

Revenue Effects of FCC Reforms to Intercarrier Compensation and Federal Universal Service Mechanisms

Part 1 of 3 of a Report to the Vermont
Department of Public Service

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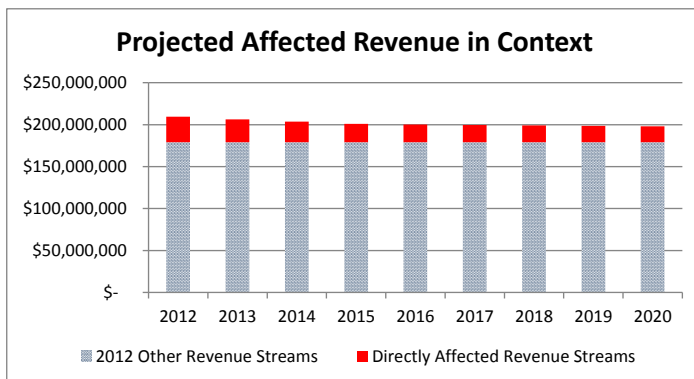
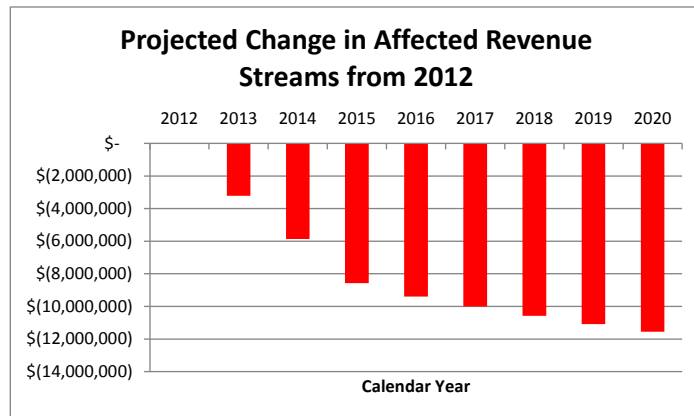
Executive Summary

This is the first of three reports that Rolka Loube Saltzer Associates was retained to write for the Vermont Department of Public Service. This report aims to estimate the revenue effects of the FCC’s *Transformation Order* on November 18, 2011 (“*Transformation Order*” or “*Order*”)¹ on Vermont’s ten incumbent local exchange carriers. Despite the many uncertainties in how the FCC’s *Order* will be implemented, RLSA estimated revenue streams for the forecast period from 2011 through 2020 for all ten incumbent carriers. Other universal service issues, including operating expenses, will be considered in subsequent reports.

The following charts and discussion summarize RLSA’s estimates for the forecast period from 2012 through 2020. RLSA considered two major revenue streams. First, we considered revenue that will be affected by likely changes in federal USF support, likely changes in intercarrier compensation (particularly terminating access compensation), and likely changes in subscriber revenues associated with new rates authorized by the *Transformation Order* (“Affected Revenue”). Additionally, we considered other regulated revenue sources, notably including revenue from monthly switched access line subscriber charges and from monthly special access charges (“Other Revenue”). We did not consider unregulated revenue in this report, an important revenue category based on sales of broadband DSL.

Considering all Vermont incumbents together, RLSA estimates that annual Affected Revenue streams will decline in the forecast period by \$11.6 million (“MM”) or 38 percent. This is depicted in the accompanying chart.

However, predicted losses in Affected Revenue streams are relatively minor in the context of all regulated operations. Placing this in context, the accompanying chart shows that the losses are small in



¹ See *Connect America Fund*, WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 26 FCC Rcd 17663 (Nov. 18, 2011).

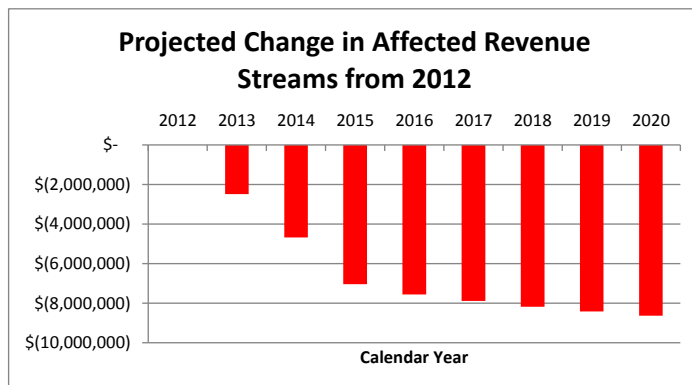
relation to the same companies’ 2012 Other Revenue of \$179 MM. This means that the revenue losses from the *Transformation Order*, while substantial in absolute terms, are a minor portion of the total regulated revenues of the incumbent carriers, which are currently at \$209 MM.

The *Transformation Order* addresses two types of companies: Price Cap carriers and Rate-of-Return carriers. “Price Cap” carriers are generally larger companies and include all legacy Bell Operating Companies. “Rate-of-Return” carriers are often rural independent companies. In Vermont, two ILECs are considered Price Cap carriers and the other eight are Rate-of-Return carriers.

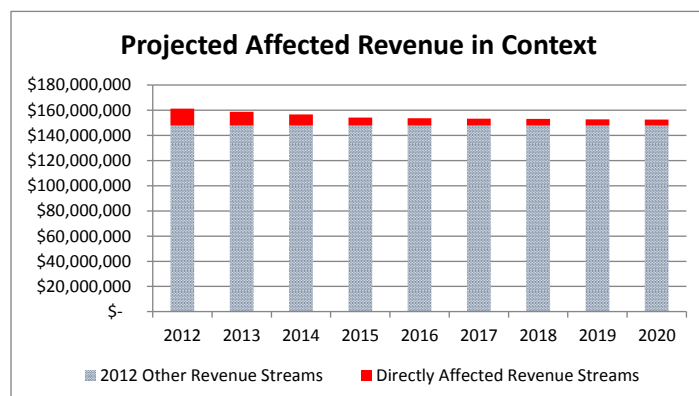
FairPoint

FairPoint Communications operates the two Price Cap companies in Vermont. Telephone Operating Company of Vermont (“TOC of VT”) is the larger company, and FairPoint Vermont is the smaller company.

RLSA estimates that the FairPoint companies will see annual Affected Revenues decline over the forecast period by \$8.6 MM, or about two-thirds of what FairPoint now receives in Affected Revenue. Over this period, the annual losses are estimated to grow by about \$2 MM each year for the first several years, with smaller annual reductions thereafter. This estimate is based on our conclusion that the FairPoint companies are likely to suffer substantial support losses, be required to redirect general support to make additional capital expenditures, or both.



FairPoint’s annual Affected Revenues are only a small part of its overall annual regulated revenue of \$161 MM. Trends in Other Revenue streams will likely have more influence on FairPoint’s financial viability than will Affected Revenue streams. Future line counts and special access revenues are particularly important parameters that create considerable uncertainty in future estimates.



Rate-of-Return Companies

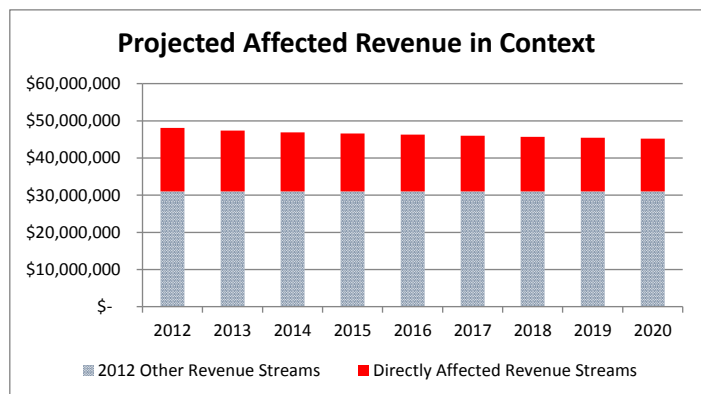
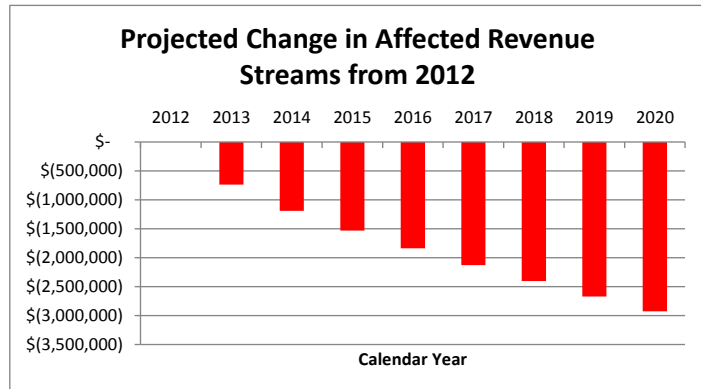
RLSA estimates that affected annual revenue streams of Vermont’s eight Rate-of-Return companies will decline by \$2.9 MM or 17 percent over the forecast period. RLSA anticipates a series of revenue reductions of approximately \$0.5 MM each year below the preceding year’s level.

Placing this in context, the accompanying chart shows that the Rate-of-Return companies currently have Other Revenue of \$31 MM and Total Regulated Revenues of \$48 MM. This means that the \$2.9 MM expected revenue losses from the *Transformation Order*, while substantial in absolute terms, will be a minor portion of the total regulated revenues of the incumbent Rate-of-Return carriers.

The details differ substantially among the Rate-of-Return companies. Over the forecast period, RLSA estimates Affected Revenue reductions of at least 15 percent for VTEL, and Waitsfield, and at least 25 percent for Franklin, Shoreham, and Topsham. For these companies, Affected Revenue losses are not necessarily a minor problem. Details by company are shown in Appendix A to this report.

Other Issues

At this early stage of RLSA’s work, it is not yet possible to say whether projected revenue losses justify immediate policy action in Vermont, such as activation of a state high-cost universal service fund. Forthcoming RLSA reports will include recommendations. There is a pending legal challenge to the FCC’s *Order*, but it is unlikely to be decided by the Court before the end of 2013.



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I. Background and Terminology

This is the first of three reports prepared under contract to the Vermont Public Service Department by Rolka Loube Saltzer Associates. The report is required by Vermont statute.²

The subject of this first report is the likely financial effects in Vermont of a recent order by the Federal Communications Commission (FCC). The FCC released its *Transformation Order* on November 18, 2011 (“*Transformation Order*” or “*Order*”).³ This report estimates the effects of that *Order* on the regulated revenue streams⁴ of Vermont’s incumbent telephone companies (“incumbents” or “local companies”). This report does not address revenue streams generated by non-regulated services.

In the pages below we summarize the main elements of the *Transformation Order*. Then we describe our major assumptions in estimating the revenue effects of the *Order*. We neither explain every intricacy of the FCC’s *Order* nor every element of our calculations, but we provided Excel worksheets for that purpose to the Department of Public Service.⁵ This report also examines the need, if any, for additional action in Vermont, and considers the potential impact of various legal challenges to the FCC action on the federal USF.

RLSA’s second report will examine the costs of providing service in Vermont. This task involves modeling costs using a computerized cost model of forward-looking network costs, and analyzing the carriers’ current company-wide cost of service and revenue.

RLSA’s third and final report will consider a range of economic and policy issues surrounding universal service, including price elasticity, economic development, the effects of competition, policy options for Vermont, and one or more recommended support mechanisms to support universal service and rural economic development while securing the benefits of telecommunications competition for Vermont households and businesses.

² 30 V.S.A. § 7515(b)(6).

³ See *Connect America Fund*, WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 26 FCC Rcd 17663 (Nov. 18, 2011).

⁴ “Regulated” is a term of art in the telecommunications industry. It means all traditional telecommunications operations. “Unregulated” operations include some major categories of operations, notably including broadband DSL and video.

⁵ Much of the content of these Excel worksheets is confidential. Generally, the companies claimed confidentiality for their exchange-by-exchange line counts and also for the volume of their intercarrier transactions. The spreadsheets are not included in this report.

A. Revenue Sources, Access Charges and Reciprocal Compensation

This report estimates regulated revenue effects of the *Transformation Order* on Vermont's incumbent telephone companies. To understand the recent changes, one must first have a basic grasp of the different types of existing revenues.

A local company's most fundamental revenue stream is its subscriber revenues. These include "flat-rated" monthly charges that fall due even if a subscriber doesn't use his or her telephone. In Vermont, subscriber revenue can also include per-minute charges for local calling. Some local companies also sell toll service at retail, and these companies derive revenue from both flat-rated monthly "bundle" charges as well as per-minute toll revenues.⁶

Local carriers also obtain substantial revenue from the sale of wholesale services to other carriers, notably including long distance carriers (also called "interexchange carriers" or "IXCs"). These IXCs use the facilities of the local exchange carrier to originate and terminate long distance calls. The FCC established a system of "access charges" to compensate local exchange carriers for the use of their networks by IXCs. Today these charges consist solely of payments for each minute of an actual call.

IXCs (and other carriers) historically have paid three forms of access:

- Terminating end office access charges arise whenever an incumbent has terminated a call on the incumbent's network at the IXC's request. To terminate a call, the incumbent rings the phone of the desired subscriber and then connects the voice circuits to the IXC's network so that voice exchange can occur.
- Originating end office access charges arise whenever an IXC's customer uses an incumbent's network to dial (usually with "1 plus" dialing) a call that is transported to the IXC's own network.
- Transport access charges arise when, to complete one of its own subscriber's calls, an IXC must use a local carrier's cable or tandem switch to transport that call from the end of the IXC's network to the incumbent's local network.

In 1996, Congress passed a law establishing local exchange competition as national policy. A key element of that law prescribed a new system for regulating the rates at which carriers exchange local voice traffic.⁷ It required that "interconnection agreements" be filed with state commissions, and it included some standards for establishing upper and lower limits on

⁶ Historically, the local carrier sold long distance services as part of its regulated services. However, the current approach is to provide long distance services and data services through an unregulated separate subsidiary. The customer still purchases "bundled services," but the revenues from the bundle are allocated by the carrier among its regulated and unregulated subsidiaries.

⁷ See 47 U.S.C. § 251.

“reciprocal compensation” payments. Where there were reciprocal compensation disagreements between commercial parties, state commissions were directed to arbitrate those differences.⁸

B. Dual Jurisdiction and Separations

The FCC and the states share a system of “dual jurisdiction” over telecommunications services. Some services are “intrastate” (often more simply called “state” services). All states have a regulatory body with the capability of overseeing intrastate services, particularly rates. In Vermont, that regulator is the Vermont Public Service Board, although state and federal laws have exempted some intrastate services and carriers from regulation. Some services are “interstate,” and their rates are potentially overseen by the FCC, if at all.

The jurisdictional separation of costs and revenues is most important to incumbents. These local companies must divide their operations into two virtual parts, one state and one interstate. Both revenues and costs must be separated to facilitate those dual ratemaking calculations by state and federal regulators. The methods to perform this separation are prescribed in a complex set of FCC administrative rules.

Separating revenues is relatively straightforward. Interstate revenues are all revenues generated from the sale of interstate services, such as state-to-state dialed calling. Most point-to-point services (“special access”) are also interstate. Similarly, state revenues are all those derived from the sale of intrastate services, including local exchange service and toll and access revenues for in-state calls.⁹

State revenue derives largely from fixed monthly subscriber payments for local exchange service, or “dial tone.” Incumbents also receive substantial revenue from intrastate access charges and, to a lesser extent, net revenue from reciprocal compensation payments.

On the interstate side, there was no per-month “fixed” charge before the 1980s. Virtually all interstate revenue came from per-minute toll access payments. In the 1980s the FCC introduced a “subscriber line charge” (“SLC”). This is a fixed monthly payment paid by subscribers. From the customer’s point of view, a SLC payment is just another piece of the fixed monthly telephone bill, and most customers don’t know or care that it produces interstate revenue. Currently, SLC payments can be as large as \$6.50 per month for residential customers and \$9.20 for multiline business customers.

Local companies must also separate their costs, a process that is much more complex than separating revenues. Separation techniques are not important here, but the result is very

⁸ See 47 U.S.C. § 252.

⁹ This process becomes more complex when the carrier sells bundle of state and interstate services. In those instances, a carrier allocates the revenue between the jurisdictions using a specific allocation algorithm. It is not clear if only the FCC or if both the FCC and the state commission can review the reasonableness of the algorithm.

important. If a telephone company's separations factors allocate a high level of cost to the state jurisdiction, that company generally will have high local service monthly rates and high intrastate access charges. One important change in federal-state relations over the last 15 years has been a steady shift of revenues to the interstate jurisdiction, but without any corresponding shift in costs.

