Consumer Welfare on Hold:
The Unintended Consequences from Retransmission Consent Regulation Spectrum Auctions

Steve Pociask
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1701 Pennsylvania Ave. NW
Suite 300
Washington, DC 20006

www.TheAmericanConsumer.org
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Executive Summary

With wireless traffic nearing capacity and predictions for continued rapid growth, Congress passed legislation designed to make wireless broadband spectrum available by holding auctions, whereby TV stations could voluntarily surrender use of TV broadcast spectrum in return for auction proceeds. To this end, incentivizing (compensating) TV stations to relinquish broadcast airwaves is the key to clearing and repurposing spectrum needed to meet growing wireless broadband service demand.

However, old regulatory rules – called retransmission consent regulations – directly conflict with these auction incentives. These regulations enable TV stations to negotiate more lucrative retransmission consent fees and require cable TV, satellite and other video service providers (collectively referred herein as multichannel video programming distributors or MVPDs) to air TV broadcaster ads to MVPD viewers. As a result of these regulations, retransmission consent revenue has increased at a compounded annual growth rate of 46% since 2006, giving TV stations billions of dollars of annual benefits at the expense of MVPDs. However, if TV broadcasters surrender spectrum in the upcoming auction and stop broadcasting, then they lose these ongoing regulatory benefits in return for a onetime auction payment.

In essence, retransmission consent regulations act to discourage TV stations from participating in the auctions. In other words, these regulations work counter to the policy goal of getting spectrum to its highest and best use, and they are at odds with achieving the National Broadband Plan.

Unless these regulations are reformed or eliminated, the resulting consumer welfare losses will be immense. While the rise in retransmission consent costs will increase MVPD prices by 15%, leading to demand repression and $20 billion in consumer welfare losses over the next five years, these costs are trivial with respect to the potential welfare losses affecting wireless consumers. This study estimates that auction failure would potentially reduce consumer welfare by roughly half a trillion dollars in the wireless sector.

Because retransmission consent regulations discourage TV stations from participating in the incentive auctions, these regulations pose a major obstacle to the auction’s success and a major threat to consumer welfare. Even if the upcoming spectrum is somewhat successful and manages to clear the entire UHF spectrum, because these retransmission consent regulations remain firmly in place and act to inflate station values, the remaining TV spectrum may never
reach its highest and best use. Instead, the remaining VHF stations, particularly stations associated with the major national affiliates, have every incentive to keep the spectrum underutilized.

This study shows that retransmission consent regulations are tying up valuable spectrum slated for wireless broadband services. Addressing this problem requires reforming these old regulations and repurposing spectrum to where consumers can maximize their benefits. With 8 million (and potentially falling) households relying solely on over-the-air broadcasts and with over 326 million (and rising) wireless subscribers, the direction and need for consumer-focused reform should be clear.
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Introduction

“For commercially held spectrum, voluntary incentive auctions will ensure that spectrum is repurposed from the lowest value uses to the highest; and that the economic benefits are widely shared among stakeholders, including broadcasters, wireless carriers, consumers, and taxpayers....Allocating spectrum with a mix of licensed and unlicensed use has the greatest potential to support future innovation.”

Consumers have become ever so reliant on wireless broadband services for work, communications, e-commerce, news and entertainment. At the end of 2012, there were over 326 million wireless subscribers accounting for more than 1.5 trillion megabytes of wireless data, a 65% increase in traffic from the previous year.

However wireless services appear to be hitting a bump in the road in what some have termed the spectrum crunch. The White House’s Council of Economic advisors estimates that wireless data in the U.S. will increase by 20-fold over the next five years. In one report, the FCC estimates 275 megahertz of new spectrum will be needed by the end of 2014. With broadband networks already running at 80% of its capacity, if more spectrum does not come online soon, congestion, slower service, poor quality, overly restrictive usage caps, and higher prices are likely to result.

