City of Lucas, TX

Council Workshop

BROADBAND STUDY AND FINANCIAL OVERVIEW

July 27, 2020

What is a Sustainable Enterprise

A sustainable enterprise must achieve required revenues to cover all expenses, including debt service and funded reserves, at a given rate for service and with certain uptake to be attained.

Key Indicators include:

- Year positive net income
- Year positive free cash
- Year debt payback

City Background and Research

2018 Technology and Communications Survey

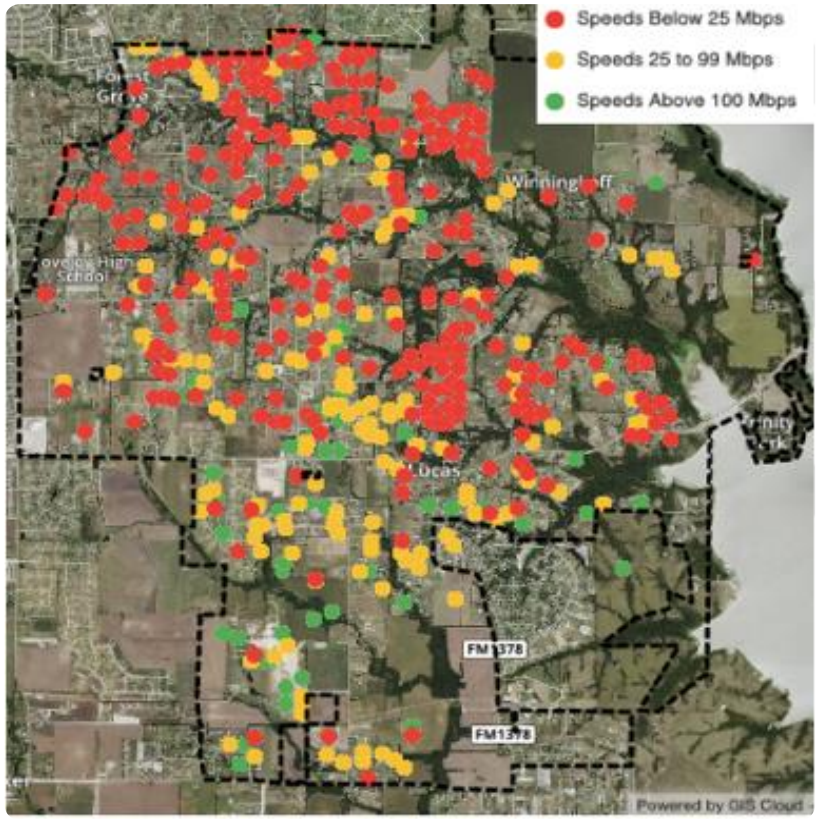
Zone	% of Total Responses	Dominant Provider	Satisfaction (Satisfied to Very Satisfied)
1	22%	AT&T (65%)	46%
2	29%	AT&T (48%)	26%
3	32%	AT&T (46%)	66%
4	17%	Frontier (93%)	57%

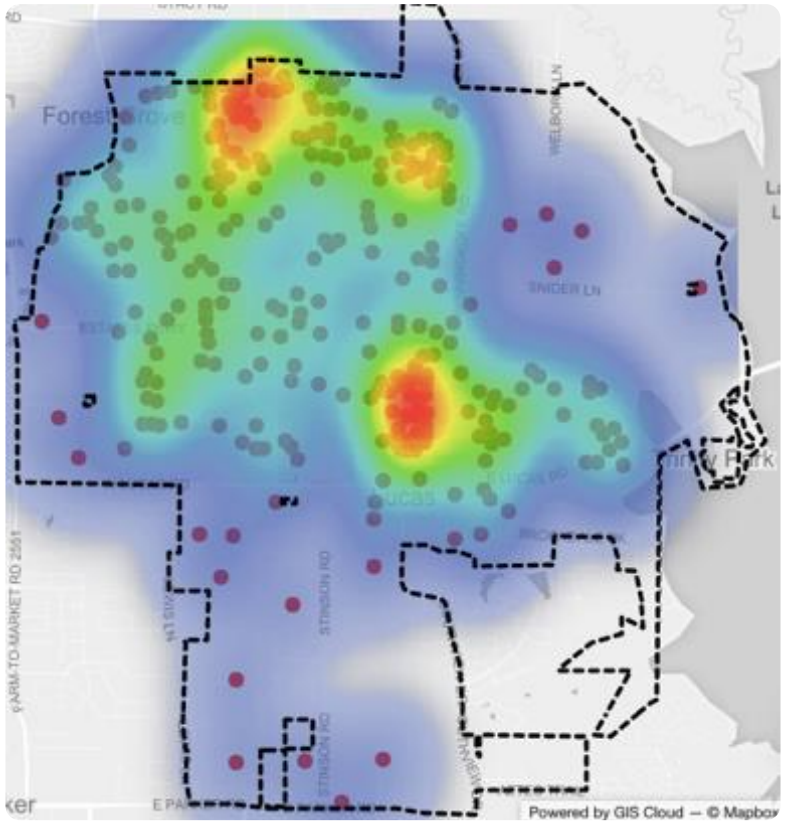
2019 Speed Test Survey

Speeds Reported	Download (Mbps)	Upload (Mbps)
Minimum	0.05	0.01
Maximum	504.54	518.45
Median	19.315	4.605
Average	41.01824903	23.18212062

US Avg Speeds 143.28/56.04 Mbps – Texas Avg Speeds 92.82/16.35 Mbps – Dallas Avg Speeds 116.09/19.88 Mbps[1]

City Background and Research





Market Study

- Lucas Tech Committee met with service providers and all stated that density is too low and lots too large to make business sense to expand into Lucas.
- AT&T does not plan on improving current infrastructure in Lucas and will build new fiber into greenfield developments only.
- Frontier has claimed bankruptcy and state of their infrastructure is uncertain.
- Suddenlink seems to have good coverage in Lucas, however survey data suggest customers are not taking service (8%).