C. Price Cap and Rate-of-Return Carriers

For purposes of setting the rates for interstate services, the FCC divides incumbents into two major groups. The original concept of "Rate-of-Return" applied to nearly all companies. In the 1990s, the FCC applied a new system of "Price Caps" to the larger carriers such as Verizon. Price Cap carriers generally do not calculate their return on investment. Rather, they adjust rates from year to year based on extrinsic factors such as inflation or productivity. If they over-earn or under-earn, there is generally no rate adjustment.¹⁰

Today, the Price Cap carriers are generally the larger incumbents. The class includes all the former Bell operating companies, but also includes many mid-sized and smaller companies as well. In Vermont, both FairPoint companies are Price Cap companies. This includes the Telephone Operating Company of Vermont ("TOC of VT"), which FairPoint acquired from Verizon, as well as its traditional company, FairPoint Vermont, Inc. ("FairPoint Vermont").¹¹ The second major group is the "Rate-of-Return" companies. All eight non-FairPoint incumbent companies in Vermont are Rate-of-Return companies.¹²

The FCC also applied a different method for Price Cap companies when setting the rates carriers charge one another for "toll access." Price Cap carriers have generally charged lower interstate access rates than have Rate-of-Return companies.¹³ The FCC allows Price Cap companies to adjust interstate access rates slightly from year to year, based on factors other than net earnings. Many Price Cap companies have adopted interstate access rates that are uniform across multiple states. For Rate-of-Return companies, rates are also often the same across multiple states, because the National Exchange Carrier Association operates a "revenue pool" that allows all members to charge uniform rates.

¹⁰ Originally, the Price Cap system was established with some upper and lower earnings bounds. The FCC gradually eliminated those limits, however.

¹¹ FairPoint Vermont was converted to Price Cap regulation in 2010. See Petition of China Telephone Company, et.al. for Conversion to Price Cap Regulation and for Limited Waiver Relief, WC Docket No. 10-47, Order of May 10, 2010, 25 FCC Rcd 4824.

¹² Two Vermont companies belong to a subset of Rate-of-Return companies called "average schedule" companies.

¹³ For example, TOC of VT charges \$0.0023 per minute for terminating interstate calls. Waitsfield Telecom charges \$0.0269 per minute for the same service, approximately ten times as much.

The recent Order affirms this distinction between Price Cap and Rate-of-Return carriers and extends it into new policy areas. The distinction seems likely to remain essential to an adequate understanding federal regulatory policy.

II. Intercarrier Revenue Changes

A. The *Transformation Order*

Over the last 20 years, the FCC has greatly reduced interstate access charges. It eliminated most fixed and per-minute charges between carriers associated with recovering the costs of the “local loop” (cable facilities used to serve retail customers). The remaining per-minute charges recover costs associated with central office equipment and transport between carriers, and those charges are much below historical levels. The 2011 *Order* continued that trend toward lower access rates.

At the same time, the *Transformation Order* was unique in two respects, both of which are currently on appeal.¹⁴ First, the *Order* reached across the dual jurisdiction divide. In past epochs of rate reform, the FCC has ordered reductions only for interstate rates. For example, in 2000 and 2001, the FCC greatly reduced interstate access charges but left supervision of intrastate access charges to state commissions. In the 2011 *Order*, however, the FCC for the first time asserted a right to limit intercarrier rates for *intrastate* toll traffic. The FCC essentially ruled that all intercarrier traffic exchanges (including toll) are subject to the new statutes enacted in 1996 for “reciprocal compensation.”

Second, the *Transformation Order* established “bill-and-keep” as the “default methodology for all intercarrier compensation traffic.”¹⁵ This mandated national framework means that carriers will no longer pay per-minute charges to other carriers. Assuming the *Order* survives the pending judicial review, carriers will exchange traffic without compensating each other in any way. This will be true regardless of which carrier has a retail customer to pay its own costs, regardless of the balance of traffic flow, and regardless of the scale of each carrier’s network costs.

Under a bill and keep regime, incumbents will be able to recover their costs only from their retail customers and from universal service payments.¹⁶ Wholesale customers will become free-riders on the local network. Bill and keep is a common relationship among large Internet backbone providers, but it is not common between large and small Internet service providers.

¹⁴ The *Order* is on appeal in the United States Court of Appeals, Tenth Circuit (Denver), but a decision is not expected until sometime in 2013.

¹⁵ *Order* ¶ 736.

¹⁶ *Order* ¶ 746-47.

More to the point, it is a fundamental change from historical patterns within the telephone industry, where “calling party pays” has been the general rule for landline communications.

Although the FCC in the *Transformation Order* purports to control intrastate access, it does not change any rules for separating costs or revenues. This means that even though the FCC’s action could lead to an increase in local rates, the FCC will not accept any greater legal responsibility for incumbent costs. Nevertheless, to the extent that the *Order* eliminates intercarrier revenue from access and reciprocal compensation payments, the FCC did assure incumbents they will receive partial compensation through a new form of federal universal service support and through a new flat-rate charge, the access recovery charge (“ARC”).¹⁷

The *Transformation Order* established a complex transition plan to achieve the ultimate goal of bill and keep rates. Most rates were frozen immediately. The *Order* established a deadline of 2013 for reduction of some intrastate rates. It also prescribed very low per-minute rates for some services, to be implemented by 2015. Finally, the *Order* established bill and keep rates for all terminating services by 2018 for Price Cap carriers and for all terminating end-office services by 2020 for Rate-of-Return carriers.

The following sections summarize the effects of the *Transformation Order* in more detail from 2011 through 2020, for both Price Cap and Rate-of-Return carriers.¹⁸

B. Terminating End Office Access

IXCs (and other carriers) historically have paid terminating end office access charges whenever an incumbent has terminated a call on the incumbent’s network at the IXC’s request. To terminate an IXC’s call, the incumbent rings the phone of the desired subscriber and then connects the incoming voice signal from the IXC’s network to its own subscriber. The FCC views these terminating end office access rates as the source of the “most acute intercarrier compensation problems, such as arbitrage.”¹⁹ Terminating end office access payments consist of several separate charge elements.²⁰

For interstate terminating end office access, the *Transformation Order* immediately capped all 2011 rates at their current levels. The *Order* also established a transition to bill and keep for terminating access, with the details dependent on whether the carrier is a Price Cap

¹⁷ The details of that “Recovery Mechanism” support are discussed in Part III.B. below.

¹⁸ See generally, *Order* ¶ 801.

¹⁹ *Order* ¶ 800. The FCC has not defined “arbitrage,” but in common usage it is the practice of generating services for one’s own company purely because the allowed rate for that service is greater than the economic cost. Access stimulation has been a widely discussed form of arbitrage in recent years. *Order* ¶ 820.

²⁰ These include a “carrier common line” charge, an “end office information surcharge,” and “local switching.”

carrier or a Rate-of-Return carrier. For Price Cap carriers, terminating rates must be reduced to \$0.0007 per minute by 2016²¹ and to zero by 2017. For Rate-of-Return carriers, terminating end office rates must be reduced to \$0.005 by 2016, to \$0.0007 by 2019, and to zero by 2020.

On the intrastate side, terminating rates were also subject to the immediate 2011 cap. In addition, by 2013, all intrastate rates must be at “parity” (also called “mirrored”), meaning they cannot exceed interstate rates. After 2013, intrastate terminating rates are subject to the same limits as interstate rates.

C. Transport Access

An IXC (and any other carrier) historically has paid transport access when, to complete one of its own subscriber’s calls, the IXC must use a local carrier’s cable or “tandem switch” to transport that call from the end of the IXC’s network to the incumbent’s local network. Transport comes in two flavors, “switched” and “dedicated,” depending on how the IXC chooses to move its signal. “Switched transport” is paid for on a per-minute-of-use basis. “Dedicated transport” is paid for by what amounts to lease payments on dedicated trunks. Switched transport²² and dedicated transport²³ each generate multiple access charge elements.

For interstate transport, the *Transformation Order* capped all rates immediately at current levels. The *Order* also sets a 2017 limit for Price Cap carriers that own a tandem switch (which includes TOC of VT) so that the sum of end office terminating and transport cannot exceed \$0.0007. By 2018, the sum of these charges must be zero. All other incumbent carriers are exempt from interstate transport reductions except the immediate cap.

On the intrastate side, transport rates of all incumbents (Price Cap and Rate-of-Return) were capped in 2011 and must mirror interstate rates by 2013. Thereafter, the limits for interstate traffic will apply.

D. Originating End Office Access

IXCs (and other carriers) historically have paid originating end office access whenever one of their subscribers uses an incumbent’s network to dial a call that is transported to the IXC’s own network. Although the *Transformation Order* concluded that the originating end

²¹ All target dates in the *Order* other than 2011 occur on July 1.

²² The elements of switched transport are “tandem switched facility” rates (per cable mile per minute), “tandem switched termination” rates (per minute), and “tandem switching” (per minute).

²³ The elements of dedicated transport are “direct trunked facility” and “direct trunked termination.” Carriers typically have dedicated transport available at two capacities, “DS1” and “DS3,” each of which has different rates.

office access regime should eventually be reformed, the *Transformation Order's* actual mandates for originating end office access were minimal.

For both interstate and intrastate traffic, the *Transformation Order* immediately capped switched originating end office access rates at current levels, but only for Price Cap carriers. Rate-of-Return carriers were not capped.²⁴

E. Reciprocal Compensation

Reciprocal compensation is compensation for termination and transport of local calls. Unlike access rates, reciprocal compensation rates are determined by agreement between carriers, or in some cases by arbitration. Reciprocal compensation traffic is mostly intrastate, but it can also include interstate calls under some circumstances.

Under the *Transformation Order*, all reciprocal compensation rates were immediately capped in 2011 at current levels. The *Order* also established transitions to bill and keep. For all carriers, any rates above interstate terminating access rates must be reduced to that level by 2013. For Price Cap carriers, rates will thereafter decline to a cap of \$0.0007 by 2016, and zero by 2017. For Rate-of-Return carriers, rates will thereafter decline to a cap of \$0.05 by 2016, to \$0.0007 by 2019, and to zero by 2020.

F. Wireline to Wireless Connections

The FCC has uniquely broad jurisdiction over the rates charged by cellular carriers.²⁵ It has asserted that this jurisdiction covers the rates for services purchased by cellular carriers also. Using this jurisdiction, the FCC immediately adopted bill and keep as the default compensation methodology for non-access traffic exchanged between LECs and cellular providers within FCC-defined “major trading areas.”²⁶

G. Summary

The following table summarizes the FCC’s transition plans. RLSA estimated incumbent carrier revenues according to these rules.

²⁴ *Order* ¶ 805.

²⁵ The FCC calls cellular carriers “CMRS” providers.

²⁶ *Order* ¶¶ 779, 806; *see* 57 U.S.C. § 332(c)(1)(B). Major trading areas are the areas over which the FCC auctions spectrum. Vermont is separated into two major trading areas. Northern and Southwestern Vermont are in major trading area no. 1 that also includes Connecticut, most of New York, north eastern Pennsylvania and northern New Jersey. Southeastern Vermont is in major trading area no. 8 that also includes New Hampshire, Maine, Massachusetts, and Rhode Island.

Summary of ICC Transition²⁷	Jurisdiction	Price Cap	Rate-of-Return
Terminating End Office	Interstate	Immediate cap. Transition to zero in two stages by 2017.	Immediate cap. Transition to zero in three stages by 2020.
	Intrastate	Immediate cap. Mirroring of interstate rates by 2013. Transition to zero in two stages by 2017.	Immediate cap. Mirroring of interstate rates by 2013. Transition to zero in three stages by 2020.
Transport	Interstate	Immediate cap. Transition to zero by 2018 for carriers that own their own tandem switches.	Immediate cap.
	Intrastate	Immediate cap. Mirroring interstate by 2013.	Immediate cap. Mirroring interstate by 2013.
Originating End Office	Interstate	Immediate cap.	Immediate cap.
	Intrastate	Immediate cap.	N/A
Reciprocal Compensation	All	Immediate cap. Mirroring of interstate terminating rates by 2013. Transition to zero, in two stages ending in 2017.	Immediate cap. Mirroring of interstate rates by 2013. Transition to zero, in three stages ending in 2020.
Wireless Interconnection	All	Immediate zero rate for intra-MTA service.	Immediate zero rate for intra-MTA service.

III. Revenue Replacement Mechanisms

The *Transformation Order* creates two new mechanisms that allow incumbents to recover some of the revenue lost to intercarrier compensation reforms. The first is the “access recovery charge,” a subscriber rate increase. The second is a universal service mechanism.

A. Access Recovery Charge

Incumbents are permitted to impose a “federal access recovery charge” (“ARC”).²⁸ This is a new fixed monthly charge imposed on wireline customers. It is in addition to the already authorized “subscriber line charge” (“SLC”) that arose out of an earlier epoch of access reforms.

²⁷ All year dates shown are effective on July 1 of the stated year.

²⁸ See generally, *Order* ¶ 847-904.

The FCC will allow carriers to consolidate the SLC and ARC charges into a single line item on customer bills.²⁹

The FCC set limits for the ARC, in the following ways:

- The ARC cannot produce more revenue than the carrier's total "eligible recovery," which is a portion of lost intercarrier compensation revenue, but calculated in a specific way.
- The ARC cannot increase at an annual rate of more than \$0.50 for consumers and small businesses, and \$1.00 per line for multi-line businesses.
- For Price Cap carriers, the ARC cannot exceed \$2.50 per line per month for residential customers and single line business customers, or \$5.00 per line per month for multiline business customers.
- For Rate-of-Return carriers, the ARC cannot exceed \$3.00 per line per month for residential customers and single line business customers, or \$6.00 per line per month for multiline business customers.
- The ARC cannot raise a residential customer's total rate to more than \$30.00 per month.
- For multiline business customers, there is a total cap of \$12.20 per line for the total of the federal SLC and the new federal ARC.

Eligible recovery for ARC purposes depends on the type of incumbent. The FCC rules differentiate among: (1) larger Price Cap carriers such as TOC of VT,³⁰ (2) smaller Price Cap companies such as FairPoint Vermont, and (3) Rate-of-Return companies. For each class, eligible recovery shrinks over time, but the details vary. The rules are least generous with the larger Price Cap carriers. The rules are most generous with Rate-of-Return carriers, for whom the eligible recovery decreases by 5 percent per year.

RLSA estimated ARC revenues assuming that Vermont carriers will charge ARC rates at the maximum allowed levels. RLSA also assumed that TOC of VT and FairPoint Vermont will separately determine their ARC rates, even though we know that FairPoint in fact calculates the ARC at a multistate level.³¹

RLSA tested each company's rates to see whether the rates would surpass the FCC's \$30 rate limit. Although it is a complex matter to calculate a single "residential rate" in Vermont, where carriers often charge local measured service rates, in the end we assumed that the \$30 limit would restrict only one Vermont carrier's (Northfield) ARC rates.

²⁹ Order ¶ 852.

³⁰ These are the Price Cap carriers participated in the last round of interstate access reforms called "CALLS."

³¹ The FairPoint ARC charge currently is \$0.41 for residential customers and single line business customers and \$0.82 for multiline business customers. This practice of setting ARC rates at the corporate level produces slightly lower retail rates for Vermont customers. But because the ARC is not at the maximum allowed rate, neither FairPoint company in Vermont is eligible for RM support.

The Rate-of-Return carriers will generally limit their multi-line ARC to \$3.00 in order to comply with the \$12.20 cap on the sum of the multiline SLC and ARC.

B. Recovery Mechanism Support

The second new mechanism that allows incumbents to recover some of the revenue lost to intercarrier compensation reforms is a new form of federal universal service. The *Transformation Order* fundamentally modifies federal universal service support mechanisms, with the principal purpose of providing support for broadband deployment in unserved areas. The *Order* created a series of new support mechanisms that, confusingly, have all been given the singular collective title of “Connect America Fund” (“CAF”) support. The new program under consideration here is commonly called “Recovery Mechanism” (“RM” or “CAF-ICC”) support.

The broad purpose of RM support is to replace a portion of the revenue that incumbents lose through mandated intercarrier compensation rate reductions and that is not recovered through the ARC charge. RM support comes under increasingly severe constraints over time, suggesting that it will likely be provided to fewer and fewer carriers.

The rules for calculating RM support are complex and contain numerous assumptions about future developments. The basic mechanism is that a carrier receives RM only if it has some “eligible recovery” left over that cannot be recovered by the ARC at the maximum allowable rates.

IV. Federal Support Changes

This section examines changes that the *Transformation Order* has made to existing federal universal service mechanisms. It also describes new CAF support programs, particularly those for Price Cap carriers. The *Order* also created a new CAF program for wireless carriers, but that program is not material here.