The passage of the Middle Class Tax Relief and Job Creation Act of 2012 included provisions designed to address this spectrum crunch and to free up spectrum for wireless...
services by: 1) providing revenues to broadcasters for giving up TV spectrum through a reverse-
auction mechanism; and 2) providing wireless service providers an opportunity to bid and
repurpose that spectrum for consumer services, such as wireless broadband Internet services.
The bill has many provisions, including allocating $7 billion of the auction proceeds toward the
construction of a nationwide public safety broadband network for first responders, called
FirstNet. In addition to FirstNet, the U.S. Treasury would take some proceeds to reduce the
federal debt; and TV broadcasters would be compensated directly for voluntarily relinquishing
their TV spectrum.

By relinquishing spectrum in return for auction revenue, TV station broadcasters could
voluntarily stop broadcasting altogether, or they could continue broadcasting by either moving
to a VHF frequency or sharing spectrum with other broadcasters. If broadcasters moved to
another frequency, they could (collectively) be reimbursed (up to $1.75 billion) for offsetting
the cost of new equipment, retuning and preventing any loss in coverage that may result from
the move. In the end, the process hopes to make as much spectrum available and take in as
much auction revenue as possible, while repurposing the airwaves for wireless communications
services, most notably for broadband Internet services.

A number of experts have looked at the upcoming “forward” auction, in terms of its
potential for freeing up spectrum and at what cost, and some have analyzed potential adverse
consequences on proceeds if auction rules are designed to restrict participation. However,
little has been done to quantify the incentives that broadcasters have for giving up their
spectrum in the “reverse auction.” This paper will investigate these incentives with a particular
focus on the effects that current retransmission consent rules may have on the auction’s
outcome.

This paper will analyze the reasons for the sharp increase of retransmission fees, as well
as the corresponding rise in TV station values, profits and industry consolidation. Based on this
analysis, a question arises – will the rapid rise in retransmission consent fees and TV station
values discourage auction participation by broadcasters? If the answer to this question is yes,

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6 Most recently, see Fred B. Campbell, “Maximizing the Success of the Incentive Auction,” November 4, 2013, at
http://www.broadcastcoalition.org/uploads/auction_whitepaper_10_31_2013_FINAL_revised_v2.pdf; Leslie M.
Marx, “Economic Analysis of Proposals That Would Restrict Participation in the Incentive Auctions,” September 18,
2013, filed with the FCC at http://apps.fcc.gov/ecfs/document/view?id=7520944358; Anna-Maria Kovacs,
“Spectrum-Auction Design: A Case Study,” Georgetown University Center for Business and Public Policy, October
2013. Also see Coleman Bazelon, “Expected Receipts from Proposed Spectrum Auctions,” The Brattle Group, Inc.,
July 28, 2011; Coleman Bazelon, Charles L. Jackson and Giulia McHenry, “An Engineering and Economic Analysis of
the Prospects of Reallocating Radio Spectrum from the Broadcast Band through the Use of Voluntary Incentive
Auctions,” presented at the Research Conference on Communication, Information and Internet Policy, September
and Coleman Bazelon, “The Economic Implications of Restricting Spectrum Purchases in the Incentive Auctions,”
McDonough School of Business, Center for Business & Public Policy, Georgetown University, April 30, 2013, at
http://www.gcbpp.org/files/Academic_Papers/EconImplicationsSpectrumFINAL.pdf; and “Telecom Services &
and if repurposing this spectrum from TV broadcast to wireless services would enhance consumer welfare, then retransmission consent regulations will have negative unintended consequences on wireless broadband consumers. This study makes a first attempt to quantify these potential welfare effects.

Retransmission Consent: Competition or Protection?

U.S. broadcasters were given the use of spectrum at no charge to provide over-the-air broadcast TV for providing local news and public programming. A number of years later, cable TV services came on scene initially as a means to improve broadcast TV reception for consumers living in more remote areas. However, in the ensuing decades, cable TV aggregated additional programming and developed some of its own programming, thereby becoming a competitive alternative to over-the-air broadcast stations, which relied at the time solely on advertising revenue.