Why Fiber is the Next Utility

- Essential service, similar to water and electricity.
- COVID-19 has exemplified this concept.
  - Ability to work from home
  - Ability to learn virtually
  - Telemedicine

Where the private sector won't solve the problem, cities have created utilities, and in certain cases, Special Purpose Districts to step up and fill the gap.

Business Models From Low to Higher Risk/Reward

- POLICY PARTICIPATION ONLY - Most passive model and includes creating policies for permitting, right of way access, construction, fees, and franchises that regulate the cost of constructing and maintaining broadband infrastructure within its jurisdiction.
- INFRASTRUCTURE PROVIDER - Municipalities build network and lease and/or sell physical infrastructure, such as conduit, dark fiber, poles, tower space, and property to broadband service providers that need access within the community.
- GOVERNMENT SERVICES PROVIDER – Provide network services to just community anchors including local governments, school districts, higher educational organizations, public safety organizations, utilities, and occasionally healthcare providers.
- OPEN-ACCESS PROVIDER - Municipalities build network and "light" the fiber and equip the network with the electronics necessary to establish a "transport service" or "circuit" to service providers.

Business Models From Low to Higher Risk/Reward

- RETAIL SERVICE PROVIDER – BUSINESS ONLY - Municipalities provide retail end users services to just business customers.
- FULL RETAIL SERVICE PROVIDER – Municipalities provide full end user services to businesses and residential customers.
- PARTNERSHIPS - Partnership is a negotiated contract between a public entity (i.e. Lucas) and private or public entity to fulfill certain obligations to expand broadband services. An investment/ROI issue has been voiced by incumbent providers who are already entrenched in the Lucas market, and would likely require serious incentives to participate in a P3 with the City.

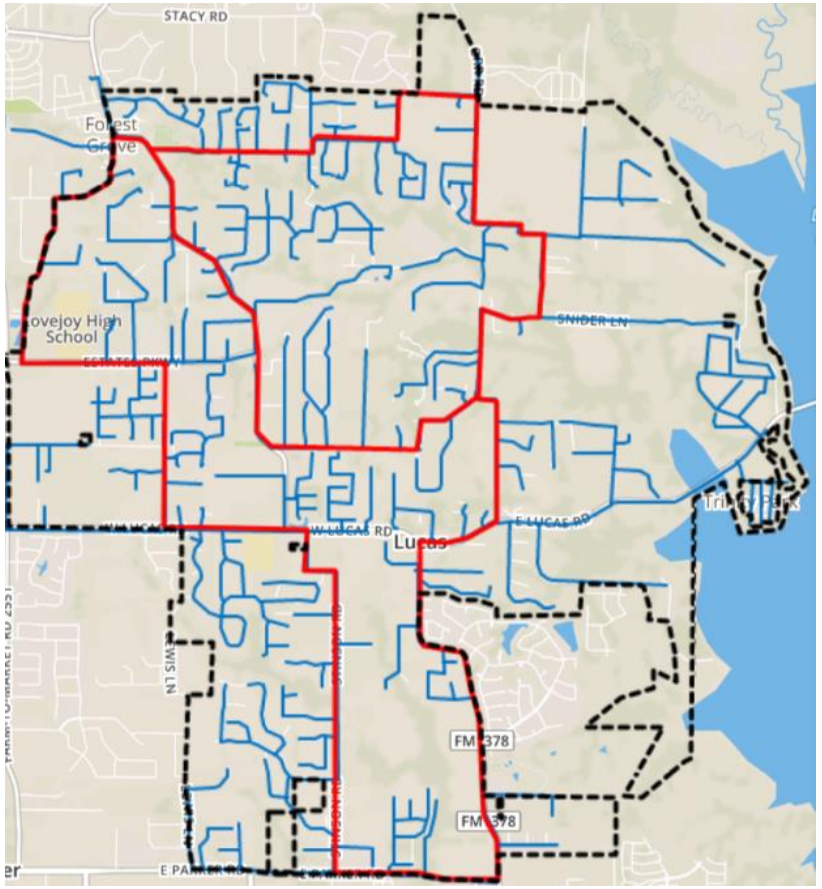
The models presented in this Study assume a Full Retail Service Provider model for Lucas, supporting the City's desire to have control of the infrastructure and services provided to their citizens. A Partnership structure if possible, could decrease risk, control and reward.

Texas Regulatory Restrictions

- Under Texas State law, a city is prohibited from providing local exchange telephone service, basic local telecommunications service, or switched access.
- However, in 2017 the City of Mont Belvieu, TX successfully argued that their plan to connect subscribers to the Internet, rather than a telecommunications provider, is not prohibited.
- Phone and video services cannot be offered directly or through a third-party by the City.
- However, Mont Belvieu did extensive education to their community on the fast-growing over-the-top video offerings available (e.g. Hulu, YouTube, Disney+, ESPN+) and how high-speed broadband is essential to utilize these offerings.

Even though it appears that the Mont Belvieu ruling is applicable to the City of Lucas, it is critical that the City of Lucas confirm with their City Attorney.