The FCC has improved its computer modeling capabilities over the years. At the same time, it has become increasingly enamored of using U.S. census block data for universal service support calculations. This trend continued in the *Order*, which also uses census blocks as geographic units to define the boundaries of carriers’ service obligations.

The FCC has historically applied different support mechanisms to Price Cap and to Rate-of-Return companies.³² If anything, the *Transformation Order* increases those differences, making the two systems more dissimilar, at least over the next five to ten years as the CAF program is implemented.

³² Previously the rules differentiated between “rural” and “nonrural” carriers, but that distinction has been largely replaced. The new classification and the old classification have largely the same result in Vermont, although FairPoint Vermont Telephone is now both a rural company and a Price Cap company.

A. Support for Price Cap Carriers

1. Existing Support to Price Cap Carriers

Historically, federal support to Price Cap carriers has been relatively sparse. The FCC found that in 2010, Price Cap carriers received approximately 25 percent of high-cost support, even though they served more than 83 percent of the unserved broadband locations in the nation. This is similar to the situation in Vermont for voice lines, where FairPoint serves 78 percent of the state's total access lines, and many of those lines are in high cost portions of the state.³³ This scarcity of federal support to Verizon and now FairPoint has contributed to historical differences in the broadband availability to FairPoint customers and to Vermont's Rate-of-Return carrier customers.

Since 2001, Price Cap carriers have received federal support from the "High Cost Model Support" ("HCMS") mechanism. Within Vermont, only TOC of VT (formerly Verizon) received this form of support, and it has recently generated about \$5.5 million per year for FairPoint. This support had a direct effect on rates until recently, as most of this support was returned quickly to customers in the form of explicit credits. FairPoint currently retains all HCMS support as general revenue.

Price Cap carriers also receive "Interstate Access Support" ("IAS"). This support began as compensation for the "CALLS" round of access interstate rate reductions mandated by the FCC in 2000. IAS is calculated based on how much revenue each carrier lost during that reform. TOC of VT recently received about \$1.8 million per year in IAS. This revenue reduces FairPoint's interstate rates, but it has had no effect on intrastate rates set by the Vermont PSB.

2. Changes for Price Cap Carriers

The transition for Price Cap carriers will occur in several stages. It has become common to refer to as phases of CAF implementation. The first round of implanting the *Transformation Order* consisted of an immediate "freeze" on support to Price Cap carriers. Next, the FCC authorized a grant program that has come to be called "CAF I" support or "Incremental Support." Eventually, when "CAF II" is implemented, Frozen High Cost support will be replaced by a new kind of grant called "CAF II" funding.

³³ Part II of this same study will examine more closely the costs of all Vermont carriers, by study area.

a. Frozen Support

The *Transformation Order* immediately “froze” existing federal support for each Price Cap carrier at the 2011 level. The freeze covered most varieties of support then provided to Price Cap carriers, notably including both HCMS and IAS.³⁴

Frozen Support comes with increasingly stringent spending requirements. Currently, supported carriers must use federal USF support “provision” of voice service to entire service areas. Beginning in 2013, all carriers receiving Frozen Support must use at least some of that support to “build and operate broadband-capable networks used to offer the provider’s own retail broadband service” in areas “substantially unserved by an unsubsidized competitor.”³⁵ RLSA does not understand this language to necessarily require any carrier to expand its broadband network. It does authorize use of Frozen Support for that purpose, but the main effect of Frozen Support apparently will be to require carriers to ensure that their annual justification of how federal support has been spent can justify broadband operating expenses in noncompetitive areas equal to or greater than the support amount.³⁶

b. CAF I incremental support

In 2012 the FCC offered a one-time opportunity to carriers to receive \$300 million in “incremental support” for capital construction of broadband infrastructure facilities. These grants were for capital expenditures and cannot be used to support ongoing operations.

CAF I Incremental Support came with numerous requirements:

- The new facilities had to be deployed in geographic areas where customers cannot currently obtain adequate fixed broadband service.³⁷
- The carrier’s capital improvement plan did not anticipate those same construction projects over the next three years.

³⁴ *Order* ¶ 133. Frozen High Cost support will be reduced in areas with very low local rates. RLSA does not believe this limitation is material in Vermont.

³⁵ *Order* ¶¶ 150, 591. In 2013, the authorization applies to one-third of Frozen Support. In 2014, it applies to two-thirds of Frozen Support. In 2015, it applies to all Frozen Support.

³⁶ Carriers today provide annual reports to state commissions, reports that the FCC has required under 47 U.S.C. § 254(e). Historically those reports have said that support was used as revenue to support operating expenses throughout their service areas. In the future, carriers will have to show that increasing shares or support have been devoted to broadband. Those future reports may claim either that the funds have been used to provide broadband in areas not served by unsubsidized competitors, either as revenue that was expended for operating expenses, or as capital contributions that was used for capital improvements to broadband network.

³⁷ For this purpose, the minimum broadband speed recognized was 768 kbps downstream and 200 kbps upstream.

- The funding would not be used to satisfy any merger commitment or other regulatory obligation.
- Deployment must be complete to 2/3 thirds of the locations in two years and to all required locations in three years.
- The new facilities must provide service of at least 4 Mbps downstream and 1 Mbps upstream.
- The carrier receiving support must provide broadband service to a number of locations equal to the support accepted divided by \$775.³⁸

Last July, FairPoint Vermont accepted CAF I support of \$2.0 MM for TOC of VT and \$0.02 MM for FairPoint Vermont. In return, FairPoint promised to deploy broadband to thousands of Vermont locations, and it promised to add service to one new customer for every \$775 in CAF I Incremental Support received.³⁹

RLSA understands that to meet its deployment obligations, FairPoint will have to incur capital expenditures of more than \$775 per location. To provide broadband for all promised locations, RLSA understands that FairPoint will need additional funding from other sources. RLSA also understands that FairPoint intends to use Frozen Support for this purpose. Therefore, RLSA anticipates that at least some Frozen Support will in the immediate future be redirected toward capital expenditures and will not be available to support operating expenses, either for broadband or for voice services.

c. CAF II Support

The CAF II system, when implemented, will be fundamentally different from existing support. One innovation is an annual budget. Support for Price Cap carriers will be subject to an overall national cap of \$1.8 billion per year.⁴⁰

The most fundamental change is that CAF II will operate something like an optional contract between the carrier and the government. The subject of the contract is broadband availability, but it applies only to certain portions of certain states. For its part, the FCC will ensure that a participating carrier receives CAF II support for five years. In return, a CAF II carrier must accept for that same five year period a truncated version of broadband carrier of last resort (“COLR”) obligation.

The *Transformation Order* explains that incumbent carriers will be given what amounts to a right of first refusal to be the supported terrestrial broadband carrier in any included area. A carrier wishing to accept CAF II support will file a commitment with the FCC that covers all of

³⁸ Order ¶¶ 94, 138, 146-147.

³⁹ Letter from Karen Brinkman to Marlene Dortch, FCC, July 23, 2012, available at <http://apps.fcc.gov/ecfs/document/view?id=7021991826>.

⁴⁰ Order ¶ 158.

the carrier's included territory in a set of states. That set may exclude one or more of states where the carrier serves, but for any included state all covered areas will be subject to the FCC's COLR requirements.⁴¹

For carriers making a CAF II commitment, support will be determined by the output from the new computerized model. Therefore, the shift to CAF II cannot occur until the results of a new computerized cost model are available. The FCC anticipated that modeling work would be completed before January 2013,⁴² but that prediction now appears to have been wildly optimistic. RLSA estimates that model results will not be available until 2014. Moreover, to estimate future CAF II support, one must know the "benchmarks" or uniform parameters that the FCC will apply as offsets against localized cost results from the cost model.⁴³ The FCC has not set those benchmarks.

The FCC anticipated that some incumbents may not submit commitments during the CAF II initial award stage for every state in which the carrier has a service territory. In the states where the carrier has not made a CAF II commitment to serve, the FCC has explained that it anticipates holding a form of "competitive bidding."⁴⁴ The FCC has not explained what entities might submit bids in these circumstances or what price ceilings or other limits the FCC would apply to those bids. It is possible that an incumbent Price Cap carrier that has declined the price-limited right-of-first-refusal could file a bid in this second round, but at a higher support price than was possible in the earlier round.⁴⁵

After the initial five years of CAF II expires, still another kind of auction will occur. In this auction (which might be called "CAF III"), "all eligible providers will be given an equal opportunity to compete."⁴⁶ In other words, the FCC has already announced a plan to eliminate its not-yet-implemented CAF II support mechanism, in favor of commercial auctions.

d. CAF II Obligations

In return for CAF II funding, supported carriers will come under a more comprehensive set of broadband public service obligations. First, the supported carrier must provide broadband to increasingly high proportion of the areas within the carrier's service area that are not served by an "unsubsidized competitor." By the end of the third year, service must be available to 85

⁴¹ *Order* ¶ 171. The FCC calls this carrier decision a "state-level commitment."

⁴² *Order* ¶ 171.

⁴³ In USF parlance, a "benchmark" is a nationally uniform support parameter. Sometimes a benchmark is a uniform number that is subtracted from each area's cost as a part of a support calculation.

⁴⁴ *Order* ¶ 156.

⁴⁵ Indeed, this possibility may cause some Price Cap carriers to decline their first round right-of-first-refusal, hoping for a higher support level following a second round bid.

⁴⁶ *Order* ¶ 178.

percent of those locations within the state. By the end of the fifth and final year of CAF II, all of those locations must be served.⁴⁷

Broadband service will also have to meet increasingly rigorous “performance metrics”. By 2017, Price Cap carriers’ broadband services must be providing 4 Mbps downstream and 1 Mbps upstream. This exceeds the speed of many older DSL services that were built in the 1990s. The FCC also expects required speeds to increase further in the future, to “at least” 6 Mbps down and 1.5 Mbps up to some supported locations.⁴⁸

The cost of achieving ubiquitous service and higher service quality standards may exceed the support that the FCC provides under CAF II. This condition could cause a cautious carrier to decline CAF II support and commitments. Where a carrier does accept, however, the new structure could effectively eliminate all operating support for voice service, a program that has existed for many years. Such a carrier might have difficulty raising funds in capital markets because that voice support has historically been an important underpinning for debt financing.

e. Some Locations Only

The FCC has authorized several kinds of geographic exclusions from the CAF II system. These areas are generally excluded both purposes of calculating support and for defining the obligations to serve.

First, areas “outside the high cost range” are excluded from both the FCC’s support calculations and from the carriers’ service obligations.⁴⁹ This includes both areas with very high cost and areas with low cost.

The FCC reasoned that costs in some areas are so high that available federal USF funds could be exhausted serving only a few customers. By exempting these so-called “Remote Areas,” the FCC has said that no Price Cap carrier will be required to provide broadband, even though it may receive CAF II support for that state.⁵⁰ Neither traditional forms of support nor CAF II support will be available in Remote Areas. Instead, the FCC will offer “Remote Areas Support,” a new program with a budget of \$100 million per year.⁵¹ This new mechanism will offer support for remote areas, but not if they already have broadband.⁵² Until the FCC

⁴⁷ Order ¶ 160.

⁴⁸ Order ¶ 160. The FCC has not yet decided what percentage of supported locations should meet this new standard.

⁴⁹ The Commission delegated to its Bureaus the task of differentiating high cost areas that will be supported from very high cost remote areas that will not be supported.

⁵⁰ Order ¶ 173 (supported Price Cap carriers must “offer service to all high-cost locations between an upper and lower threshold within their service territory in a state”.)

⁵¹ Order ¶ 534.

⁵² Order ¶¶ 535.

completes its current project to revise the cost model, it is impossible to know how much difference this Remote Areas Support policy shift will make to Vermont's Price Cap carriers. To answer that question, one must know the detailed cost results of the still incomplete model as well as the benchmark for identifying areas with extremely high costs. Neither is available now.

It also appears that low-cost areas will be outside the "high cost range" and therefore will be excluded from both the FCC's support calculations and from the carriers' service obligations.⁵³ A low-cost area will be an area with a cost below a "benchmark" or uniform threshold defined by the FCC. The FCC has not yet set that benchmark.

Finally, areas where "an unsubsidized competitor offers affordable broadband" will be excluded from both the FCC's support calculations and from the carriers' service obligations.⁵⁴ The FCC said several times in the *Transformation Order* that it does not want to use CAF II funds in areas served by an unsubsidized competitor.⁵⁵

It is one thing to conceptually define areas that will be excluded. It is much harder to implement such decisions without creating gaps. We mentioned above that the FCC has become enamored of using census blocks as the smallest geographic unit in its calculations. But by aggregating geographic data in this way, the FCC seems likely to create significant geographic gaps in each supported carrier's duty to serve.

The source of the problem is that the FCC and the National Telecommunications Information Administration consider a census block to be "served" by an unsubsidized competitor if *any customer* in that census block can buy cable Internet service. In Vermont, many census blocks have varying density, and cable service is not available everywhere within the census block. But under the FCC's standards, if one customer in a census block has cable Internet service available, the entire census block is deemed "served by an unsubsidized competitor." The results of that determination are: (1) that census block is ineligible for federal support; and (2) no customer in that census block is owed an obligation to make broadband available.

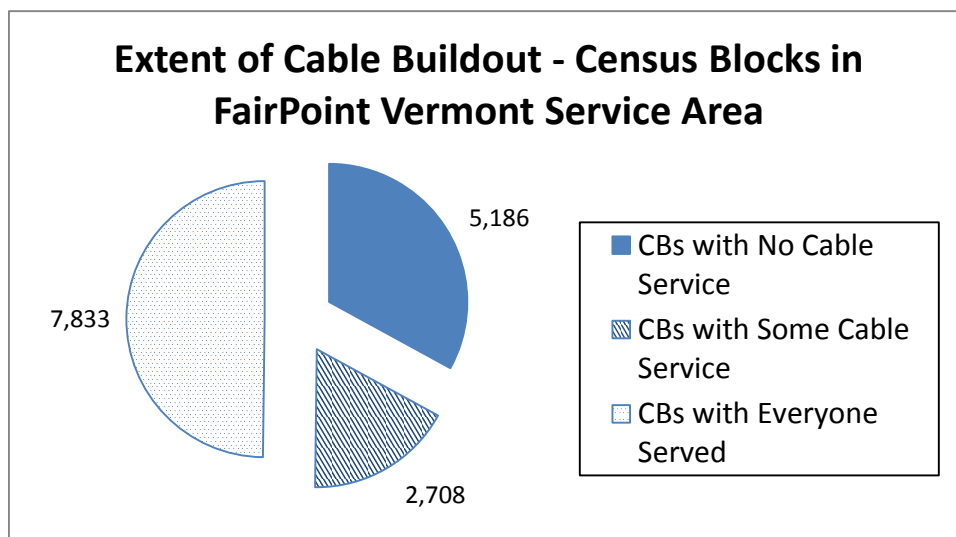
Vermont has extraordinarily good data concerning the actual extent of cable service within FairPoint's service area. A 2011 report by the Department of Public Service reported on the number of census blocks that have no cable service, have cable service in some locations, and have cable service everywhere. The results are summarized in the following chart.

⁵³ *Order* ¶156.

⁵⁴ *Order* ¶175, 177. In Vermont as elsewhere, an unsubsidized broadband competitor would include most or all cable television providers and any wireless internet service providers ("WISPs"), whether using licensed or unlicensed spectrum.

⁵⁵ E.g. *Order* ¶ 149, 150 (carriers receiving frozen high-cost support must use a portion of that support "to build and operate broadband-capable networks used to offer the provider's own retail broadband service in areas substantially unserved by an unsubsidized competitor.")

Chart 1. Extent of Vermont Cable Buildout by Census Block



One half of the census blocks in FairPoint’s service area are fully served by cable. These areas will not receive federal USF support, and no Price Cap supported carrier is required to construct broadband facilities within them.

In about a third of the FairPoint census blocks, there is no cable service. This category comprises 45,195 locations or about 19 percent of the locations in Vermont. These areas are eligible to receive federal USF support, and if FairPoint accepts CAF II funding, it will need to construct broadband facilities throughout those census blocks.⁵⁶

The smallest but still sizeable category is census blocks where some but not all customers within the census block can buy cable service. This category comprises 17 percent of the state’s census blocks and contains 22,400 locations that do not actually have cable service. In other words, at about one in eleven of FairPoint’s locations (9.4 percent), a customer cannot get wireline based broadband service from a cable provider and federal law will make no effort to ensure that the customer gets broadband from the telephone company.

RLSA does not know how many of the 22,400 locations in partially served census blocks have access to cable. To the extent such customers exist, however, they create a serious gap in the FCC’s new system. These customers do not yet have broadband service, and they have no reasonable prospect of receiving broadband, even if FairPoint does elect to make a commitment to serve Vermont under the CAF II election.