As cable TV grew, it significantly eroded broadcast TV’s market share and its advertising base. Congress stepped in and passed the 1992 Cable Act (“the Act”) to provide broadcast stations certain protections and rights in order to assure that communities continue to receive over-the-air local news and public programming.

Specifically, the Act included must-carry and retransmission consent rules, allowing local broadcast stations to choose between mandatory carriage and negotiated carriage. Under the current law, if a station elects the “must-carry” option, the cable TV service provider (more broadly the MVPD) is required to carry that local station’s programming on its basic tier and in a prime location of the channel lineup, generally the same channel number as used by the over-the-air station. This provides an advantage to TV station broadcasters by giving their content top exposure to MVPD viewers.

Alternatively, if a broadcaster elects “retransmission consent,” the MVPD provider must obtain the “consent” of the broadcaster in order to carry its signal, affording the broadcaster an opportunity to seek payment in exchange for carriage. In addition, the Act prohibits the MVPD provider from inserting its own advertising, thereby preserving broadcast carriers’ advertising revenue, despite an eroding market share for broadcast TV stations. This means that as consumers mothball their antennas and opt for MVPD network services, broadcasters can continue to earn advertising revenues for the eyeballs they reach through carriage on pay-TV networks. Essentially, MVPDs are disadvantaged since they must forego this advertising revenue, while broadcasters benefit from a two-sided market — receiving revenue from advertisers and receiving retransmission consent revenues from MVPDs for the privilege of carrying “free” TV signals.

As an additional advantage to broadcasters, the Federal Communication Commission (FCC) established its network non-duplication rule, which deters MVPDs from negotiating with
broadcast stations outside of local markets by blocking out similar programming carried by the other local stations. Essentially, the law was designed to prevent cable TV monopoly providers from shopping around, which gave local broadcasters negotiating leverage – all for the purpose of protecting over-the-air broadcast revenues and assuring local content to viewers.

Who Has Monopoly Power Now?

However, the market has changed significantly in the last two decades, calling into question whether regulations should continue to confer advantages to broadcasters at the expense of its distributors – the MVPDs, consisting of the array of cable TV, satellite and video service providers. The days of the old cable TV monopoly are gone, and with it is the need to provide additional negotiating leverage to broadcasters. Today, incumbent cable TV providers, like Comcast, Charter, Cox and Time Warner Cable, face competition in all markets. This competition includes rivalry from multiple satellite providers, primarily DISH and DIRECTV, as well as traditional over builders and more recently telecommunications providers, including AT&T and Verizon. Today, 83% of TV households now subscribe to these pay-TV services.7

In addition, “over the top” programming delivered via the Internet has become a major source of movies, video content and news. The growing host of online subscription-based providers includes such notables as Hulu Plus, Amazon, Netflix and Blockbuster, as well as strong business interests from such tech giants as Intel, Sony, Microsoft, Google and Apple. Some of these subscription-based services are beginning to create their own content, available through TV viewing or streaming directly to various electronic devices, including laptops, tablets and smart phones, some of which ironically require spectrum. According to a recent Consumer Electronics Association survey, “over-the-top” programming services are used, at least in part, by 10% of TV households. Not included in this statistic are the millions of other Internet consumers who have access to subscription free online local and national news, as well as video content from YouTube and others.

While consumers have many options, they are presently shunning free over-the-air broadcasting. Today, only 7% of households use over-the-air broadcasting as their exclusive source of TV content.8 While the decline in over-the-air broadcast viewing reflects consumer preference, public policies have had a harder time evolving. With competition and countless Internet news sources, there is currently no shortage of local news and content that would justify protecting the 1950s-era “over-the-air” broadcast model. However, the consequences of retransmission consent regulations now provide broadcasters additional bargaining leverage and that leverage, as the next sections will show, can have adverse consequences on consumers.