Lucas' Conceptual Design

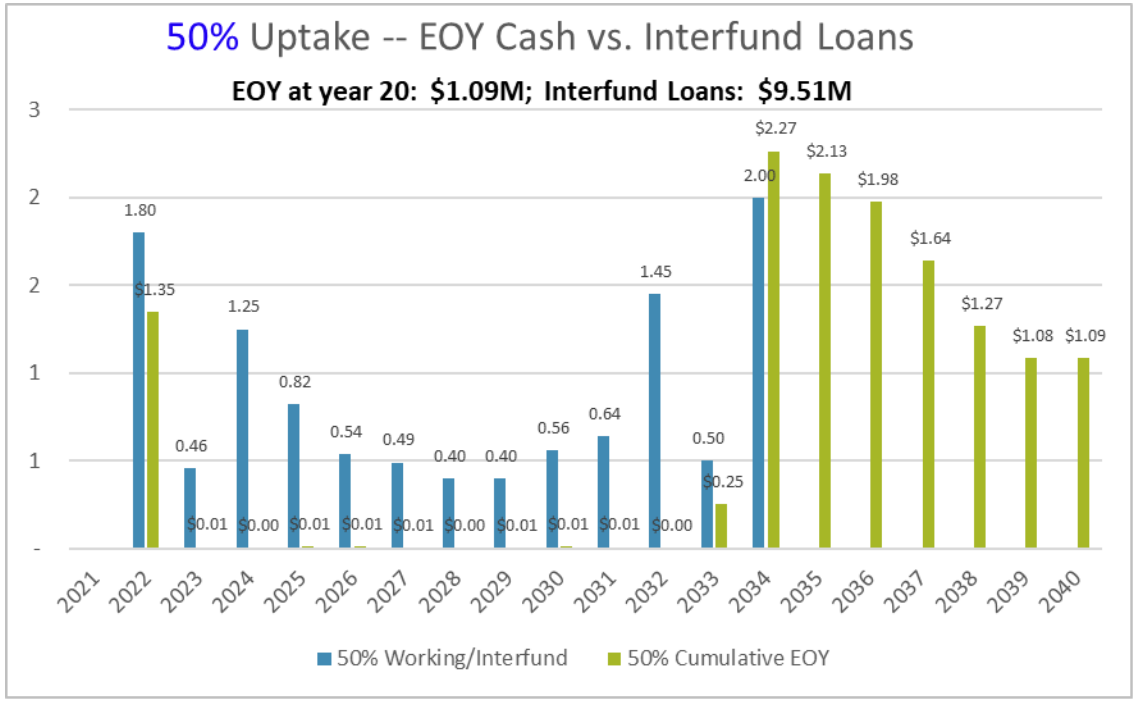


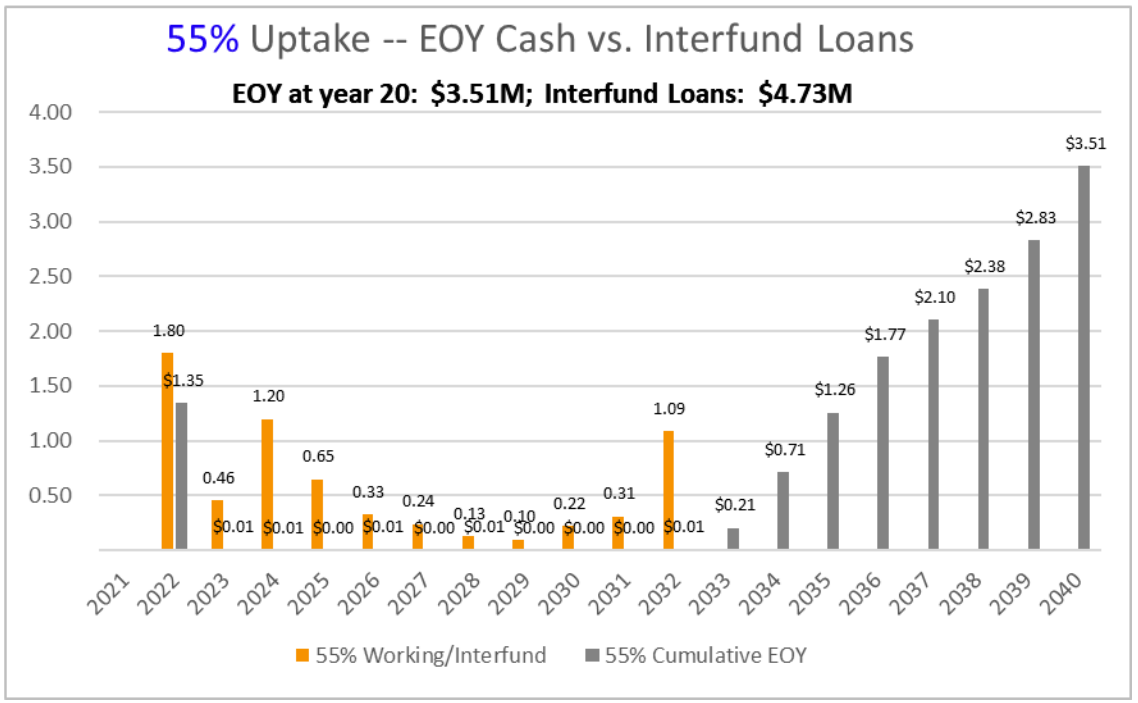
	Mileage
Backbone Ring	20.20
Feeder Distribution	87.65
Total:	107.85