⁵⁶ It is possible that the FCC will disqualify some census blocks in these areas because of the presence of other unsubsidized competitors, such as wireless Internet service providers.

f. Voice Service Obligations

Even though the funding for voice service will be curtailed or effectively eliminated, the *Transformation Order* emphasized that supported carriers must also continue to provide that voice service throughout their service areas.⁵⁷ This obligation arises from the definition of “Eligible Telecommunications Carriers” in federal law.⁵⁸ These carriers must continue to provide voice telephone service throughout their service areas. There is no exclusion for areas served by unsubsidized competitors or for very high cost areas. Federal law also provides that a carrier can only escape these obligations after obtaining permission of the state utility commission, which must first find that another ETC is serving that area.⁵⁹ RLSA is not able to predict the outcome of a future conflict before a state commission between an irresistible economic force (insufficient federal support and negative operating cash flow) and an immovable legal object (a statute that potentially obligates existing incumbents to continue operating indefinitely without any plausible escape route).

The *Transformation Order* authorizes the FCC to grant a “waiver” that approves additional support on a case-by-case basis for a single carrier. A carrier seeking a waiver must demonstrate that more support is needed to avoid putting consumers at risk of losing voice services where no alternative terrestrial service is available. Waivers can also be granted where other support changes would cause a provider to default on existing loans and/or become insolvent.⁶⁰ However, the FCC emphasized that waivers will be difficult to obtain. A very detailed application will be required, and it will be subject to “a rigorous, thorough and searching review comparable to a total company earnings review.” Waivers will not be routinely granted.⁶¹

g. Industry Response

Nationally, the industry response was mixed to the CAF I grants. Where FairPoint saw an opportunity, other carriers declined or even spurned the offer. Verizon declined an offered \$19.7 million.⁶² AT&T declined to accept an offered \$48 million, explaining that it was uncertain how participating in the CAF Phase I program would affect its “continuing efforts to

⁵⁷ *Order* ¶¶ 19, 175.

⁵⁸ *See* 47 U.S.C. § 254(e) (only ETCs may receive federal USF support).

⁵⁹ 47 USC § 214 (e) (4).

⁶⁰ *Order* ¶ 540.

⁶¹ *Order* ¶¶ 540-542.

⁶² *TR Daily*, July 26, 2012.

be relieved of outdated legacy obligations.”⁶³ Overall, of the \$300 million that the FCC made available for CAF I grants, only \$115 million was accepted by carriers.⁶⁴

This recent history suggests that larger carriers may be unwilling to accept support that is tied to any costly obligations that resemble carrier of last resort (“COLR”) obligations. For this reason, RLSA believes the FCC’s complex CAF II support offers, when they come, may be met by little industry interest. If so, the CAF II program will be unlikely to achieve its goals for national broadband deployment. A silver lining, however, could be an unexpected opportunity for mid-sized companies like FairPoint. If AT&T or Verizon were to refuse all CAF II support, for example, a larger portion of the \$1.8 billion budget cap for Price Cap carriers might become available to FairPoint.

B. Support for Rate-of-Return Carriers

1. Existing Support to Rate-of-Return Carriers

Rate-of-Return carriers receive support under mechanisms that are fundamentally different from those offered to Price Cap carriers. Four programs have recently provided support to Vermont companies: “High Cost Loop” (“HCLS”) support; “Local Switching Support” (“LSS”); “Interstate Common Line Support” (“ICLS”); and “Safety Net Additive” (“SNA”) support.

a. High Cost Loop Support

High Cost Loop Support was created in the 1980s. The support is intended to defray costs in the intrastate jurisdiction arising from very expensive distribution networks in high-cost areas. Since 2000, this support has not been available to Verizon or TOC of VT because FCC rules transferred non-rural carriers to its “High Cost Model” support mechanism.

For many years the HCLS program has limited one category of qualifying expense, “corporate operations” expense. This expense includes administrative overheads, legal and regulatory expenses and executive salaries. The cap formula is sensitive to carrier size, giving the most latitude to the smallest companies.

HCLS is the single largest FCC support program. It has consistently shrunk in overall size over the years, and has at the same time concentrated support on carriers with the very highest costs. Therefore, many carriers with moderately high costs have seen their HCLS revenues decline or even drop to zero.

⁶³ *Id.* AT&T has lobbied in many state legislatures to be relieved of COLR obligations imposed by state law.

⁶⁴ Letter from Malena F. Barzilai, Windstream, Corp. to Marlene Dortch, FCC, Aug. 30, 2012, filed in Docket No. 10-90.

At the end of 2011, six Vermont companies received HCLSs support: Franklin, FairPoint Vermont, Shoreham, Topsham, Waitsfield,⁶⁵ and Vermont Telephone. Together, these companies received annualized HCLS support of \$1.5 million. In 2013, that support is expected to amount to \$0.8 million.

b. Local Switching Support

Local Switching Support was created in the 1980s and substantially revised in the late 1990s. It shifts some of the costs of local switching from the state to the interstate jurisdiction, thereby creating a possibility for lower local rates.

LSS has been available only to carriers serving less than 50,000 access lines, and the amount of support is dependent on company size. Companies with the smallest number of subscribers, less than 10,000, receive the greatest benefit.

Eight Vermont companies received LSS support at the end of 2011: Franklin, Ludlow, Northfield, FairPoint Vermont,⁶⁶ Perkinsville, Shoreham, Topsham, and Waitsfield. Together, these companies received annualized LSS support of \$2.7 million.

c. Interstate Common Line Support

Interstate Common Line Support was created in 2001 as part of the “MAG” round of interstate access reform. ICLS was intended to offset revenue losses from mandated interstate access rate reductions. Unlike other federal programs, ICLS is closely tied in with the FCC’s rate-setting mechanism, and support is based on a “revenue requirement” deficiency for “common line” expenses.⁶⁷

Nine Vermont companies received ICLS support at the end of 2011: Franklin, Ludlow, Northfield, FairPoint Vermont,⁶⁸ Perkinsville, Shoreham, Topsham, Waitsfield, and Vermont Telephone. Together, the companies received annualized ICLS support of \$6.5 million.

d. Safety Net Additive Support

Safety Net Additive support (“SNA”) was created in 2001 to provide support for small incumbents that have substantially increased their total plant investment per line. At the end of

⁶⁵ Waitsfield does not expect any HCLS support in 2012 or beyond.

⁶⁶ Effective on January 1, 2012, FairPoint Vermont’s support was frozen and no longer participates in the high cost loop program. Prior to that date rural Price Cap carriers could participate in the high cost loop program. *Order* ¶ 133.

⁶⁷ Common line expenses are roughly those associated with the local loop or distribution system.

⁶⁸ FairPoint Vermont continues to receive ICLS under the FCC’s 2010 order converting it from Rate-of-Return regulation to Price Cap regulation.

2011 it provided support to only one Vermont incumbent, Franklin Telephone. Franklin received annualized SNA support of approximately \$25,000.

2. Changes for Rate-of-Return carriers

The *Transformation Order* made relatively modest changes to support for Rate-of-Return carriers, leaving intact most of the basic structure of that support. But it made important modifications to individual programs. The exception was the FCC Local Switching Support. The *Order* ended the LSS program, although any support losses due to that change were made eligible for RM support.⁶⁹

The *Transformation Order* mandated that Rate-of-Return carriers receiving either HCLS or ICLS must offer high quality broadband to their customers upon “reasonable request.” By high quality, we mean 4 Mbps downstream and 1 Mbps upstream, speeds which exceed many older DSL services that were built in the 1990s.⁷⁰ Upon request, carriers must provide “broadband service at speeds of at least 4 Mbps downstream and 1 Mbps upstream with latency suitable for real-time applications, such as VoIP, and with usage capacity reasonably comparable to that available in residential terrestrial fixed broadband offerings in urban areas, upon reasonable request.”⁷¹

It is probably not possible to know in advance when a request for service is “reasonable” in the FCC’s view. It is possible that the FCC might require Rate-of-Return incumbent carriers to fulfill all requests for service, regardless of cost. More likely, in RLSA’s view, is that the FCC will follow established precedent for wireless carriers allow incumbent carriers some flexibility to deny requests for service that would impose a high incremental cost. The FCC currently requires supported wireless carriers to provide voice service to any customer who makes a “reasonable request.”⁷² However, the FCC allows cellular carriers to offer a range of options to customers. Some of those options require the customer to purchase additional equipment at his or her own cost.⁷³ After exhausting minor remedies such as better antennas at the customer’s premises, the carrier can ultimately deny service if the service would impose on

⁶⁹ *Order* ¶ 257. Because FairPoint Vermont is Price Cap carrier, it is not allowed to recover any of its LSS support through the Recovery Mechanism.

⁷⁰ FairPoint, for example, presently offers broadband service in most of its rural areas but does not meet the 4/1 broadband speed standard in all rural areas.

⁷¹ *Order* ¶ 206.

⁷² FCC, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, FCC 05-46, 20 FCC Rcd 6371, ¶ 22.

⁷³ The options include: (1) modifying or replacing the requesting customer's equipment; (2) deploying a roof-mounted antenna or other equipment; (3) adjusting the nearest cell tower; (4) adjusting network or customer facilities; (5) reselling services from another carrier's facilities to provide service; or (6) employing, leasing, or constructing an additional cell site, cell extender, repeater, or other similar equipment. *Id.*

the carrier more than “a reasonable cost.”⁷⁴ Thus the FCC’s standard is ultimately circular. It fails to answer the central question of when a cost becomes so large as to make a new service request unreasonably costly.

The *Transformation Order* placed new limits on the costs that can qualify for HCLS support. Two separate caps were imposed, based on regression analyses the FCC performed on existing cost data.⁷⁵ One cap limits capital expenditures. To the extent that a carrier’s actual capital expenditures exceed the 90th percentile regression formula limits, cost and support is reduced. A similar mechanism applies to operating expenditures. The new caps apply to only the HCLS mechanism.

The *Transformation Order* also modified the parameters for the corporate operations expense limitation rule.⁷⁶ It incorporated a new analysis based on more current spending information. More important, the *Order* extended the corporate operations expense limiter to the ICLS program, to which it had not previously applied.⁷⁷

The *Transformation Order* mandated HCLS reductions for carriers with local rates below an “urban rate floor.”⁷⁸ RLSA believes this provision is not material to Vermont because no Vermont carrier has rates below \$14 per month.⁷⁹

The *Transformation Order* mandated gradual elimination of Safety Net Additive support, but held harmless the support for some carriers.⁸⁰ First, no carriers may in the future qualify for new SNA support. Second, if a carrier’s current SNA support was caused by declining line counts, SNA support will be eliminated in two steps ending in 2013. Finally, if current SNA support was caused by additional investment, support will continue until it expires on its original terms.

⁷⁴ *Id.*

⁷⁵ *Order* ¶ 214.

⁷⁶ *Order* ¶ 232.

⁷⁷ *Order* ¶ 229.

⁷⁸ *Order* ¶¶ 238-39. Beginning July 1, 2014, the urban rate floor may be higher than \$14. The FCC has said that it anticipates that level to be “close to the sum of \$15.62 plus state regulated fees.” In Vermont, state regulated fees include a current USF charge of approximately 2%.

⁷⁹ Vermont Telephone was reported to have rates below the current rate floor, that report arose from Vermont Telephone’s practice of offering discounts on second and third lines. Vermont Telephone is eliminating that rate, and its base rate should be above all plausible future FCC rate floors.

⁸⁰ *Order* ¶ 252.

The *Transformation Order* also limited support under all high cost federal programs to \$250 per month per line.⁸¹ This rule is not material in Vermont because no Vermont carrier receives support at this level.

The *Transformation Order* also eliminated support under all high cost federal programs where there is 100 percent overlap between the incumbent's study area and areas served by unsubsidized broadband providers, such as cable television companies that offer broadband.⁸²

As with Price Cap companies, the FCC will entertain waiver petitions aimed at increasing a company's support. The *Transformation Order* emphasizes, however, that such requests will not be routinely granted, and any company that seeks additional funding will be subject to a thorough total company earnings review.⁸³

V. RLSA's Methods

RLSA has been asked to look eight years into the future, which is a very long time in telecommunications. In this section we describe the methods we used to make predictions of future revenue streams of Vermont's ten incumbent carriers, as well as the major areas of uncertainty likely to reduce the reliability of our predictions.

RLSA's first task was to estimate future revenue changes in revenue streams of incumbent Vermont carriers affected by the FCC's *Transformation Order*. We considered three revenue streams. First, we estimated changes in federal USF revenue. This entailed evaluating the likely effects of programs that are ending as well as new programs that have not yet been fully defined. For the reasons explained above, the analysis for Price Cap companies was quite different from the analysis of Rate-of-Return companies.

Second, we estimated the revenue effects of the FCC's intercarrier compensation changes. This task was complicated by the fact that the *Transformation Order* primarily affected terminating access charges, but left originating access untouched and made relatively minor changes in other areas.

Third, we estimated the revenue effects of a new kind of subscriber charge, called the "ARC" charge. This task was complex, requiring us to consider the effects of the *Transformation Order* on intercarrier revenues and universal service revenues. That result in turn influenced one form of federal USF support.⁸⁴

⁸¹ *Order* ¶ 272.

⁸² *Order* ¶ 281.

⁸³ *Order* ¶ 202.

⁸⁴ The amount of Recovery Mechanism support depends on whether the carrier can achieve its entire eligible recovery from allowed ARC rates.

After determining the total estimated Affected Revenue streams, RLSA also estimated the future effects on “other” revenue streams of incumbent Vermont carriers. These estimates were largely based on past trends, although in some cases RLSA used its professional judgment to modify historical rates of growth or decline.

In sum, RLSA produced for each of the 10 Vermont incumbent carriers, an estimated future stream of “affected” revenues and an estimated future stream of “other” revenues. These two components then were added to produce an estimated stream of total regulated revenues. The results are described in Appendix A, by carrier.

A. Scenario for Subscribership

RLSA’s future revenue estimates depend on assumptions about the companies’ business environment, and the number of subscribers is a key variable. Subscriber count affects subscriber revenue directly, but it also creates echo effects for intercarrier compensation revenue and federal universal service support.

Subscriber counts changed slowly for many years, but there have been dramatic changes in the last decade due to competition. The competition has come in two quite different forms. First, increasing numbers of customers have “cut the cord” and become wireless-only subscribers. This effect is strongest with younger subscribers, but the geographic effect is relatively uniform. Since most of Vermont has wireless coverage, RLSA assumes that the loss of lines due to cord cutting has affected all Vermont carriers in approximately equal degree and has already been underway for years.

The second important kind of competitor has been cable television offering digital voice products. Cable companies offer service over smaller areas than wireless carrier, but their offerings can have more dramatic effects on incumbent revenue. When cable television competitors enter a market, the incumbent generally loses a substantial share of its lines over the next few years. Some Vermont carriers already have experienced this decline, and they may already have absorbed most of the effect. Other carriers will likely experience this kind of competition for the first time before 2020. Although extensions of cable-based voice service will be a key variable in estimating the incumbents’ economic futures, the scope of this study has not included making any such geographically-specific estimates.⁸⁵

With one exception, RLSA has assumed that line counts would decrease by the historical value of each carrier’s trend plus an additional 2 percent annual loss.⁸⁶ RLSA added two percent

⁸⁵ Complete modeling of future carrier revenues would require fine-grained geographic estimates of where cable competition will develop, as well as time series customer response modeling. Both were beyond the scope of this study.

⁸⁶ For example, if a carrier’s line count trend was a decrease of 2 percent, RLSA used a 4 percent decrease for the future.

because of expected geographic expansions in cable service areas. Accordingly, local service revenue has also been projected to decline by its historical trend plus 2 percent.⁸⁷

B. Scenario for Inter-carrier Revenue

In estimating future inter-carrier revenues, RLSA generally assumed that existing trends in access will continue and be modified by the *Transformation Order*. That is, RLSA assumed that the FCC's mandated rate changes will occur as scheduled and that current trends in billable access minutes will continue.

For intrastate inter-carrier compensation, RLSA divided each carrier's traffic into various categories such as terminating, originating and transport. For each category, we estimated future demand units, trending future values based on past patterns and line counts. We then applied either the current inter-carrier rate or the newly mandated FCC-mandated rate, if applicable.

For interstate inter-carrier compensation, RLSA divided each carrier's traffic into various categories such as terminating, originating and transport. For each category, we estimated future demand units, trending future values based on past patterns and line counts. We then applied either the current inter-carrier rate or the newly mandated FCC-mandated rate, if applicable. Calculations for Rate-of-Return companies were complicated by the fact that all the Rate-of-Return companies participate in a national pool for access revenues.