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8 Ibid.
Presence of Market Power

There are concerns that retransmission consent has provided broadcast stations additional negotiating clout over distributors.⁹ This means higher costs for MVPDs and ultimately higher prices for consumers. According to a Congressional Research Service report, retransmission consent provides broadcasters a stronger negotiating position over MVPDs and, in fact, this leverage has coincided with the increase in MVPD competition and accompanying higher prices:

“InIronically, the market consequence of greater competition in the distribution of video programming appears to be greater negotiating leverage for programmers with popular — and especially must-have — programming, resulting in higher programming prices that MVPDs tend to pass through at least partially to subscribers.”¹⁰

If the current retransmission consent rules favor broadcasters over MVPDs and this is evident from a rapid rise in retransmission fees, then regulators have given broadcasters the upper hand in negotiations. In fact, one early analysis concluded that TV stations appear to have market power, as evidenced by MVPD content costs increasing several times faster than the general rate of inflation.¹¹

More recent data provide strong evidence that TV stations are exerting market power over MVPDs. In fact, according to data from SNL Kagan, retransmission consent fees continue to far outstrip inflation. As the figure below shows, retransmission consent fees stood at $210 million in 2006 and are predicted to exceed $3 billion by the end of 2013 — a 46% compound average annual growth rate.¹² Retransmission consent fees are projected to increase to $6 billion by 2018 — and by some estimates as high as $12 billion or 32% per year.¹³ Keep in mind that there is no corresponding evidence that these fees provide for any additional output or cover any additional cost beyond inflation and, therefore, represent substantially a pure price increase and pure profit for broadcasters at the expense of consumers. This supports earlier research that broadcasters appear to have market power.

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¹³ Brian Frederick, “NAB Breaks out Tin Foil Hats in Retrans Fight,” TV News Check, September 10, 2013.
If SNL Kagan’s view is correct, the increase in retransmission consent will result in a 15% increase in MVPD service prices by 2018.\textsuperscript{14} Assuming a price elasticity of demand of -2.0, the increase in price would result in a 30% decline in the number of basic subscribers.\textsuperscript{15} The increase in consumer price from retransmission fees and the corresponding repression in demand would yield consumer welfare losses in present discounted value totaling $20 billion over the next five years. Therefore, consumers will be substantially worse off from these fees.

If retransmission consent regulations were intended to level the playing field between broadcasters and multichannel distributors, then they have failed miserably. If these regulations were intended to provide consumers with local news and free content, then that purpose has long passed with the advent of competition and the plethora of choices on the Internet. The result is regulatory failure.

**Blackouts are increasing**

Today, the FCC’s network non-duplication rule prevents MVPD providers from finding lower cost programming in distant markets that carry, for the most part, the same programming as other local stations, thereby granting local TV stations a monopoly in their markets. This means that TV station broadcasters can play one MVPD competitor against another, threaten and impose blackouts, and force higher retransmission fees.

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\textsuperscript{14} This increase includes only the amount of fees that exceed the rate of MVPD inflation. Also, the SNL Kagan view is conservative in that its increases are only half the rate some have estimated, as noted earlier.

\textsuperscript{15} This is a very conservative estimate, given that several recent studies suggest that the price elasticity of demand for basic services is somewhat more elastic (in the range of -4 to -5), which would mean the increase in transmission consent could cripple basic MVPD subscribership and the pay-TV market, assuming the relevant portion of the demand curve. For example, see G. S. Crawford, G. S. and A. c (2012): “The Welfare Effects of Bundling in Multichannel Television Markets,” *American Economic Review*, v102n2, April 2012, 643-685.
In many instances, blackouts have been timed with major sports events, such as the World Series, which increases the local broadcaster’s negotiating power even more.\textsuperscript{16} Because retransmission consent contracts expire on different dates, a blackout affecting one MVPD (say, a cable TV company) encourages customers to switch to another MVPD (say, another cable or a satellite provider), thereby raising the stakes in negotiations and forcing distributors to settle early. As a result, TV broadcasters now have considerable leverage in negotiations with MVPDs, in no small part because competition from non-local broadcasters is not permitted. After negotiations are completed, higher programming costs are passed to consumers in the form of higher consumer prices. Whether by blackouts or higher prices, consumers are the major losers from the imbalance in negotiations between broadcasters and distributors.