Uptake Scenarios

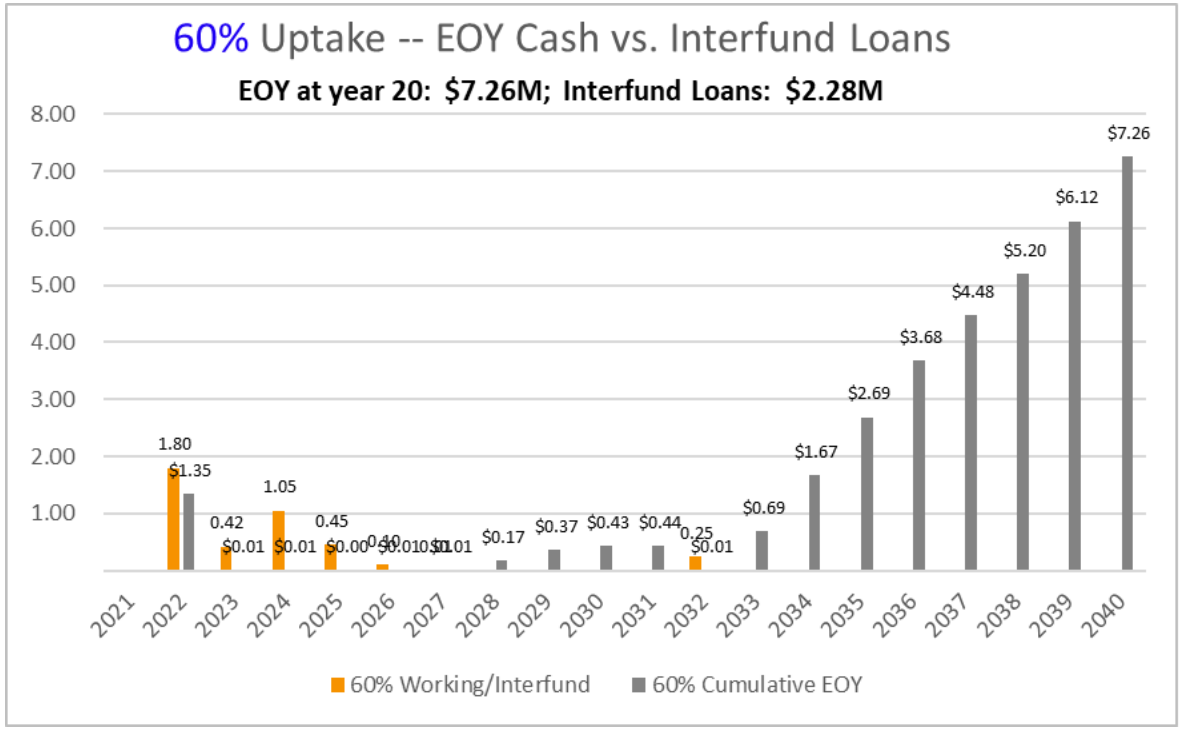
- Goal was to determine lowest uptake and rate possible keeping interfund loans below $5M
- Multiple scenarios were modeled
  - Uptake percentages ranging from 45% to 65%
  - 1 Gbps rates from $89.95 to $125.95
  - Combinations of the uptake percentages and rates
- **Best fit scenario is at a 55% uptake and rate of $115/mo**
  - 1 Gigabit Service
  - Includes "white glove" managed services, which other ISPs charge a monthly rate to subscribers (ie. home network assistance, password recovery)

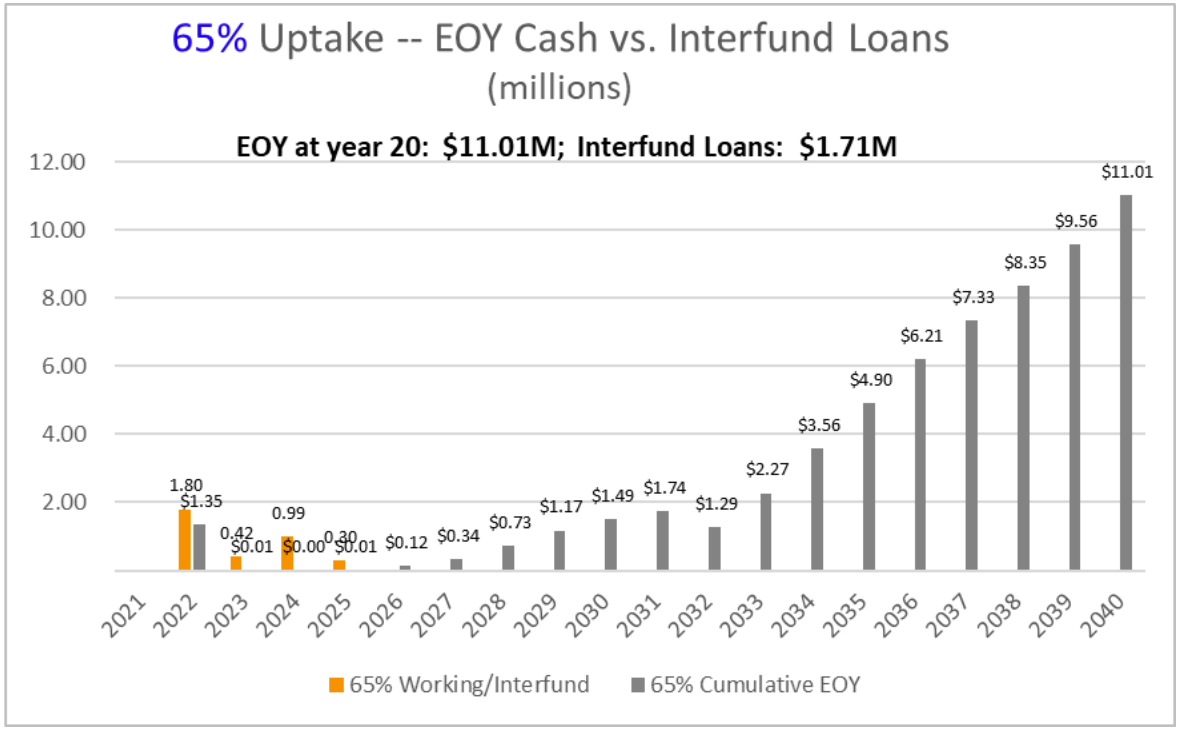
End-of-Year Cash vs. Interfund Amounts





End-of-Year Cash vs. Interfund Amounts





Staffing

Position	Year 1*	Year 2	Year 3	Year 4-20
Telecom Mgr/ OSP Engineering Supervisor		0.5 FTE	1 FTE	1 FTE
Sales & Marketing Manager		0.5 FTE	1 FTE	1 FTE
Headend/Network Engineer		0.5 FTE	1 FTE	1 FTE
Customer Support Rep		0.5 FTE	1 FTE	1 FTE
Network/NOC Technician		0.5 FTE	1 FTE	1 FTE
Technical Service Rep			1 FTE	1 FTE
Field Services Technician			1 FTE	1 FTE
Field Locates Technician			1 FTE	1 FTE