For Rate-of-Return carriers, our interstate access scenario was complicated by the existence of rate pools run by the National Exchange Carrier Association ("NECA"). NECA runs a "traffic sensitive pool" that shares interstate revenues among all participants nationally. All 8 Vermont Rate-of-Return companies participate in this pool. Each incumbent charges uniform interstate access rates to other carriers, at rates filed in NECA tariffs at the FCC. When an incumbent provides interstate access, the pool receives the revenue. NECA pays each incumbent an amount of revenue that recovers all (or a portion) of its interstate "switching revenue requirement." In this environment, the number of minutes of access sold by the incumbent does not affect its actual revenue, only the revenue received by NECA.

The *Transformation Order* creates a new twist, however, in that many inter-carrier rates will now be limited by the terms of the *Order*, regardless of what tariffs NECA might file. Accordingly, NECA's total pool revenue will not cover the revenue requirement of all pool members. Under NECA's rules, if the pool is short of money, NECA under-pays every carrier by the same proportion.

This proportionality rule allowed us to estimate each of the 8 Vermont Rate-of-Return carriers' future pooled interstate access revenue. Rather than forecasting the interstate access

⁸⁷ The exception was TOC of VT, whose line count we assumed will follow the historical trend. We used a more optimistic assumption for TOC of VT because that carrier has been for several years competing with cable providers in many parts of its service area.

revenue of each carrier separately, we instead applied a single trend to all 8 that is based on our best estimate of NECA's national ability to cover future claims in the form of interstate switching revenue requirements.⁸⁸

Some carriers reported net revenue from reciprocal compensation. In these cases RLSA generally reduced 2011 revenue by half in 2012 and eliminated it entirely in later years.

For special access revenues,⁸⁹ RLSA assumed an annual 2 percent loss, beginning in 2012. This choice was a compromise between two opposing forces in the industry. First, most Vermont carriers have had increasing special access revenue in recent years, sometimes greatly. These special access circuits are heavily used by wireless companies for "backhaul" between cell towers and nearby high-capacity wireline networks. RLSA expects continued increases in the demand for data transport to and from wireless towers. At the same time, wireless carriers appear to be migrating away from traditional special access services, such as DS-1 transport, and toward "Ethernet" services. RLSA understands that this technology shift produces a lower unit price⁹⁰ and thereby reduces revenues for incumbent sellers of special access. Overall, RLSA estimates that special access revenues will decline gradually over the next few years. The uncertainty in this estimate is large, however, and that uncertainty is important to this project because special access is now a large revenue stream for most Vermont incumbent carriers.

C. Scenario for Price Cap USF Support

The FCC has not fully defined many of the essential components of its policy regarding support to Price Cap carriers. Major unknowns include:

- When will model results be published and sufficiently reliable to activate CAF II?
- When will Frozen Support be ended and carriers required to submit bids under the new CAF II mechanism?
- What are the cost outputs of the new model for relevant areas of Vermont?
- What parts of Vermont will become ineligible for support because they are deemed to be Remote Areas with extremely high cost?
- What will be the low-cost "benchmark" amount that the FCC will subtract from cost to calculate support? What parts of Vermont will become ineligible for support because they are deemed to have costs below the "low cost" benchmark?
- What amounts of support will the FCC offer Vermont Price Cap carriers in return for accepting CAF II responsibilities?

⁸⁸ NECA's ability to do this will decline for three reasons: (1) starting in mid-2012 NECA lost \$200.17 MM of "Local Switching Support" revenue to the pool; (2) pool minutes of access billed will continue to decline in the future (we assume 10% loss per year); and (3) average per-minute access rates will decline as the *Order* mandates lower terminating switched access rates over time.

⁸⁹ Special access is unswitched point-to-point communications that are primarily recorded as interstate revenues.

⁹⁰ Federal regulations

- Will Vermont Price Cap carriers actually submit bids for CAF II support in Vermont?
- Will the national \$1.8 billion cap be exceeded during the CAF II carrier responses? If so, how will the FCC curtail support?

Despite these uncertainties, RLSA has agreed to offer its best plausible estimate of future revenues. Knowing that any one scenario is unlikely to be realized, RLSA nevertheless postulates the following scenario for Price Cap carrier support:

- The FCC will implement CAF II in calendar year (“CY”) 2016. By that time, Frozen Support will have declined by two-thirds. This assumption reflects our understanding that capital construction requirements on FairPoint will increase over time as the FCC imposes more rigorous buildout conditions on Frozen Support, CAF I, and CAF II. If the support dollars do not decrease as planned, increasing capital expenditure demands will have the same effect.
- When the CAF II bidding program is implemented in 2016, Vermont companies will receive the same support that they received in 2015.⁹¹
- No Vermont Price Cap carrier will obtain a waiver that increases its support.
- Remote areas will have no effect on Vermont Price Cap carrier.
 - None will receive less support due to the exclusion of very high cost remote areas from support eligibility.
 - None will receive any portion of the \$100 million the FCC is setting aside for support in very high cost remote areas.

D. Scenario for Rate-of-Return USF Support

For Rate-of-Return carriers, the future of federal USF support is only slightly less uncertain. The largest question is about the overall USF budget. The budget may not prove sufficient to cover all the kinds of support that the FCC has promised, to meet the ultimate objectives of maintaining voice service where it exists, and to expand broadband services. As with Price Cap carriers, Rate-of-Return carriers also face a risk that a portion of its service area will be declared ineligible for support because the FCC’s new cost model views it as having extremely high costs. In addition the FCC is committed to developing a CAF II support mechanism for Rate-of-Return carriers. To date, however, the FCC has not developed the mechanism nor specified whether the CAF II mechanism will replace or be integrated into its existing mechanisms.

RLSA has postulated the following scenario for Rate-of-Return carrier support:

⁹¹ RLSA has available to it estimated costs and support under the FCC’s cost model currently under development. However, there are two problems. First, support distributions are highly sensitive to currently unknown support parameters (such as the dollar threshold for excluding very high cost areas). Second, RLSA’s access to these data are confidential and subject to an FCC protective order that prevents RLSA from using the results for purposes unconnected with the FCC docket.

- HCL will continue to change consistent with recent trends.
- LSS will disappear, but 2011 support levels will increase eligibility for RM.
- ICLS will increase to compensate for decreases in SLC revenues, and it will decrease for some companies due to the application of the corporate operations cap. The FCC will not decide to apply its regression-based capex and opex caps to ICLS.
- HCLS will be reduced for some companies by the regression-based capex and opex caps. Topsham is affected by these caps.
- RM will be available as needed to provide replacement for revenues lost to intercarrier compensation reforms and not recoverable from the allowed ARC.
- Vermont Rate-of-Return carriers will not receive less support due to:
 - Exclusion of very high cost remote areas from support eligibility. Similarly, no Vermont Rate-of-Return carrier will receive any of the \$100 million the FCC is setting aside for support in very high cost remote areas.
 - Provisions relating to companies with very low local rates below the urban rate floor; or
- Franklin, which is the only company to receive SNA support, will continue to receive that support until 2015, when all such support will cease.

E. Scenario for Access Recovery Charge Revenue

RLSA calculated Access Recovery Charge (ARC) revenues for each carrier separately.⁹² Maximum rates and maximum recovery rules from the FCC were applied according to the FCC rules, and using forecasted subscriber counts.

F. Scenario for Other Revenue

RLSA generally assumed that each carrier's existing trends in Other Revenue streams would continue as in the recent past. We made occasional adjustments when recent trends appeared unlikely to continue through the forecast period.⁹³

At this phase of the project, we decided to report our Other Revenue forecasts in only a limited way, limiting the results solely to 2012. We made this decision for several reasons. First, this phase of the project is focused on estimating the effect of the *Transformation Order*

⁹² FairPoint actually calculates ARC rates on a multistate basis. Replicating that calculation would have required data from FairPoint regarding its other companies outside Vermont. That task was outside the scope of this project.

⁹³ For example, TOC of VT's Local Network Revenue has historically been decreasing at 1.7% per year. We estimated future reductions at 5% per year because TOC of VT's line counts are decreasing at a far greater rate, and line counts and local service revenues are closely connected.

through 2020.⁹⁴ We want to place those revenue effects in a broader context that shows the relative size of the changes. The 2012 Other Revenue data is sufficient for that purpose.

Second, our forecast of Other Revenues in later years turned out to be highly dependent on assumptions regarding future line counts and future special access sales. Each parameter is the result of multiple forces, some of which push in opposite directions, and each is therefore uncertain. Because of the long forecast period, these parameters were critical to the result. When we made pessimistic assumptions about future line counts and future special access sales, the “Other Revenues” of carriers declined substantially. Using this data might improperly suggest a conclusion that Affected Revenues are only a minor universal service issue. Similarly, optimistic assumptions tended to predict Other Revenue increases that could neutralize the effects of the *Transformation Order*, thereby improperly suggesting a conclusion that the Order itself is not material to universal service. At this stage of our work, both kinds of conclusion would be premature. Using Other Revenue projections only for 2012 limited the uncertainty because the 2012 estimates reflect the fewest repetitions of our assumed annual revenue growth (or decline) parameters.

Finally, this phase of our work did not consider “unregulated” revenues. Incumbent carriers are migrating away from regulated revenues and toward unregulated revenues, including DSL and Internet revenues. Therefore a report that included projections for only for regulated revenues would be likely to overstate the likely financial harm to incumbent carriers. Regulated and unregulated revenues and costs will be considered together in a later report.

VI. Conclusions

A. Affected Revenue and Other Revenue Streams in Vermont

The following charts estimate the aggregate impact of the *Transformation Order* on all Vermont incumbents’ Affected Revenue streams.

⁹⁴ The contract requires RLSA to “examine the impact on Vermont services caused by the FCC’s report and order released November 18, 2011, which, among other things, expands the federal USF to include broadband deployment in unserved areas.”

Chart 2a. Vermont Aggregate Projected Change in Affected Revenue Streams from 2012

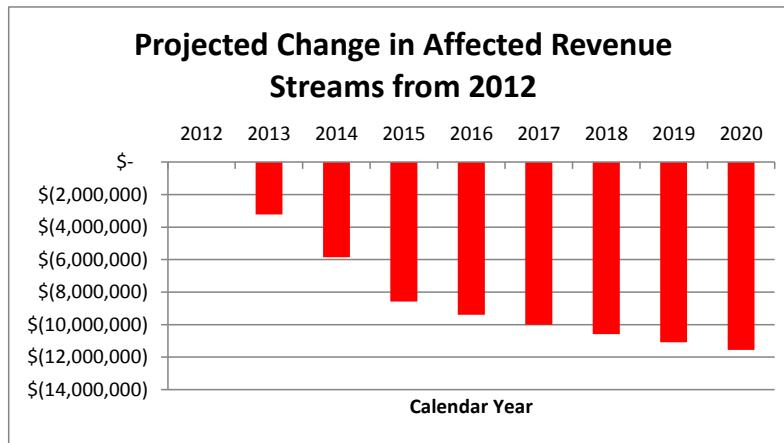
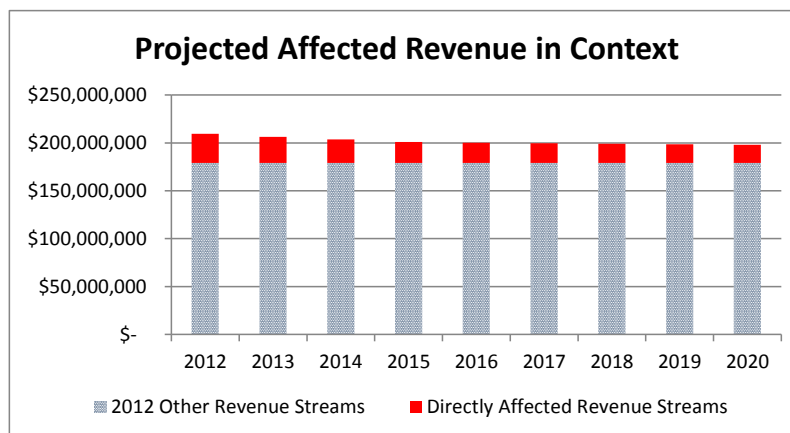


Chart 2a shows that Affected Revenue streams will decline by about \$11.6 MM from 2012 to 2020. This is a 38 percent reduction. Taken just by itself, this is a potentially alarming forecast.

These estimates suggest that a hypothetical “average” Vermont company will face very material declines in regulated revenue over the remainder of the decade. However, no Vermont company is average. Appendix A describes estimated revenues of the individual companies.

Chart 2b. Vermont Aggregate Projected Total Regulated Revenue

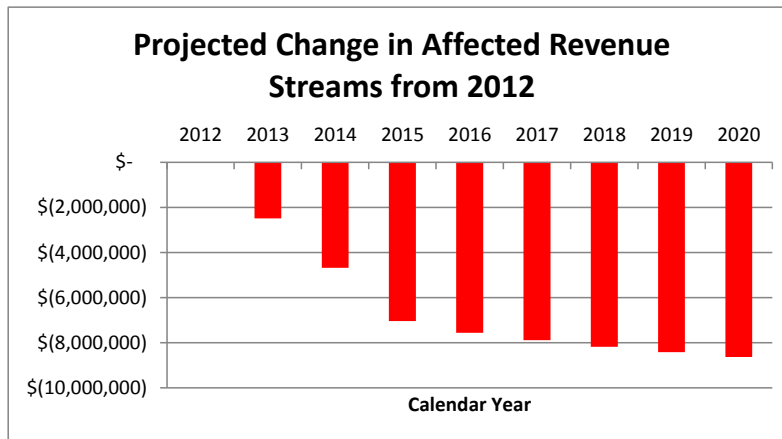


Placing this in context, Chart 2b shows that 2012 Other Revenue is \$179 MM. This means that the revenue losses from the *Transformation* Order, while substantial in absolute terms, are a minor portion of the total regulated revenues of the incumbent carriers, which are currently at \$209 MM.

B. Price Cap (FairPoint) Companies

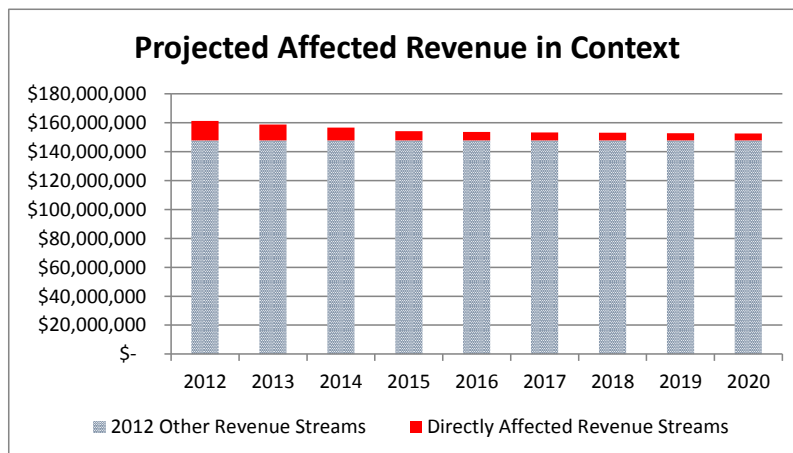
The following charts describe the Affected Revenue stream impacts of the *Transformation Order* on Vermont’s two Price Cap companies, both of which are owned by FairPoint.

Chart 3a. Vermont Price Cap Projected Change in Affected Revenue Streams from 2012



As shown in Chart 3a, RLSA estimates that Vermont’s two Price Cap companies (TOC of VT and FairPoint Vermont) will lose \$8.6 MM (or 64 percent) of Affected Revenue during the period 2012 through 2020. We estimate losses that increase each year by about \$2 MM per year for the first three years, with smaller losses thereafter. There is considerable uncertainty in these estimates, as we discussed above. Nevertheless, an effective revenue loss of approximately this size seems very likely due to substantial support losses as CAF II is implemented, to FairPoint coming under greater capital expenditure requirements from the FCC, or to both.

Chart 3b. Vermont Price Cap Projected Total Regulated Revenue



Placing this in context, Chart 3b shows FairPoint’s 2012 Other Revenue of \$148 MM. This means that the revenue losses from the *Transformation Order*, while substantial in absolute

terms, are a minor portion of the total regulated revenues of the incumbent carriers, which are currently at \$161 MM.

C. Rate-of-Return Companies

The following charts describe the Affected Revenue stream impacts of the *Transformation Order* on all eight Vermont Rate-of-Return companies.

