the contract
- d. Identify the names, titles, and telephone numbers of persons to be contacted for clarification
- e. Be signed by the person authorized to contractually obligate the organization
Table of Contents
The table of contents must be placed immediately after the report cover and before the Executive Summary.

Executive Summary
Label this section “Section 1: Executive Summary.” In two pages or less, highlight the significant aspects of your proposal including any observations about your understanding of the scope of solicitation that may set your proposal apart from other submitters.

Qualifications
Label this section “Section 2: Qualifications and Experience.” Provide information on key individuals, accounts or experiences that are relevant to UTOPIA’s goals and/or your ability to handle optical transport projects.

Network Design
Label this section “Section 3: Network Design.” Please present the following information in your quote.

Include the following elements in your quote:

- Simple network diagram showing add/drop, glass-through, and ILA sites in your design
- Power usage for each node in the network at max draw
- Power usage for the following transponders at max draw
  - 100Gbps Coherent line side / 100Gbps Ethernet client side
  - 100Gbps Coherent line side / 10x10Gbps Ethernet client side
- List if your optics are keyed and require purchase directly from your company
- List how many channels you predict this system will fully support with all transponders working at max line rate without taking any uncorrected errors to frames transiting the network. If a regeneration site is needed to support channels on the network, please make a note of this on your proposal.

Please attach technical specification information sheets for each transponder and amplifier card used in your design.

Costs
Label this section “Section 4: Costs.” Please include the main bill of materials that breaks out costs/equipment on a per site basis. Include a total hardware cost in the quote.

Optional Services and Cost of Ownership Elements
Please list the following costs as separate elements from the total hardware costs in the quote. If you are able to waive any of these costs, please list the original value as a side note.

- Support costs for an additional year of support. (Support should include 24/7 remote support and software upgrades)
- Cost to buy spare parts to support any hardware failures over the life of the system.
- Network monitoring system licensing costs
- Cost to add an additional channel for the following services. (Include enough optics to fill all ports on the transponder.)
  - West Valley – Payson: 100Gbps Coherent line side/100Gbps Ethernet client port
West Valley – St. George: 100Gbps Coherent line side/10x10Gbps Ethernet client ports

- Cost to have the system fully installed/documentated by the vendor
- Cost to provide system documentation and a method of procedures document to facilitate the self-installation of the system.
- Cost to provide training for the basic maintenance and troubleshooting of the designed optical transport system.
  - Please list out costs for the following training options: on-site, online, and at vendor location
- If possible, please list the cost to have the equipment pre-configureed or tested in factory before shipment.

Clarifications

You may request clarification of any part of this RFQ, but you must do so by email to Aaron Roth (aroth@utopianet.org) with email correspondence copied to Jeff Meyer (jmeyer@utopianet.org) and Jamie Brotherton (jbrotherton@utopianet.org) - All responses to requests for clarification will be provided to all interested respondents simultaneously. All questions must be received by July 12, 2016.

UTOPIA reserves the right to obtain clarification of any point in a respondent’s proposal or to obtain additional information necessary to properly evaluate a particular proposal.

Proposal Submission

The proposal package must be delivered to aroth@utopianet.org, jbrotherton@utopianet.org, and jmeye@utopianet.org.

Proposals delivered after the cutoff time will be returned.

A Letter of Transmittal, and an electronic copy of the proposal (with support materials) must be included in the e-mail showing the following information on the outside:

- Respondent’s Name, Contact, Phone Number, and Email Address
- Proposal – UTOPIA RFQ #ENG201601 – Optical Transport Network Upgrade
- Proposal Due: July 20th, 2016

A person(s) legally authorized to bind the respondent must sign the Letter of Transmittal. Electronic proposals must be submitted in PDF, MS Word, or MS Excel.

All proposals will be evaluated on:

- Demonstrated experience in the optical transport field
- Understanding of and ability to meet our goals and objectives
- Technical capabilities of the proposed design
- Price of the network design and total cost of ownership

Terms and Conditions

Response Material Ownership

All materials submitted in response to this RFQ become the property of UTOPIA and will only be returned to the respondent at UTOPIA’s option. Any person may review responses after final selection has been made. UTOPIA has the right to use any or all system ideas presented in reply to this request, subject to limitations outlined below in “Proprietary Information.”
Disqualification of a respondent does not eliminate this right.

