



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: NOVEMBER 20, 2015

ITEM NO: 8

File ID – 15-3691 – D

SUBJECT: FIBER BUSINESS PLAN – REVIEW OF MAGELLAN ADVISORS REPORT ON USE OF FIBER FOR ENHANCED COMMUNITY BROADBAND COMMUNICATION INFRASTRUCTURE; \$300,000 IN STARTUP COSTS OFFSET BY CURRENT REVENUES OF \$420,000

ISSUE:

The issue for Board of Public Utilities consideration is discussion of the Magellan Advisors' Fiber Business Plan and staff recommendations for implementation of the broadband business plan.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Receive a report from Magellan Advisors summarizing their work to develop a fiber business plan for Riverside Public Utilities;
2. Provide feedback to staff and the consultant on policy considerations relative to availability and expansion of broadband services in Riverside;
3. Approve in concept the roadmap for Phase 1 of the dark fiber deployment within the community; and
4. Approve the expenditure of \$300,000 to begin implementation of Phase 1 of the proposed roadmap which will formalize RPU's dark fiber leasing program.

BACKGROUND:

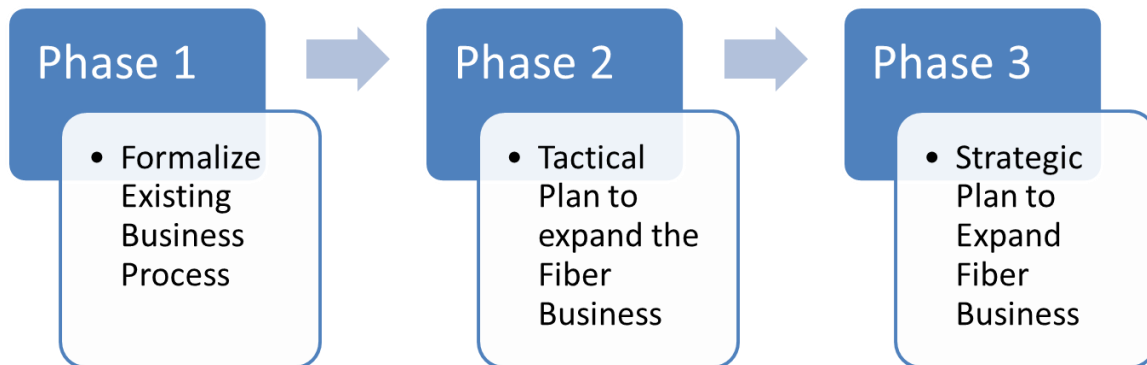
Riverside Public Utilities operates an advanced broadband fiber-optic cable based network to communicate between its substations and control centers for the operation of our electric grid. Fiber optic cable is normally installed in bundles of 96, 192, 288 or 576 fibers. A typical communication path requires 2 fibers. As a result, RPU has many locations and paths throughout the City where it owns excess fiber. This excess fiber is not connected to electronic switches at either end, rendering it "dark". Currently, RPU leases some of these excess fibers to third parties who install the electronics and "light" the fiber for communication use.

In July 2014, staff engaged the national consulting firm Magellan Advisors (Magellan) to develop a fiber business plan and roadmap for enhanced broadband communications in Riverside. Magellan has completed the attached draft report which outlines a three-phased plan for enhancement of RPU's business practices and expansion of our dark fiber offering. As discussed in more detail herein, staff is seeking Board approval for Phase 1 only. No approval is being sought for Phases 2 and 3, as staff will need to review the proposed structure to ensure compliance with California law, including Proposition 26.

Magellan's scope of work included assessment of RPU's current practices around dark fiber leasing and opportunities for enhancement of the program supported by a business community survey, interviews with community anchor stakeholders, and review of peer agency fiber offerings. Magellan also assessed RPU's current fiber offerings, infrastructure, costs of construction, and opportunities for efficiency in how we deploy fiber infrastructure.

RPU's process for leasing of dark fiber are not well supported from a policy level and pricing for third-party leases is largely ad-hoc. Magellan recommends, and staff concurs, that a more formal program is warranted, including development and publication of standard dark fiber leasing rates or tariffs. It is further recommended that this effort be supported by dedication of 0.5 FTE staff member and implementation of a formal fiber management technology solution.

Magellan's recommendations for a three phase roadmap are summarized in the following graphic:



Specific recommendations to implement the roadmap are detailed below:

Phase 1 – Formalize the existing business to brand and market dark fiber as a service.

- Assign an Internal Project Manager to Fiber Business
- Document the Inventory of Available Assets
- Implement a Fiber Management System
- Review and Standardize Agreements for Fiber Leasing
- Treat Fiber as Telecom Asset, Not an Electrical Asset
- Develop Pricing Policies for Fiber Leasing
- Publish RPU's Rates and Terms

Phase 2 – Develop a tactical plan to expand the fiber business through identification of opportunities.