** No staff needed. Network design occurring.*

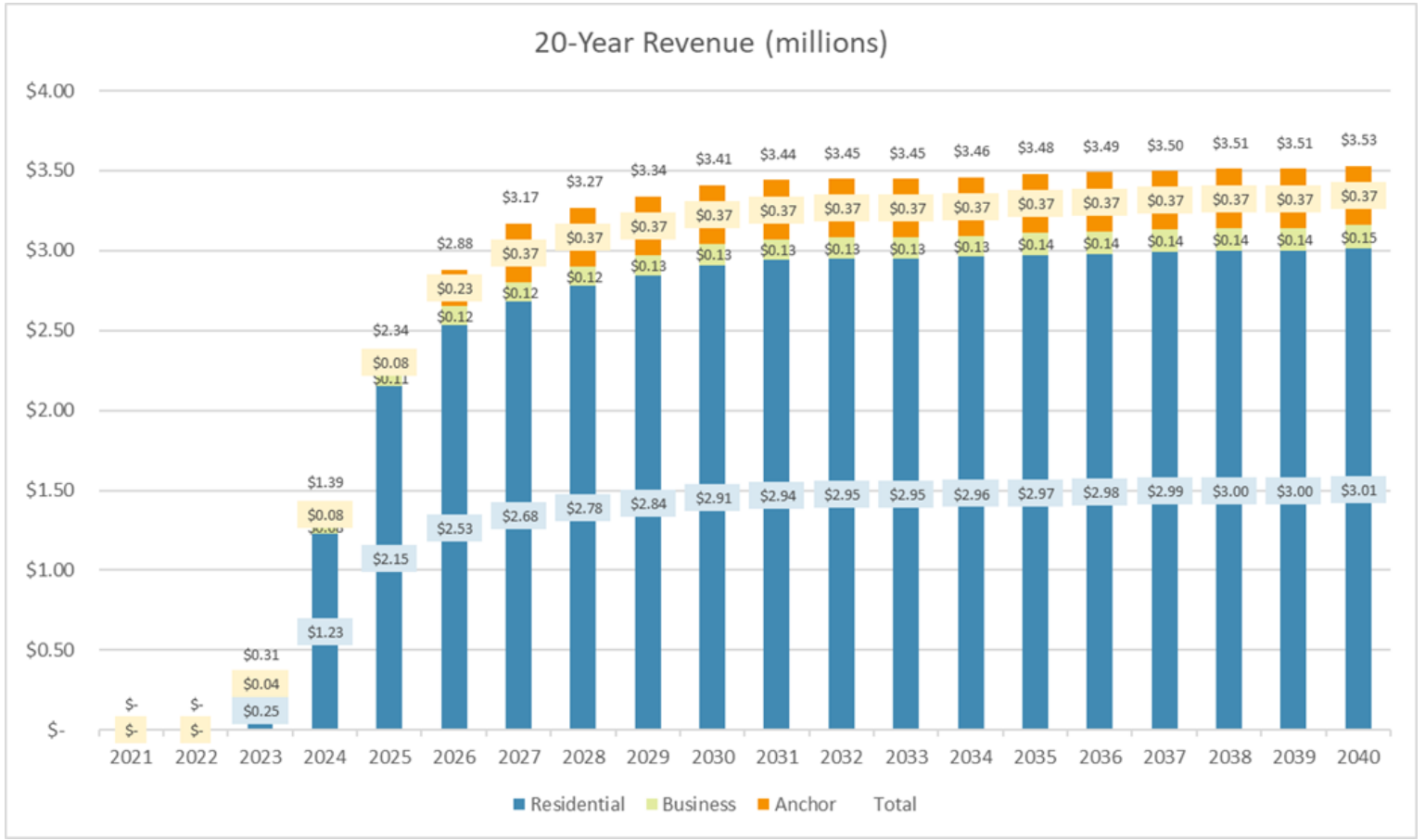
*** If higher than expected subscriber volume achieved, additional positions may be needed.*