Chart 4a. Vermont Rate-of-Return Projected Change in Affected Revenue Streams from 2012

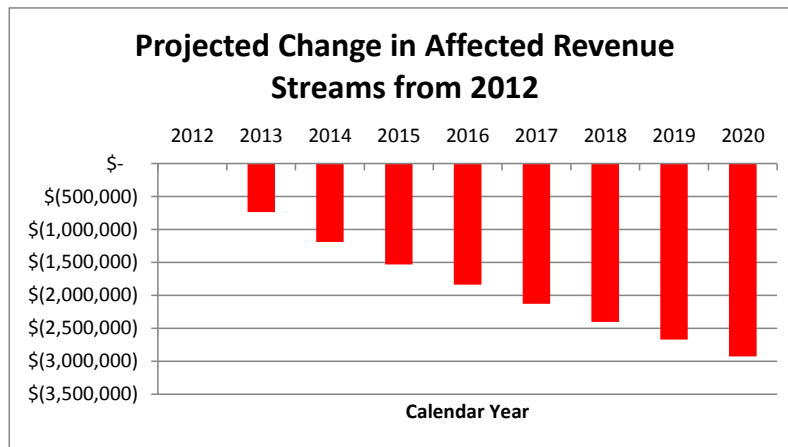
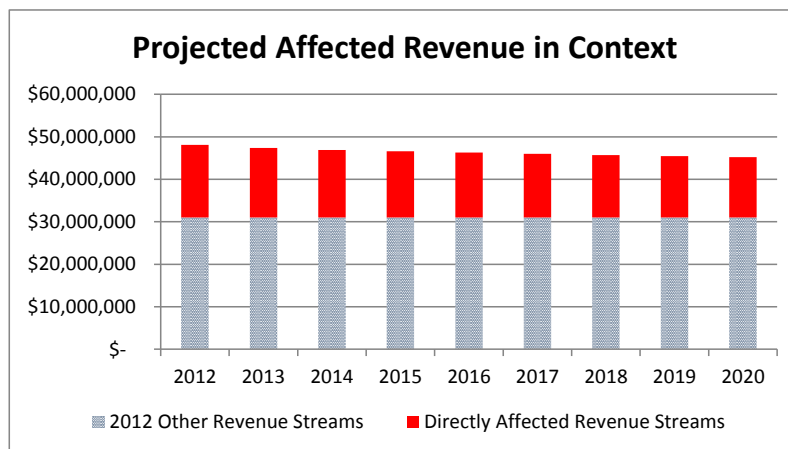


Chart 4a shows a \$2.9 MM loss to Affected Revenue streams from 2012 to 2020, or 17 percent of the base. RLSA anticipates that the companies will experience a series of annual revenue reductions, with each year producing approximately \$0.5 MM less than the preceding year. A revenue loss of this scale will be an important change for the Rate-of-Return companies.

Chart 4b. Vermont Rate-of-Return Projected Total Regulated Revenue



Placing this in context, Chart 4b shows that the Rate-of-Return companies’ 2012 Other Revenue of \$31 MM and 2012 Total Regulated Revenues of \$48 MM. This means that the

revenue losses from the *Transformation Order*, while substantial in absolute terms, are a minor portion of the total regulated revenues of the incumbent Rate-of-Return carriers.

The details differ substantially among the Rate-of-Return companies. Over the forecast period, RLSA estimates Affected Revenue reductions of at least 15 percent for VTEL, and Waitsfield, and at least 25 percent for Franklin, Shoreham, and Topsham. For these companies, Affected Revenue losses are not necessarily a minor problem. Details by company are reported in Appendix A.

D. Need for Additional Policy Changes

It is not possible at this early stage of our work to say that projected revenue losses justify immediate policy action in Vermont, such as activation of a state high-cost universal service fund. The findings above justify further work, and that work is currently planned. A more comprehensive recommendation will be possible after RLSA has completed the next phases of this report, including Part III which will:

- Evaluate price elasticity issues, economic development, and the effects of competition.
- Evaluate plausible business cases for operating rural telephone companies that sell both voice and broadband services and that in some cases also sell cable television service and wireless telecommunications.
- Develop options for consideration by the Vermont Legislature, and recommend one or more support mechanisms.

E. Legal Challenges

As the 2012 Vermont legislation anticipated, a legal challenge has been filed to the *Transformation Order*. Appeals have been consolidated in the U.S. Tenth Circuit Court of Appeals, in Denver. This court is widely regarded as a circuit friendly to rural and state interests, and it has previously ruled twice in favor of Vermont in universal service appeals. The appeal is still in early stages. Final briefs will not be filed until June, 2013, and oral argument has not been scheduled at this writing. The court's decision is expected in the fourth quarter of 2013 or in 2014.

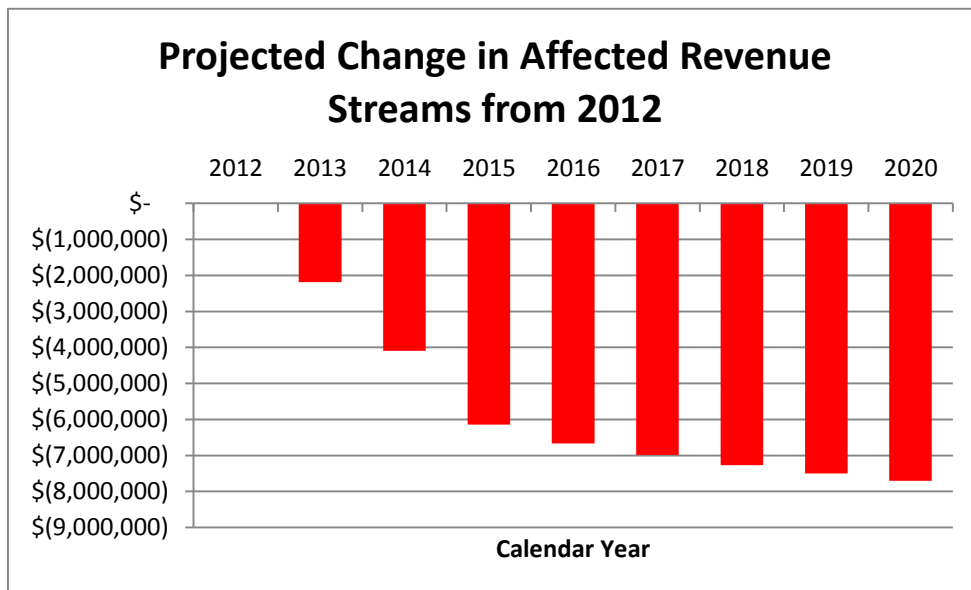
Appendix A - Revenue Estimates for Vermont Incumbent Carriers

This appendix describes for each of Vermont’s ten incumbent carriers, RLSA’s estimate of future revenue streams. For each carrier, the first chart shows directly Affected Revenue streams from 2011 or 2012 to 2020. This chart includes affected federal USF support, affected intercarrier compensation, and affected subscriber revenue. The second chart shows all regulated revenue for the same years, with the directly affected streams as a component.

A. TOC of VT

TOC of VT is Vermont’s largest incumbent. The following charts estimate revenues for TOC of VT from 2012⁹⁵ through 2020.

Chart A1a. TOC of VT’s Projected Change in Affected Revenue Streams from 2012

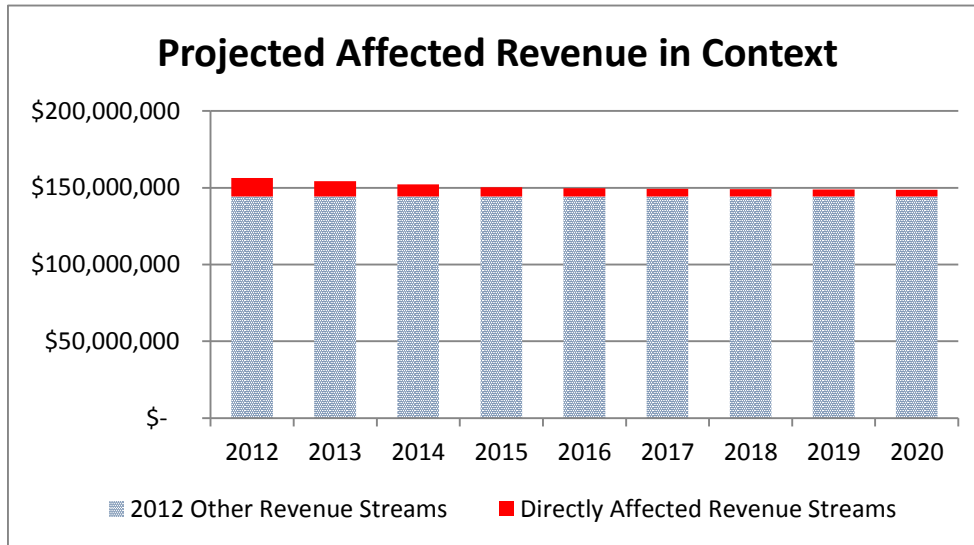


As Chart A1a shows, we forecast that TOC of VT will lose \$7.70 MM in Affected Revenue over the planning horizon. This would be a 64 percent loss from the current amount. The majority of the estimated loss is in universal service support, which, as explained above, we projected assuming that Frozen High Cost Support will decline by two-thirds by 2015. Thereafter, we assume no change in frozen support. These assumptions are consistent with our

⁹⁵ RLSA disregards 2011 because this company had unusually large adjustments to its 2011 federal universal service support receipts. RLSA could not obtain sufficient data from the Universal Service Administrative Company to perform corrections. Also, in early 2012 TOC of VT ceased using about \$4 MM in High Cost Model Support for explicit customer credits, thereby increasing its effective general revenue from federal USF.

expectation that the FCC will impose increasingly costly capital construction requirements on FairPoint, both to meet the company’s existing obligations under its CAF I grants and also to comply with the requirements attached to CAF II funding.⁹⁶

Chart A1b. TOC of VT’s Projected Total Regulated Revenue



As shown in Chart A1b, TOC of VT is only slightly dependent on Affected Revenue. This is chiefly due to the small amount of federal USF generally given to Price Cap carriers, including those in Vermont. It is also due in part to the company’s already low access rates, which moderated intercarrier compensation losses. Therefore, although TOC of VT stands to lose a large percentage of its Affected Revenue streams, the loss affects only a small portion of TOC of VT’s overall revenue and would be less likely than other factors to have a substantial effect on the company.⁹⁷

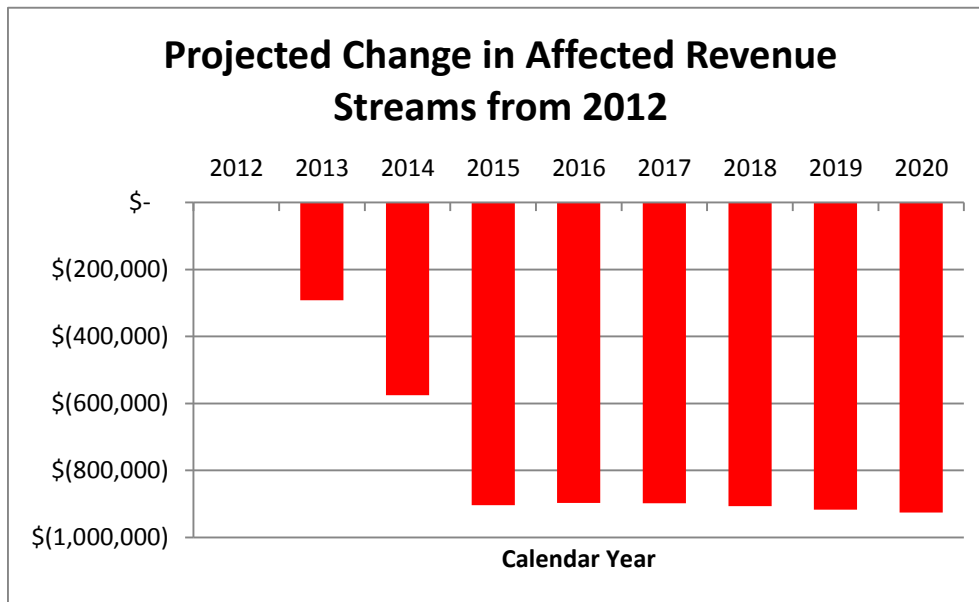
⁹⁶ If FairPoint accepts CAF II, it will be required to provide broadband to those census blocks with no cable availability. That FairPoint service will have to meet the FCC’s speed requirements, which (at least initially) require 4 Mbps downstream and 1 Mbps upstream. FairPoint has expressed that it plans to invest funds in excess of what it will receive in CAF I in order to meet its CAF I commitment to serve the specified number of locations. FairPoint intends to use Frozen High Cost USF funds in part to cover these additional costs.

⁹⁷ Other trends such as its rate of line losses and its special access sales are likely to be more important to FairPoint.

B. FairPoint Vermont

The following charts estimate revenues from 2012⁹⁸ to 2020.

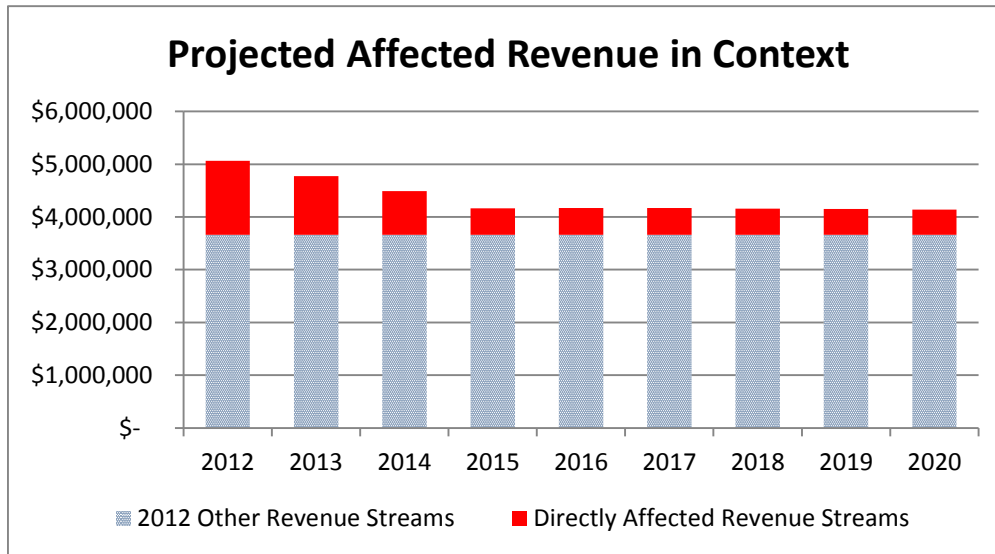
Chart A2a. FairPoint Vermont's Projected Change in Affected Revenue Streams from 2012



As Chart A2a shows, FairPoint Vermont stands to lose \$0.93 MM in Affected Revenue over the planning horizon. This would be a 66 percent loss from the current amount. This loss is expected principally in reduced federal support, but also to reduced intercarrier compensation.

⁹⁸ RLSA disregards 2011 for this company because of unusual large adjustments to its 2011 federal universal service support receipts.

Chart A2b. FairPoint Vermont's Projected Total Regulated Revenue



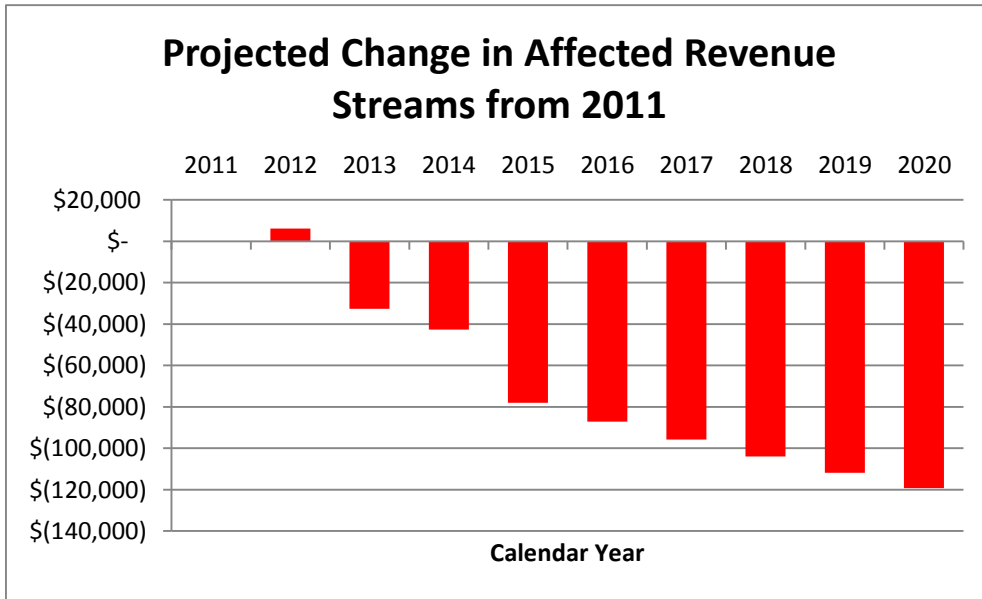
FairPoint Vermont is moderately reliant on Affected Revenue streams. Placing the loss in context, Chart A2b shows that 2012 Other Revenue is \$3.66 MM. The loss of \$0.93 MM in Affected Revenues would be likely to have a substantial effect on FairPoint Vermont.⁹⁹

C. Franklin

The following charts estimate revenues from 2011 to 2020.