- Establish Achievable Goals for the Fiber Business
- Identify Immediate Needs and Opportunities
- Determine RPU Policies for Expanding Dark Fiber
- Develop Pricing Policies for Expanding Dark Fiber
- Define Operational, Staffing and Financial Requirements
- Consider Establishing an Enterprise Fund
- Implement Operations and Staffing
- Increase the Inventory of Available Fiber
- Develop the Marketing and Sales Program
- Establish Metrics for Success

Phase 3 – Strategic expansion of fiber offering through potential new business models.

- Evaluate the Impact of RPU's Current Fiber Business
- Identify New Opportunities
- Explore Additional Business Models
 - Open-Access
 - Direct Provider
 - Public-Private Partnership
- Consider Public-Private Partnerships
- Learn from Other Organizations
- Conduct a Feasibility Study

The Magellan report and recommendations have been peer reviewed by the California-based consulting firm Tellus Ventures. Tellus Ventures was retained by staff to provide local perspective in the California market place and participated in several joint meetings between staff and Magellan. Tellus Ventures concurs with the recommendations contained in their report.

In considering the expansion of a dark fiber program, it is likely that initial and early phases will target large public and institutional customers that have the internal capacity to use dark fiber as a service, including installing and maintaining the electronic at each end of the fiber run to “light” the fiber and interconnect with a national carrier or internet exchange. This service could also appeal to local broadband providers (incumbents or potentially new service providers) as the cost of leasing existing fiber could (and likely would) be lower than the cost of installing new fiber runs. Latter phases will evaluate the expansion of RPU’s current fiber network could include evaluation of open access business models that would expand fiber offerings into area of high potential broadband uptake. An open access model could include “lit” services that could appeal to smaller institutional and business customers and meet some of the “last-mile” economic challenges that local incumbent broadband providers face.

Specific pricing and deployment policies would be developed by staff in Phase 1, with completion targeted for Q2 2016 for consideration by the Board of Public Utilities and City Council. Policy templates relative to community broadband availability, development and joint trenching standards, and engineering design standards are attached under separate cover of the report. A separate community “fiber ready” checklist is under development by the City’s Innovation and Technology Department. Staff recommends the checklist recommendations be melded with the balance of the roadmap recommendations as part of the overall policy development undertaken with Phases 1 and 2 of the fiber plan implementation.

Staff recommends an expenditure of \$300,000 to support the appointment of a half-time staff member to participate and lead the efforts to develop pricing policies and standardization of leasing agreements (estimated at \$70,000/year) and the purchase and maintenance of a fiber inventory technology solution (estimated at \$230,000). Ongoing annual costs to support Phase 1 is estimated at \$135,000 total annually to support the business development effort, ongoing software maintenance, and related activities. It is expected that Phase 1 could be fully implemented in the current fiscal year, with concurrent or near-term serial implementation of several of the Phase 2 recommendations. The following Table summarizes the expected startup and ongoing costs for Phase 1 activities. Phase 2 costs are dependent on immediate reaction/uptake to a published fiber tariff, but are largely expected to be handled by internal staff. Allocation of those staff to a specific fiber cost center could shift costs internally and more accurately reflect the cost of those activities, but are not expected to significantly increase overall costs within RPU.

Phase 1 Expected Costs (including internal staff cost allocation)		
Activity	Initial/Startup Cost	Annual/Ongoing Cost
Internal Project Manager (0.5 FTE) – fully loaded labor cost, from current headcount	\$70,000	\$70,000
Policies, rate setting, contract/agreement review and drafting (internal labor and consulting services)	\$50,000	\$20,000
Inventory and documentation of existing fiber assets (internal labor and outside resources)	\$30,000	\$15,000
Implement and manage ongoing support of fiber management system (purchase, annual support and internal labor)	\$150,000	\$30,000
Total	\$300,000	\$135,000

FISCAL IMPACT:

Phase 1 startup costs are estimated at \$300,000, with ongoing costs of \$135,000. These costs are offset by current fiber leasing revenue of \$420,000 per year which is expected to increase through a more formal deployment of a fiber business model. Funds are budgeted and available in the Electric Capital Other Electric Projects Account 6130000-470688 and the Administration Professional Services Account 6000000-421000.

Prepared by: Kevin S. Milligan, Public Utilities Deputy General Manager
Approved by: Girish Balachandran, Public Utilities General Manager
Approved by: John A. Russo, City Manager
Approved as to form: Gary G. Geuss, City Attorney
Certifies availability of funds: Laura Chavez-Nomura, Public Utilities General Manager/Finance

Attachments:

- 1) Magellan Advisors' Fiber Business Model Report
- 2) Magellan Advisors' Policy Templates Appendix
- 3) Magellan Advisor's Presentation