Consistent with the evidence of market power and the imbalance in negotiations are an increasing number of blackouts. Since 2005, 210 Designated Market Areas (DMAs) have experienced one or more blackout.\textsuperscript{17} The last three consecutive years have set new records for the number of blackouts in DMAs, including 51 blackouts in 2011, 91 blackouts in 2012, and as of October 24, 2013 110 blackouts.\textsuperscript{18} With roughly half of settled agreements in 2013 resulting in blackouts, there is no reason to expect the rise in blackouts to abate.\textsuperscript{19}

The recent retransmission consent dispute between CBS and Time Warner Cable highlights the added leverage that broadcasters have in their negotiations with MVPD providers. After a month long blackout and just before the start of the NFL regular season, the best Time Warner Cable could do was to hold CBS to a 4-year deal with retransmission consent fees growing at a compound growth rate exceeding 30% per year.\textsuperscript{20} By one report, the deal will result in CBS receiving $2 per subscriber over the next five years.\textsuperscript{21} The fact is blackouts represent a small price to pay for TV stations, since they can produce lucrative long term gains, as one analyst explained:

“\textit{I feel these headwinds will cause a short-term loss for CBS, but in the long-term, its strategy to increase retransmission fees is expected to positively affect its stock price. With increase in retransmission fees, CBS is expected to increase this}\textsuperscript{21}"


\textsuperscript{17} “Broadcast Station Blackouts by Market since 2005,” American TV Alliance, includes data through October 1, 2013. A partial list is available online at \url{http://www.americantelevisionalliance.org/wp-content/uploads/2013/06/MASTER_2010-2013_Broadcaster_Blackouts.docx}.

\textsuperscript{18} “Broadcasters Set New TV Blackout Record,” News Release, American TV Alliance, as of October 24, 2013, at \url{http://www.americantelevisionalliance.org/news/}.

\textsuperscript{19} “Publicly Reported Broadcast TV Retransmission Consent Agreements Inked Year-to-Date,” SNL Financial LC, SNL Kagan, 2013, data as of August 22, 2013.


revenue source at a compounded annual growth rate of 31.95%, to $1 billion, over the next four years.”

In summary, blackouts have become a tool that broadcasters successfully use to force MVPD providers to pay higher retransmission fees. Because the market on the distribution side is effectively competitive, suppressing broadcast content from one service provider can send unhappy customers to its competitors. This pressure forces MVPDs to settle and pay up.

High Valuations for Broadcast Stations

Rising market power is also evident in broadcast station’s rising valuations. Wells Fargo’s analysis demonstrates that TV stations have enviably high market values, including price-to-earnings multiples exceeding 18 times for the average TV broadcast market, with LIN Media (22.6x) and Nexstar (22.1x) ahead of the pack. High expected profits are also being reflected in recent stock price increases for TV stations. In this year alone, broadcasters experienced higher stock price increases compared to general indexes, an indication of increased expected profitability. While the NASDAQ, Dow-Jones and S&P indexes grew 26.0%, 18.6% and 21.8% from January 2nd to November 20, 2013, respectively, Sinclair grew 137.5%. Over the same period, Nexstar stock increased from $11.37 to $45.6 – an increase of 301.1% in less than one year. Also notably, LIN Media stock increased 195.9% over the same time frame. While CBS (48.1%) and Fox (36.6%) operate in many businesses outside of broadcasting, their performance still outpaced the general market. Even despite their widely diversified operations, Disney (35.5%) and Comcast (21.6%) still performed near or above general market indexes. Despite the sharp downward trend in over-the-air viewership, the TV broadcast business appears quite profitable. As CBS chief executive Les Monnves said, “People are suddenly saying, my gosh, look how valuable stations are,” and adds, “I am happy we own 27 of them.”