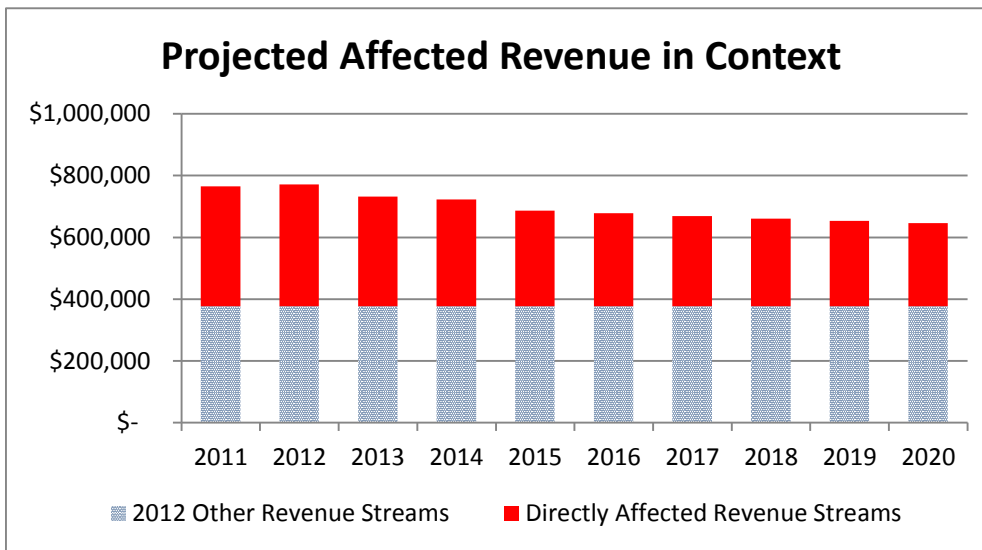
⁹⁹ FairPoint Vermont has less than 5,000 lines, and it has only a limited financial effect on its parent company.

Chart A3a. Franklin’s Projected Change in Affected Revenue Streams from 2011



As Chart A3a shows, Franklin stands to lose \$119K in Affected Revenue over the planning horizon. This would be a 31 percent loss from the current amount.

Chart A3b. Franklin’s Projected Total Regulated Revenue

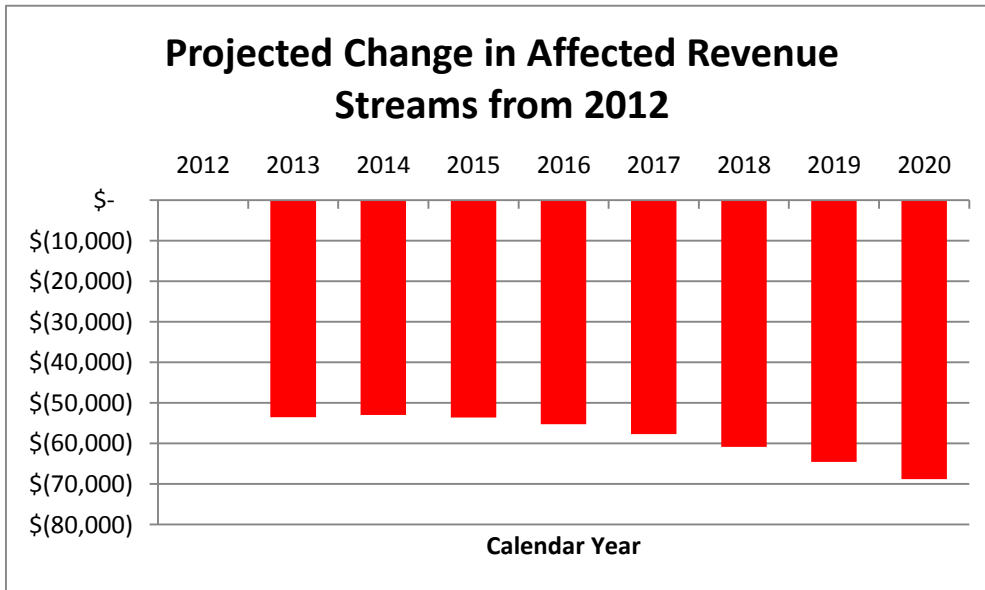


Franklin is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A3b shows that 2012 Other Revenue is \$377 K. The loss of \$119 K in Affected Revenues would be likely to have a substantial effect on Franklin.

D. Ludlow

The following charts estimate revenues from 2012¹⁰⁰ to 2020.

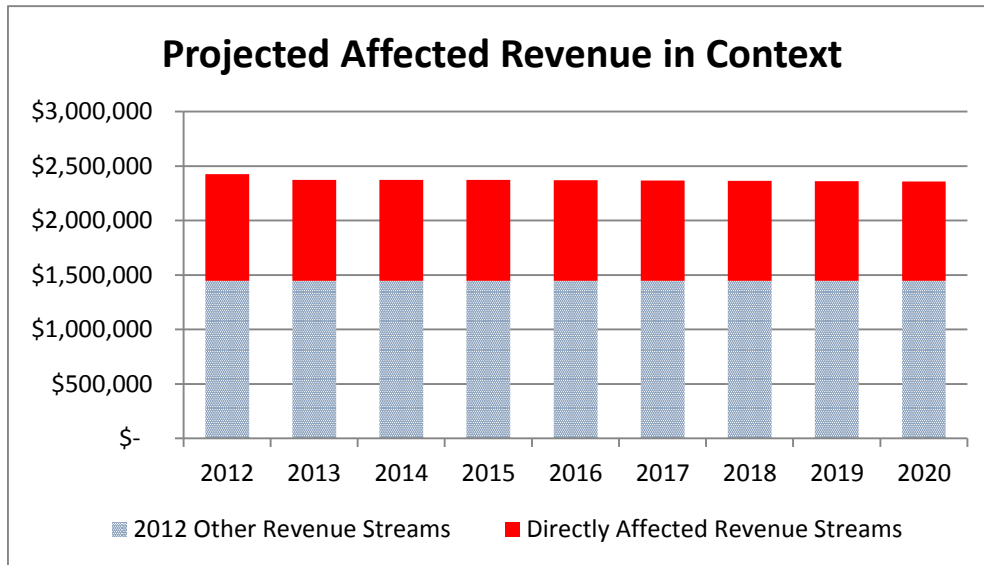
Chart A4a. Ludlow's Projected Change in Affected Revenue Streams from 2012



As Chart A4a shows, Ludlow stands to lose \$0.07 MM in Affected Revenue over the planning horizon. This would be a 7 percent loss from the current amount.

¹⁰⁰ RLSA disregards 2011 for this company because of unusual large adjustments to its 2011 federal universal service support receipts.

Chart A4b. Ludlow's Projected Total Regulated Revenue



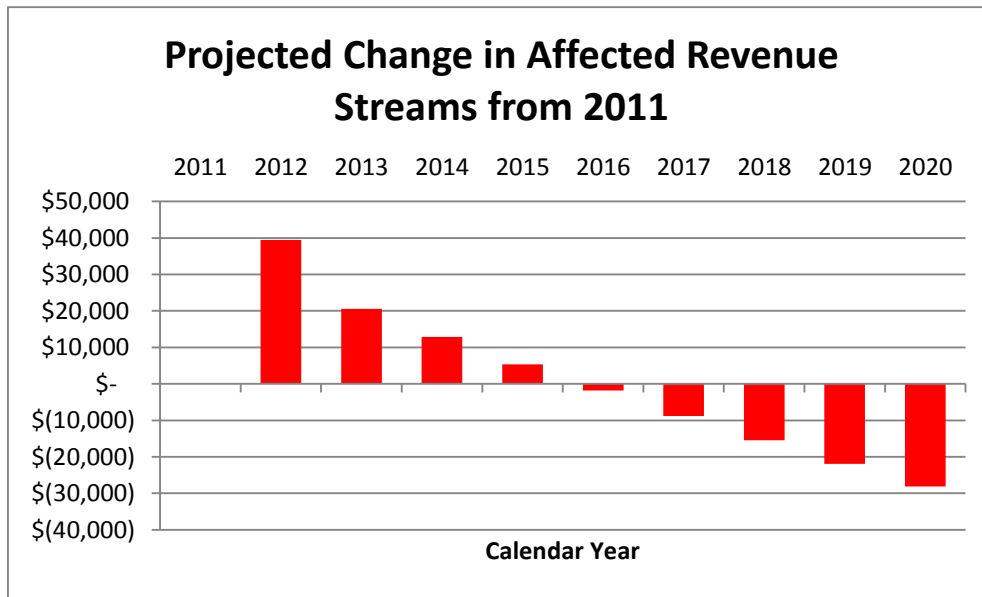
Ludlow is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A4b shows that 2012 Other Revenue is \$1.44 MM. The loss of \$0.07 MM in Affected Revenues would not be likely to have a substantial effect on Ludlow.

E. Northfield

The following charts estimate revenues from 2012¹⁰¹ to 2020.

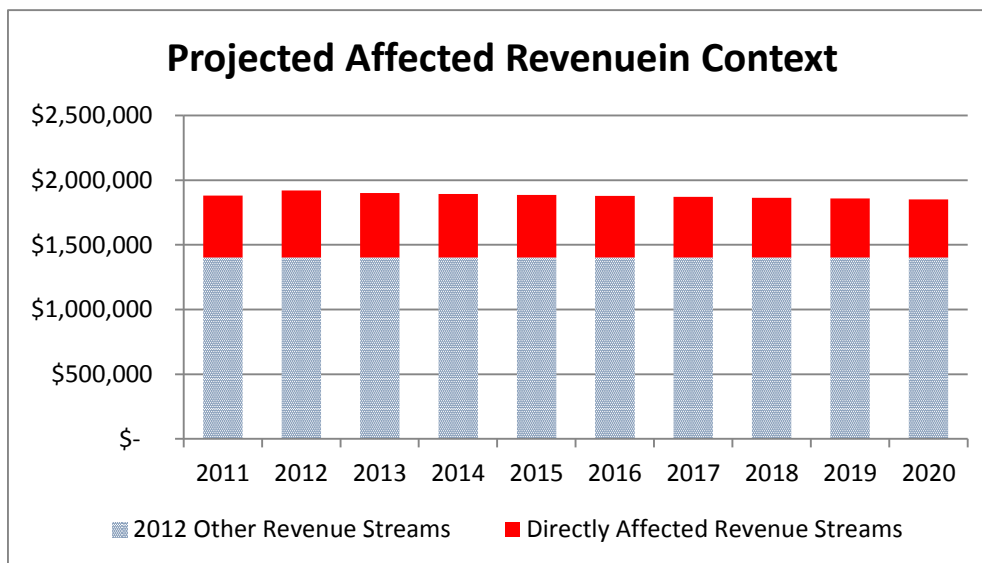
¹⁰¹ RLSA disregards 2011 for this company because of unusual large adjustments to its 2011 federal universal service support receipts.

Chart A5a. Northfield's Projected Change in Affected Revenue Streams from 2011



RLSA estimates a major one-time increase to those revenues in 2012, followed by a series of smaller but consistent losses. From 2011 through 2020, we estimate a net loss of 6 percent in Affected Revenues. As Chart A5a shows, this is a net loss of \$ 28 K in Affected Revenue over the planning horizon.

Chart A5b. Northfield's Projected Total Regulated Revenue

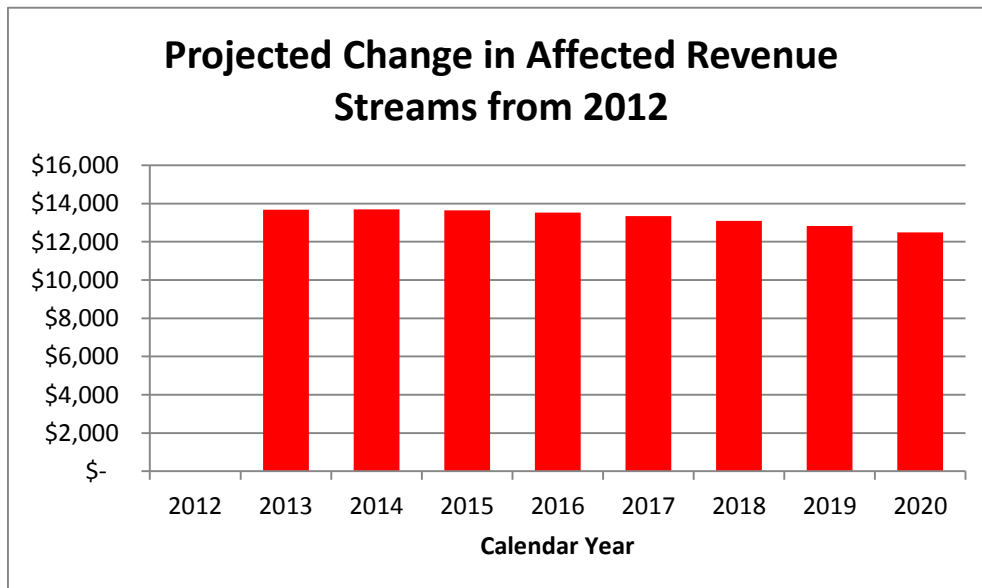


Northfield is moderately dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A5b shows that 2012 Other Revenue is \$0.97 MM. The loss of \$28 K in Affected Revenues would not be likely to have a substantial effect on Northfield.

F. Perkinsville

The following charts estimate revenues from 2012¹⁰² to 2020.

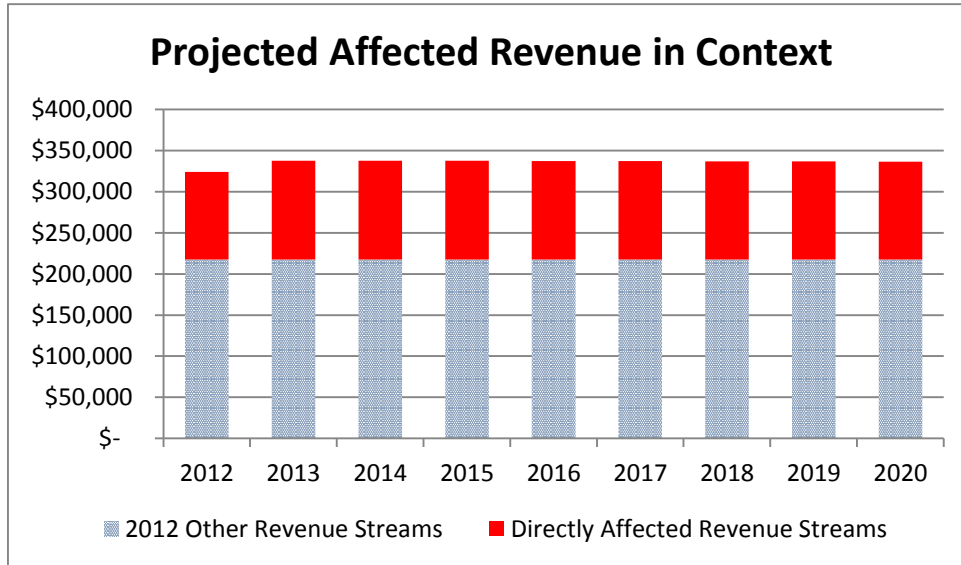
Chart A6a. Perkinsville's Projected Change in Affected Revenue Streams from 2012



As Chart A6a shows, Perkinsville stands to gain \$ 12 K in Affected Revenue over the planning horizon. The largest increase is in 2013, and is mainly the result of increased ICLS and RM support. This would be a 12 percent gain from the current amount of affected revenue.

¹⁰² RLSA disregards 2011 for this company because of unusual large adjustments to its 2011 federal universal service support receipts.