20-Year Capital Costs

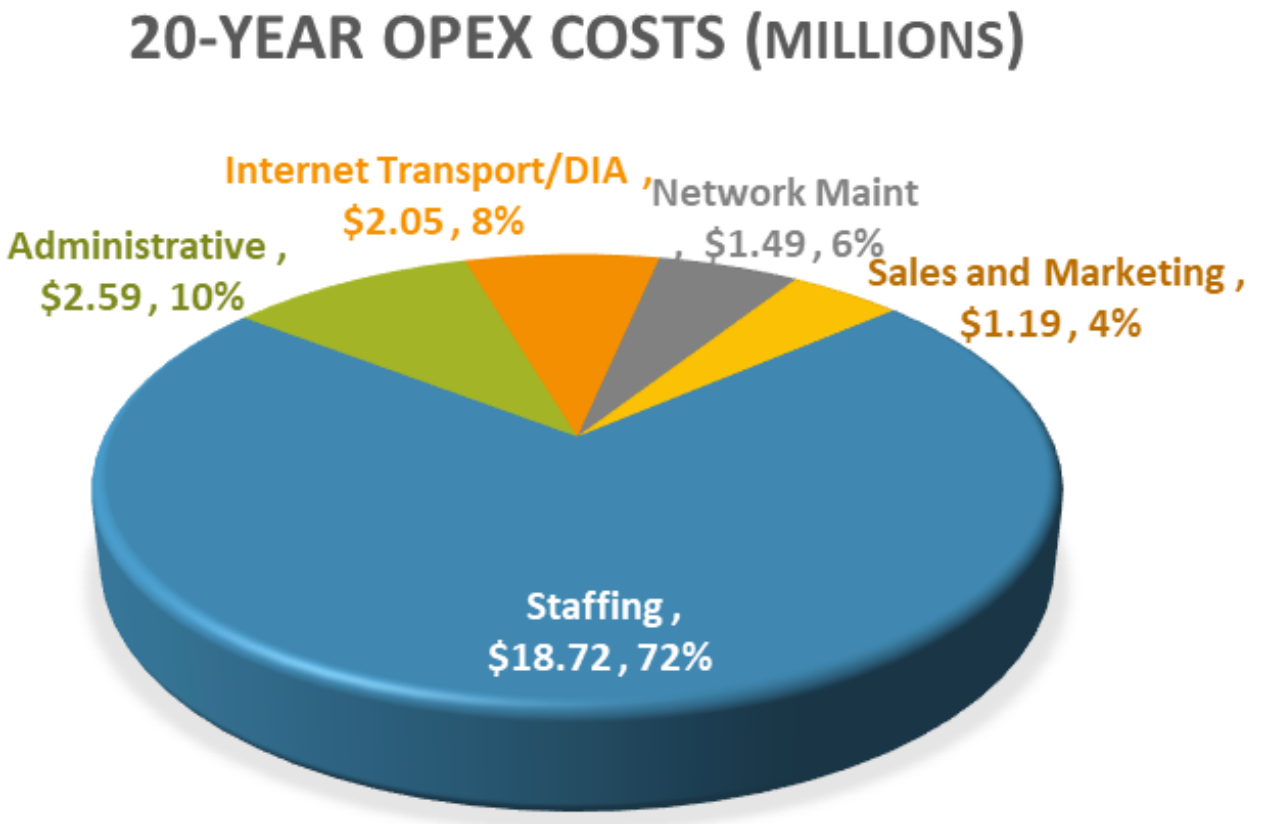
Area	Description	Estimated 20-Year Expense
Network Design	Formal low-level design of backbone and distribution networks	$ 711,839
Construction	Buildout with 10% contingency	$ 10,609,285
Network Equipment	Includes expected upgrades and refits over 20-year period	$ 2,045,273
General Equipment	Vehicles, trencher, tools, testers, etc.	$ 657,300
Building Improvements	For data center, warehouse, NOC, offices	$ 550,000
Premise Drops	Based on 55% Residential; 55% Business uptakes	$ 4,572,970
Construction and Turnkey Project Management	Management of the network buildout; inspections, and overall project management	$ 1,500,000
	Total:	$ 20,646,666