**Proprietary Information**

UTOPIA is subject to the disclosure requirements of the Government Records Access and Management Act (GRAMA), Title 63, Chapter 2, Utah Code Annotated. UTOPIA generally considers Agreements, Contract Documents, and all accompanying material to be public and subject to disclosure. A written claim of confidentiality and a concise written statement of reasons supporting the claim must accompany any material considered by respondents to be proprietary. Blanket claims that the entire Agreement or Contract Documents are confidential will be denied by UTOPIA. UTOPIA cannot guarantee that any information will be held confidential. Under Section 63-2-304 of the Government Records Access and Management Act, if a respondent makes a claim of confidentiality, UTOPIA, upon receipt, fax a request for disclosure, will determine whether the material should be classified as public or protected, and will notify the respondent of such determination. UTOPIA agrees to hold all information classified as protected in confidence and protect it from public disclosure in accordance with such statutes to the greatest extent permitted by Utah law. UTOPIA may disclose such information to the extent required by law; however, UTOPIA will provide respondents prompt notice of request for disclosure of such protected information and will cooperate with respondents in seeking the issuance of protective order, at their cost.

Respondents are entitled under the Government Records Access and Management Act to appeal an adverse determination regarding the classification of information. UTOPIA is not required to notify respondents of a request for non-protected information, and will not consider a claim of confidentiality unless the respondent’s claim of confidentiality is made on a timely basis and in accordance with the Government Records Access and Management Act.

**Network Testing**

At the end of installation and turn-up, UTOPIA or the installing contractor will test all channels for bit errors and quality. All channels on the system will be tested in parallel and at full link rate. All channels on the system should be able to run for twenty (20) minutes on a layer-1 BER test without encountering any unrecoverable errors. If errors are detected during the test window, the vendor will propose/implement changes in order to resolve any issues.

**Bid Price**

If UTOPIA accepts your proposal and awards you the project, you agree that you will complete and provide a working project for the bid price that you submitted in your proposal. You also agree that the project will be completed in accordance with the ‘Scope of Project’ section included in this RFQ. If your submitted bid price is insufficient to complete the project, you agree to solely bear any additional expenses to complete and provide a working project.

If UTOPIA requests you to complete any additional work, the additional work must be included in a separate agreement between you and UTOPIA. Any request from UTOPIA to complete additional work will not affect your agreement to complete and provide a working project in accordance with the ‘Scope of Project’ section of this RFQ for your submitted bid price.

If you refuse to complete and provide a working project for your submitted bid price, you agree that UTOPIA may terminate the agreement immediately and that UTOPIA may recover from you the amount necessary to complete a working project in accordance with the ‘Scope of Project’ section included in this RFQ.

**Conflicts of Interest**

Proposed solutions to this RFQ must be defined in such a way as to prevent and prohibit conflicts of interest between the respondent, UTOPIA, and other service providers that may offer services across the
Incurring Costs

UTOPIA is not liable for any costs you incur prior to issuance of a formally signed and executed written agreement, contract or purchase order. Costs of developing the proposals, oral presentations or any other such expenses incurred by the respondent in responding to the RFQ are entirely your responsibility, and will not be reimbursed in any manner by UTOPIA.

No Discrimination in Employment

In connection with the proposed partnership arrangement, respondents agree not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified, solely because of race, creed, color, religion, sex, age, national origin, ancestry, or sexual orientation.

News Releases

News releases and/or advertising pertaining to this procurement or any part of the subject may not be made without prior, written approval of UTOPIA.

Governing Law

The laws of the State of Utah govern all matters associated with and arising from this RFQ and any subsequent agreement. The venue for any legal action arising from the RFQ process or any subsequent agreement will lie in the Third District Court, Salt Lake County, Utah.

Selection Process

UTOPIA considers your response to the substantive content of this RFQ to be the most important element in the evaluation/selection process. We are looking for proposals that reflect a practical, credible, and cost effective design to upgrade our optical transport network. To this end, each response will be judged in its entirety as outlined below.

Submission Conformance Review

The Solicitation section of this document provides directions about the content and organization that we expect to see in your response. If your proposal contains material omissions or fails to follow the organization guidelines given in this RFQ, it will be at risk of being set aside from any further evaluation. We will not open any proposal that arrives after the filing deadline.