Chart A6b. Perkinsville 's Projected Total Regulated Revenue

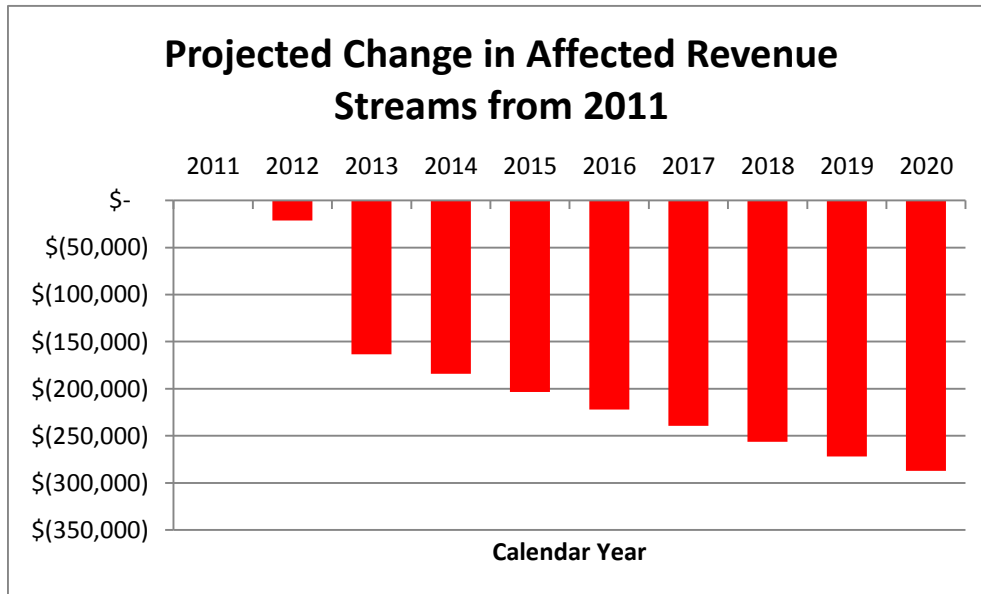


Perkinsville is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A6b shows that 2012 Other Revenue is \$217 K. The gain of \$12 K in Affected Revenue would not be likely to have a substantial effect on Perkinsville.

G. Shoreham

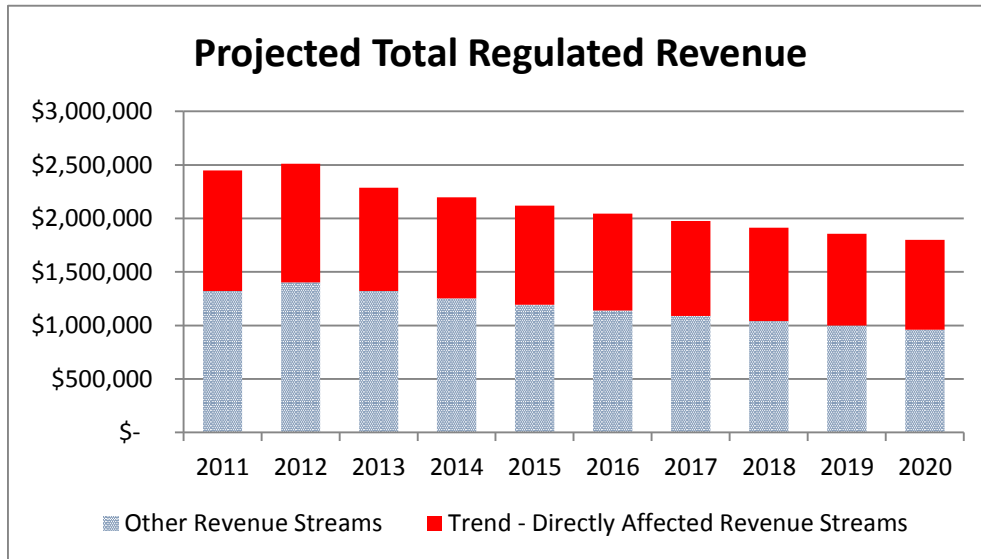
The following charts estimate revenues from 2011 to 2020.

Chart A7a. Shoreham 's Projected Change in Affected Revenue Streams from 2011



As Chart A7a shows, Shoreham stands to lose \$ 0.29 MM in Affected Revenue over the planning horizon. This would be a 25 percent loss from the current amount.

Chart A7b. Shoreham's Projected Total Regulated Revenue

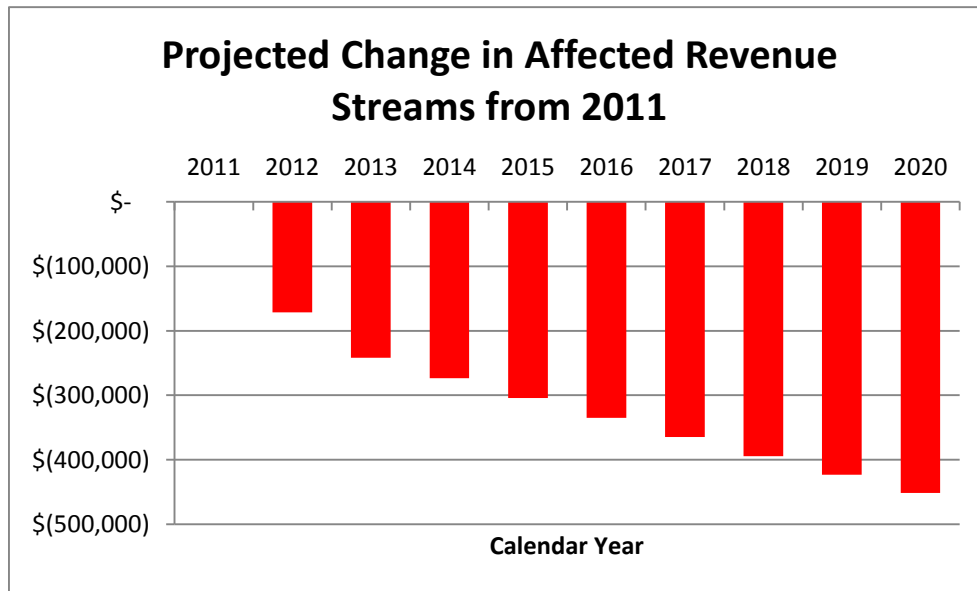


Shoreham is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A7b shows that 2012 Other Revenue is \$1.3 MM. The loss of \$0.29 MM in Affected Revenues would be likely to have a substantial effect on Shoreham.

H. Topsham

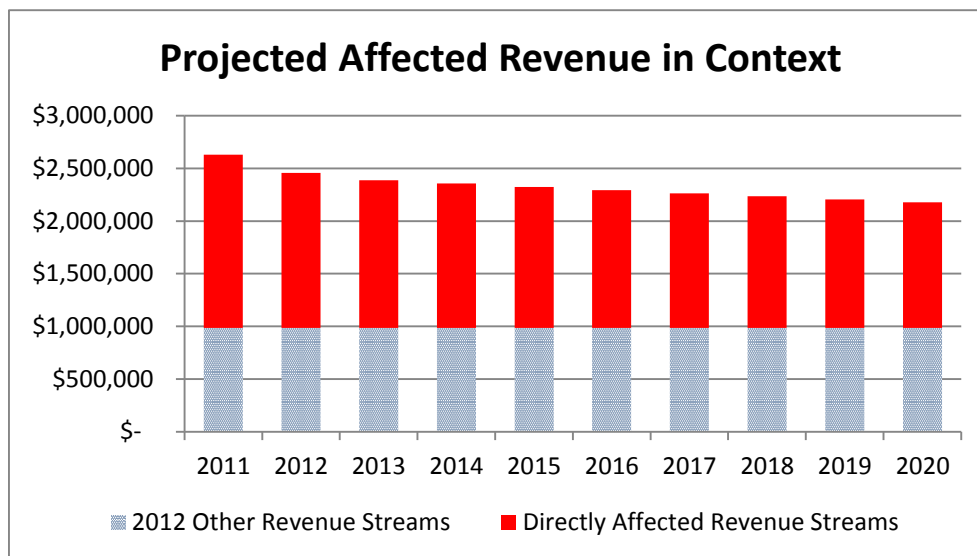
The following charts estimate revenues from 2011 to 2020.

Chart A8a. Topsham's Projected Change in Affected Revenue Streams from 2011



As Chart A8a shows, Topsham stands to lose \$ 0.45 MM in Affected Revenue over the planning horizon. This would be a 28 percent loss from the 2011 amount.

Chart A8b. Topsham's Projected Total Regulated Revenue

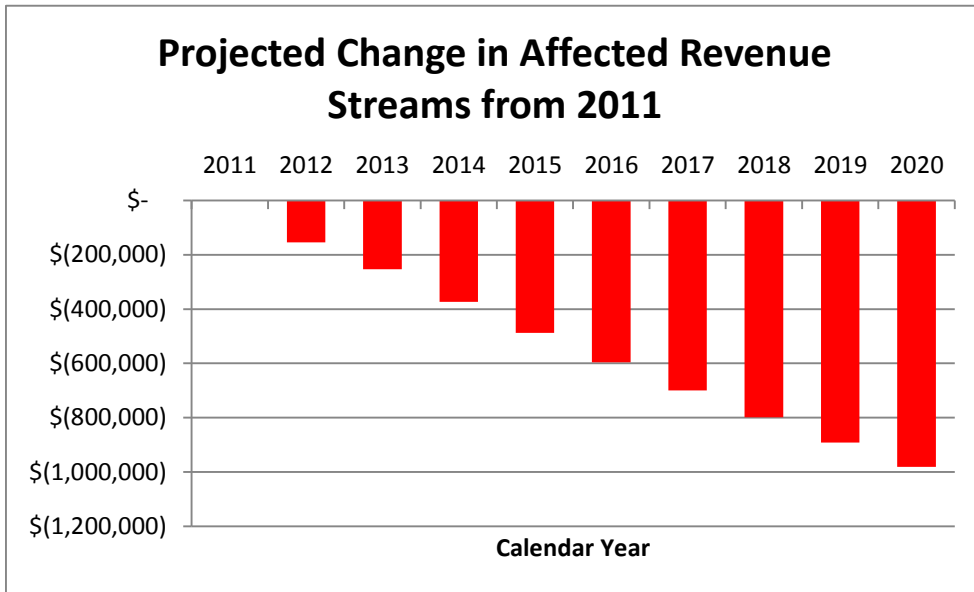


Topsham is extremely dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A8b shows that 2012 Other Revenue is \$0.99 MM. The loss of \$0.45 MM in Affected Revenues would be likely to have a substantial effect on Topsham.

I. Vermont Telephone

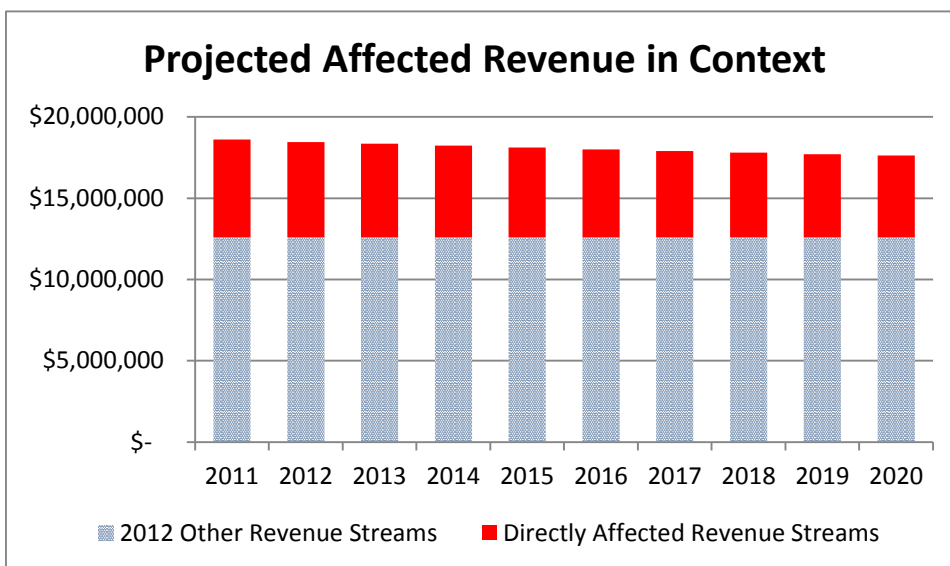
The following charts estimate revenues from 2011 to 2020.

Chart A9a. VTEL Projected Change in Affected Revenue Streams from 2011



As Chart A9a shows, VTEL stands to lose \$0.98 MM in Affected Revenue over the planning horizon. This would be a 16 percent loss from the current amount.

Chart A9b. Vermont Telephone's Projected Total Regulated Revenue

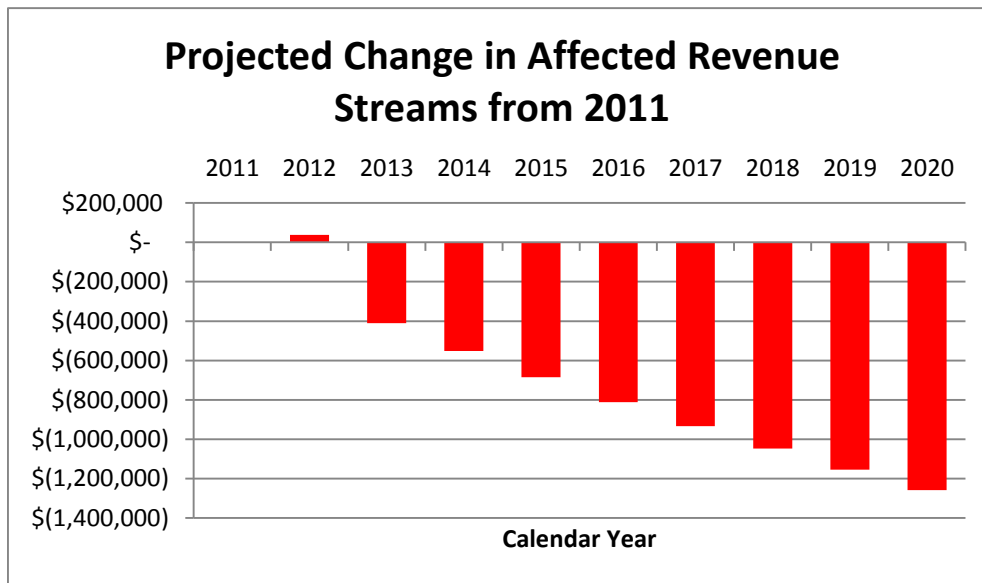


VTEL is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A9b shows that 2012 Other Revenue is \$12.6 MM. The loss of \$0.98 MM in Affected Revenues would likely have a noticeable effect on VTEL.

J. Waitsfield-Fayston

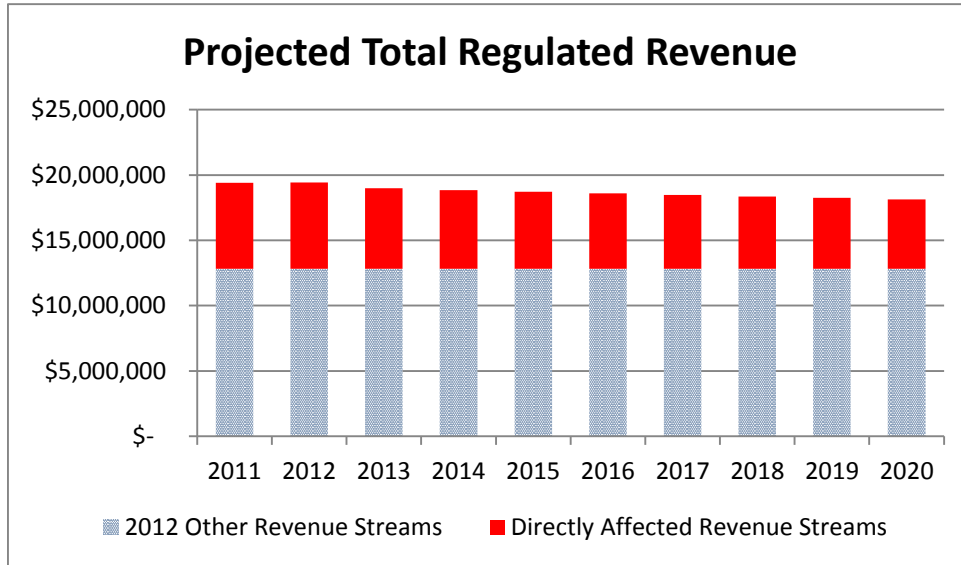
The following charts estimate revenues from 2011 to 2020.

Chart A10a. Waitsfield's Projected Change in Affected Revenue Streams from 2011



As Chart A10a shows, Waitsfield stands to lose \$1.26 MM in Affected Revenue over the planning horizon. This would be a 19 percent loss from the current amount.

Chart A10b. Waitsfield's Projected Total Regulated Revenue



Waitsfield is heavily dependent on Affected Revenue streams. Placing the Affected Revenue loss in context, Chart A10b shows that 2012 Other Revenue is \$12.8 MM. The loss of \$1.26 MM in Affected Revenues would likely have a noticeable effect on Waitsfield.