* Includes renewals and refreshes of network, premise, and general equipment

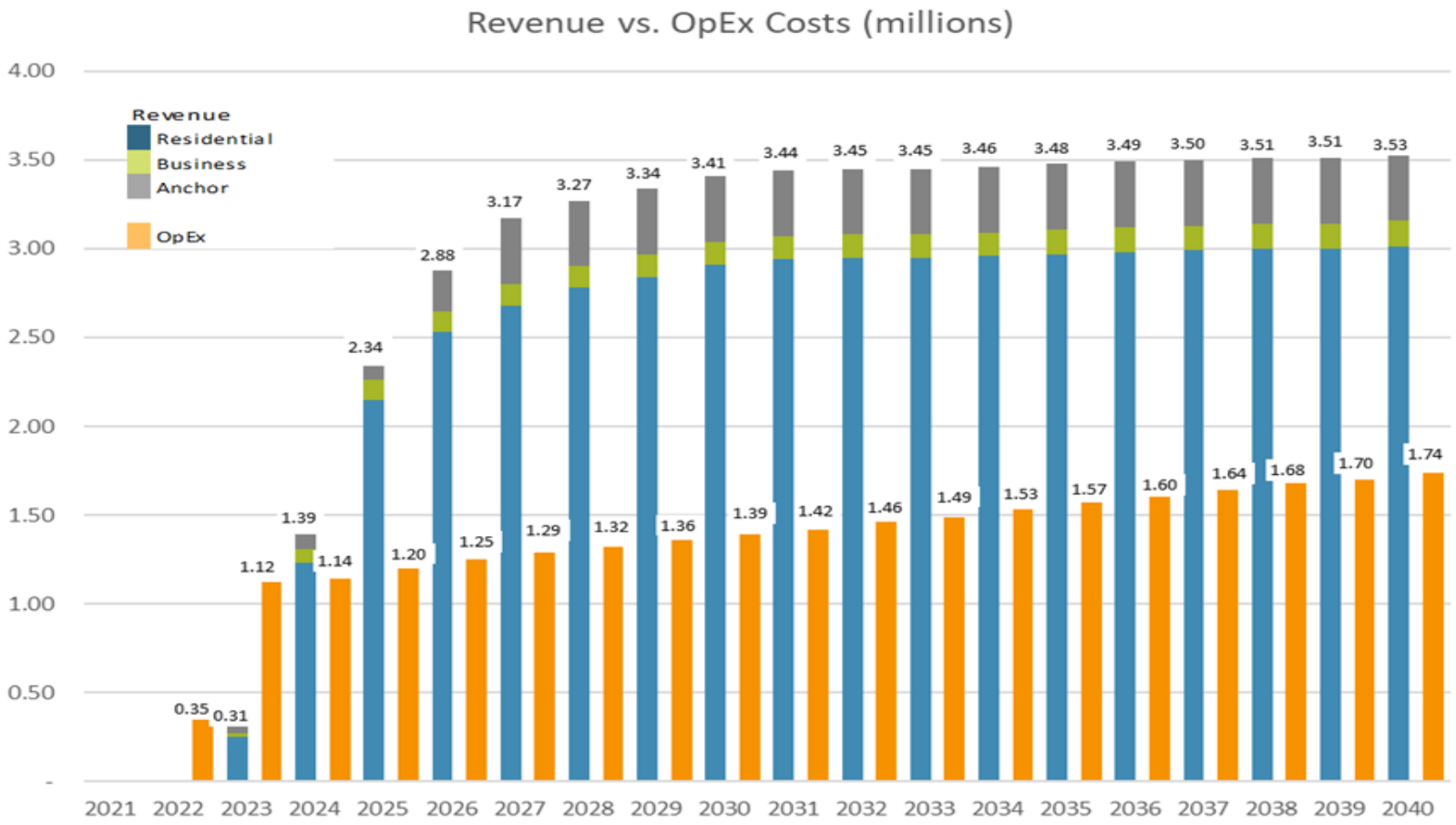
Revenue


20-Year Revenue (millions)
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$-
2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040
$- $- $0.31 $1.39 $2.34 $2.88 $3.17 $3.27 $3.34 $3.41 $3.44 $3.45 $3.45 $3.46 $3.48 $3.49 $3.50 $3.51 $3.51 $3.53
$- $- $0.04 $0.08 $0.08 $0.23 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37 $0.37
$- $- $0.25 $1.23 $2.15 $2.53 $2.68 $2.78 $2.84 $2.91 $2.94 $2.95 $2.95 $2.96 $2.97 $2.98 $2.99 $3.00 $3.00 $3.01
Residential
Business
Anchor
Total