Proposal Responsiveness Evaluation

The review committee will review the quality and responsiveness of your proposal by separately considering the following elements:

a. Practicality. Your proposal must present a technically feasible network that will be reliable and easy to maintain over the lifetime of the equipment.

b. Credibility. Your proposal will need to give reviewers a high level of confidence that your company has the competence, the human resources, and the financial resources needed to put the proposal into operation.

c. Cost Effective. UTOPIA understands the value of paying premium prices for premium services. However, heavy weight will be placed on cost effectiveness when comparing your proposal to others.
Organizational Capacity Review

In addition to the judgments that reviewers can derive from your description of the proposed strategy, they may need to be able to corroborate your representations by appeals to third parties. Accordingly, the evaluation process will include such reference checking and fact verification, as the review committee deems necessary before reaching a conclusion about selecting the winning offer.

Acceptance of Proposal

UTOPIA retains the right, at its sole discretion, to select or not select respondents to be included in further negotiations at any point during the evaluation process. The contents of the proposal of the successful respondent may become contractual obligations, if we determine to proceed with implementation.

False or Misleading Statements

If, in the opinion of UTOPIA, a proposal contains false or misleading statements or references, it will be rejected. However, before removing a proposal from consideration, we will notify the submitter of our concern and allow the submission of an explanation. UTOPIA’s decision, after considering any explanatory information will be final.

Rejection of Proposals

Issuance of this RFQ in no way constitutes a commitment by UTOPIA to award a contract. If it is deemed in the best interest of UTOPIA to do so, UTOPIA reserves the right to reject any or all proposals and to wave any informalities or minor irregularities in proposals received or to accept any portion of a proposal or all items proposed, or to reject any and all proposals received in response to this RFQ, or to cancel the RFQ.
Appendix A: Network Topology
## Appendix B: Available Fiber Optic Characteristics Data

<table>
<thead>
<tr>
<th>Site A</th>
<th>Distance</th>
<th>Office A Span Loss</th>
<th>PMD</th>
<th>CD</th>
<th>Office B Span Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1310 AVG</td>
<td>1550 AVG</td>
<td>Avg Loss</td>
<td>1550</td>
<td>PS</td>
</tr>
<tr>
<td>Payson</td>
<td>33.80</td>
<td>34</td>
<td>0.25</td>
<td>8.50</td>
<td>0.206</td>
</tr>
<tr>
<td></td>
<td>33.80</td>
<td>34</td>
<td>0.24</td>
<td>8.10</td>
<td>0.224</td>
</tr>
<tr>
<td>Elberta</td>
<td>81.22</td>
<td>34</td>
<td>0.22</td>
<td>17.70</td>
<td>0.507</td>
</tr>
<tr>
<td></td>
<td>81.22</td>
<td>34</td>
<td>0.22</td>
<td>17.90</td>
<td>0.537</td>
</tr>
<tr>
<td>Scipio</td>
<td>74.9</td>
<td>34</td>
<td>0.21</td>
<td>15.80</td>
<td>0.314</td>
</tr>
<tr>
<td></td>
<td>74.9</td>
<td>34</td>
<td>0.21</td>
<td>15.80</td>
<td>0.369</td>
</tr>
<tr>
<td>Filmore</td>
<td>74</td>
<td>34</td>
<td>0.21</td>
<td>15.60</td>
<td>0.418</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>34</td>
<td>0.20</td>
<td>15.10</td>
<td>0.396</td>
</tr>
<tr>
<td>Blundell</td>
<td>34.6</td>
<td>34</td>
<td>0.21</td>
<td>7.20</td>
<td>0.360</td>
</tr>
<tr>
<td></td>
<td>34.6</td>
<td>34</td>
<td>0.19</td>
<td>6.50</td>
<td>0.259</td>
</tr>
<tr>
<td>Escalante</td>
<td>77.9</td>
<td>34</td>
<td>0.21</td>
<td>16.20</td>
<td>0.561</td>
</tr>
<tr>
<td></td>
<td>77.9</td>
<td>34</td>
<td>0.20</td>
<td>15.90</td>
<td>0.249</td>
</tr>
<tr>
<td>Newcastle</td>
<td>65.1</td>
<td>34</td>
<td>0.22</td>
<td>14.60</td>
<td>0.338</td>
</tr>
<tr>
<td></td>
<td>65.1</td>
<td>34</td>
<td>0.20</td>
<td>14.20</td>
<td>0.332</td>
</tr>
<tr>
<td>Gunnock (Long Route)</td>
<td>77.9</td>
<td>34</td>
<td>0.21</td>
<td>16.20</td>
<td>0.561</td>
</tr>
</tbody>
</table>