Market Concentration

High market values for TV stations have been coincident with an increase in industry consolidation. Industry consolidation provides station broadcasters additional scale and

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24 Alexander Eule, Boom Time for Broadcast Stocks,” Barron’s, September 21, 2013.
26 Ibid.
leverage in retransmission consent negotiations, and these fees have been cited as a major factor in recent mergers and acquisitions for local TV stations.\(^{28}\) As one article noted:

>“Renaissance in profits has made local TV stations, for now at least, prime acquisition targets, especially with the playbook that Sinclair and the others are practicing in local markets.”\(^{29}\)

In fact, consolidation has been in a frenzy this year. During the first half of 2013, according to the media research firm SNL Kagan, there were $6.3 billion in deals involving 326 TV stations.\(^{30}\) Among the many announced acquisitions and mergers during the first half of 2013 were the Media General merger announcement with New Young Broadcasting,\(^{31}\) and Nexstar’s purchases from Communications Corporation of America and White Knight Broadcasting.\(^{32}\) Sinclair announced a number of purchases, including stations from Barrington Broadcasting, Fisher Communications, Titan Broadcasting and Cox Media Group.\(^{33}\) In June, Gannet announced a $2.2 billion deal to buyout its competitor, Belo Corporation.\(^{34}\)

As for the second half of 2013, the buying binge for TV stations appears to be continuing. Sinclair, has already purchased 79 local stations, and announced that it would purchase Allbritton Communications for $1 billion in what University of Pennsylvania professor Joseph Turow said was largely motivated in order to increase leverage in retransmission consent fee negotiations.\(^{35}\) Also, Tribune Company announced a $2.7 billion 19-station “transformational acquisition” that would make the company among the largest commercial TV

\(^{28}\) Ibid.


\(^{30}\) Ibid.


station ownerships in the country. More recently, Nexstar Broadcasting and Mission Broadcasting announced station acquisitions from Citadel Communications and Stainless Broadcasting. Also recently, the News Press & Gazette and Cowles Media purchased several TVs stations, and, in a separate transaction, Sinclair announced that it will buy eight more stations. After purchasing more than 50 stations in recent years and reportedly owning more stations than any other company, Sinclair announced in October its intention to buy several more stations.

While market consolidation rules have been established to prevent one station from dominating in a market area, Shared Services Agreement (SSA, also referred to as *sidecar arrangements*) have permitted TV stations to effectively combine many of their operations by putting them into third-party hands. These consolidated functions include human resources, news operations and negotiating retransmission consent agreements. In some cases, as the industry consolidates, TV station purchases are outright resold again but with SSA-strings attached. One attorney described how these SSA agreements can legally and cleverly skirt the FCC’s consolidation restrictions:

“But creative contract lawyers ... have come up with a way to structure sale transactions so that those deals satisfy the letter of the FCC’s rules and yet provide substantially all of same the economic benefits to sellers and in-market buyers as conventional sale transactions.”

In addition, these SSA deals enable TV affiliates of the “big four” national broadcast networks in one market to negotiate retransmission consent on behalf of competitive “big four” brands and affiliates in neighboring markets. Essentially, the same party negotiating for FOX could be negotiating for two other major broadcast networks in the same market. Today, one station manager and one sales director can manage several local TV stations in the same

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relevant market out of the same office. These arrangements work to maximize leverage during retransmission consent negotiations.

The frenzy consolidation and coordination agreements have led some to refer to this industry conduct as price gouging and collusive. These arrangements have provided additional leverage to network affiliates, thereby “leading to higher prices for retransmission consent.” As one association representative stated:

“There can be no policy justification for permitting multiple broadcast stations in the same local market that are licensed to operate as direct competitors to coordinate their retransmission consent, especially when the stations involved are affiliates of the major national networks.”