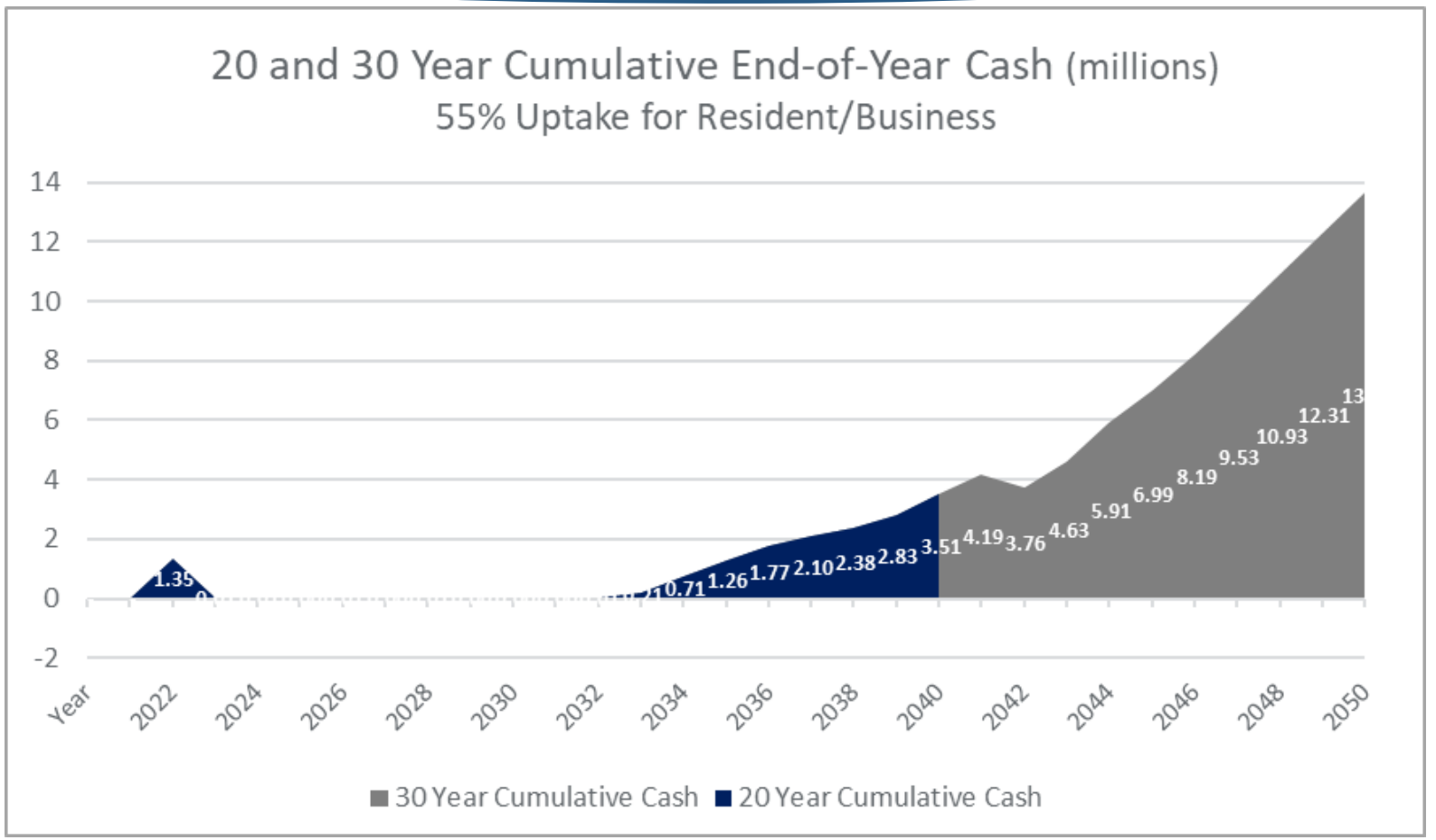
OpEx Breakdown



Revenue versus Op-Ex



Cumulative End-of-Year Cash

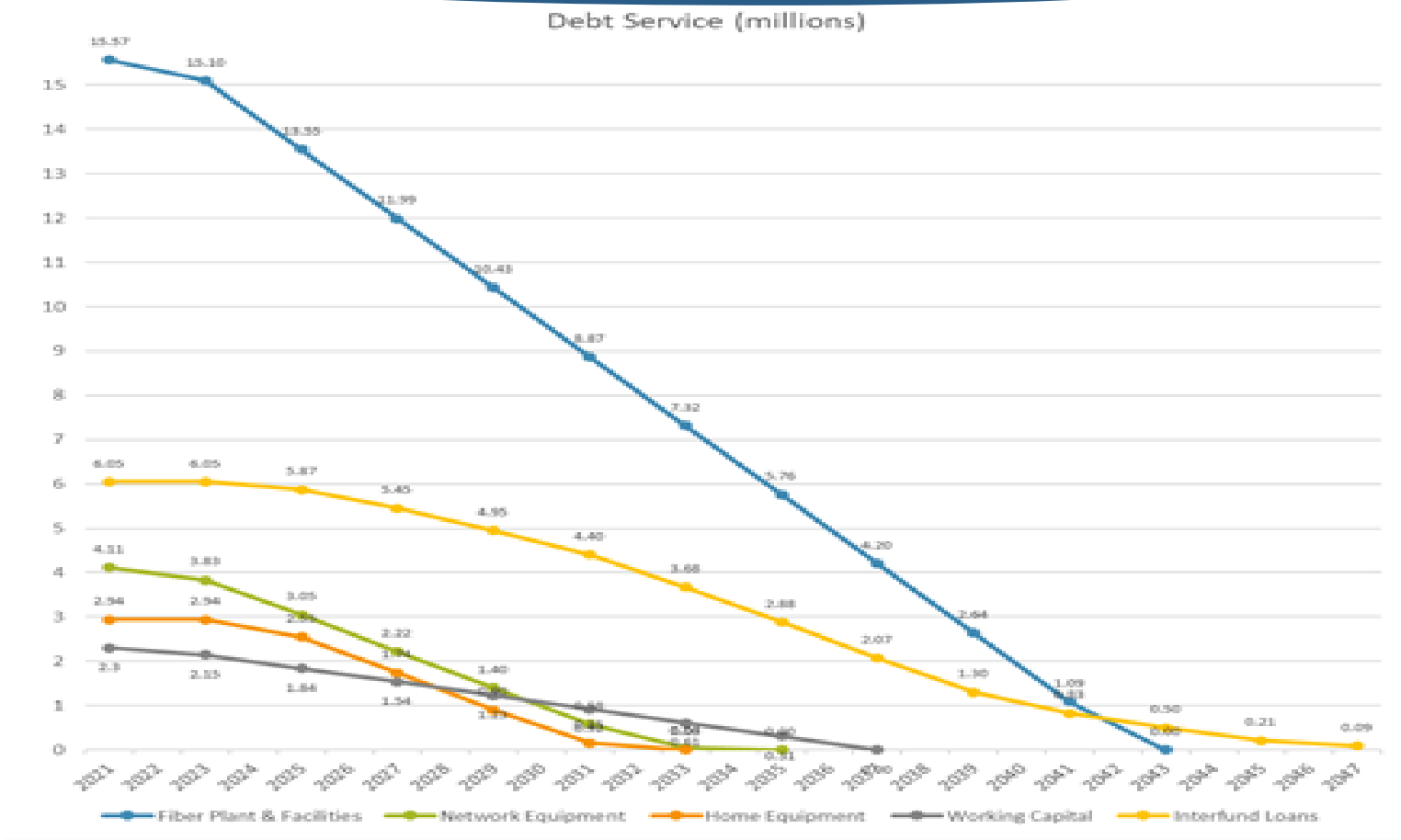


Funding**

Series	Term	Interest Rate	Principal	Interest	Total
Series A-Fiber Plant & Facilities	20	3.25%	$ 11,321,124	$ 4,251,961	$ 15,573,085
Series B-Network Equipment	10	3.25%	$ 3,465,273	$ 649,083	$ 4,114,356
Series C-Home Equipment	5	3.25%	$ 2,593,971	$ 347,992	$ 2,941,963
Series D-Working Capital	15	3.25%	$ 1,800,000	$ 502,792	$ 2,302,792
Series D-Interfund Loan	15	3.25%	$ 4,730,000	$ 1,321,225	$ 6,051,225
		Total Debt	**$23,910,367**	**$7,073,053**	**$30,983,420**

*** Based on a 55% residential uptake and a rate of $115/month for 1 Gbps service*

Debt Service



Timeline

Task	Year 1				Year 2				Year 3				Year 4			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Create business plan																
Low-level design, engineering, permitting																
Purchase fiber and conduit																
Issue construction RFP / vendor selection																
Phase I																
Backbone buildout																
Distribution buildout (40%)																
Purchase network equipment and install																
Marketing and pre-sales for Phase I																
Start rollout to Phase I customers																
Phase II																
Complete distribution buildout																
Marketing and pre-sales for Phase II																
Rollout to Phase II customers																
Post buildout close-out																

Study Recommendations

- **This Study has determined that a broadband utility is viable based on 55% residential uptake and $115/mo for a residential 1 Gbps service.**
- Structure a new division of the City responsible for deploying, maintaining, and operating a Lucas Broadband Utility.
- As it does with its existing utility, the City will need to adopt a culture that understands the importance of delivering a quality service experience into its new Internet customers.
- Magellan Advisors recommends that Lucas take a conservative and measured approach to implementing its utility, particularly focusing on building a sustainable operation through careful planning and phasing of the system.

Next Steps

- Complete a full internal review of this Broadband Feasibility Study.
- City Management and Finance should begin to socialize the Financial Model and borrowing requirements with its financial/bond advisors and counsel;
- Seek formal agreement and approvals from the City Council on the findings of the Broadband Feasibility Study, and seek consensus on the approach to deploy;
- Development of a formal City of Lucas FTTH Business Plan; Design, engineering and permitting; and prepare for contract procurement;
- Implement Smart Broadband Friendly Public Policies within the City's operating structure to accelerate infrastructure deployment, and to reduce overall project costs;
- Identify key resources within the City who will manage the development of the City's FTTH Business Plan and identify key project resources going forward.

Questions?

THANK YOU FOR YOUR TIME!