**Disincentive Auctions**

The previous sections have shown that retransmission consent regulations are driving up consumer prices and harming consumer welfare to the tune of $20 billion over the next five years, but there could be worse consequences for consumers. Because retransmission consent regulations provide market power and bestow an artificial value upon broadcasters, these broadcasters could be discouraged from giving up that spectrum in the upcoming voluntary reverse auction. It may be more lucrative for a broadcaster to sit on spectrum and earn annual revenues, rather than putting it up for auction for a onetime benefit. This means that retransmission consent regulations could be keeping spectrum from reaching its highest and best use, and consumer welfare could suffer – not just for the MVPD’s consumers (as previous shown), but also for wireless service consumers facing spectrum in short supply.

The public’s benefit from repurposing spectrum would appear to be straightforward. On the one hand, 7% of TV households (or about 8 million homes) exclusively rely on free over-the-air broadcast and that spectrum is substantially underutilized. On the other hand, there are 326 million wireless subscribers face deteriorating service and potentially higher prices from spectrum shortages. While the benefits from repurposing spectrum in terms of the public’s interest could not be clearer, what are the incentives for and against broadcaster participation in the upcoming auctions?

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43 “Petition to Deny or, in the Alternative, for Conditions,” FCC filing by the American Cable Association, MB Docket No. 13-203, September 13, 2013, p. iii.
What Broadcasters Get and Lose from Returning Spectrum

TV station owners will need to balance the potential one-time compensation from the auctions against the ongoing benefits granted through government regulations. If some TV stations give up their spectrum, they would receive a portion of auction proceeds, although a portion of the proceeds would also go towards paying for the construction of First Net ($7 billion), repacking TV stations ($1.75 billion) and the U.S. Treasury.

As for the broadcaster’s share, estimates suggest that they stand to “net” approximately $15 to $20 billion from the incentive auctions – a tremendous return for something which they received for free. For example, a study by Bazelon, Jackson and McHenry estimated that the auction would generate no more than $15.2 billion in broadcaster compensation.46 Shapiro, Holtz-Eakin and Bazelon estimated $22 billion in broadcaster compensation could be realized, if 120 MHz (the space of 20 TV channels) were auctioned off without restrictions.47 However, if only 60 MHz are auctioned, then broadcaster compensation would drop to $9 billion.48 JP Morgan’s estimate and view that the upcoming auctions could be a “disappointment.”49 As one well-known media executive put it, “To the best of my knowledge, the Commission is very unlikely to attract affiliates of ABC, CBS, NBC and Fox to this auction.”50

Like a tradeoff, TV broadcasters can opt for the proceeds from the reverse auction, whether $22 billion or $9 billion, but they must be willing to part with spectrum and the revenues associated with broadcasting over-the-air. For example, if TV stations stop broadcasting, they lose the benefits of retransmission consent regulations which include advertising revenues and retransmission fees.

To size the tradeoff, consider that by the end of 2013, local TV advertising is estimated to reach $19.2 billion and increase to approximately $22 billion over the next five years.51 This implies a revenue stream of roughly $124 billion in advertising revenues for the five years starting in 2014, when the auction is to take place. Similarly, retransmission consent fees are predicted to go from $3 billion to $6 billion by 2018, with one source saying it could reach $12

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46 See Bazelon, Jackson and McHenry, 2011.
47 See Shapiro, Holtz-Eakin and Bazelon, 2013.
48 Ibid.
billion by 2018.\textsuperscript{52} Under the slower growth scenario, retransmission consent would yield $40 billion for the five-year period starting in 2014.

The simple fact is that advertising and retransmission consent provide an annual benefit worth $22 billion today, which could grow well over $34 billion per year by 2018. This ongoing revenue stream, coupled with the terminal value of holding wireless spectrum, changes the calculus of auction participation. It may be that those stations broadcasting on UHF, in part because they are less dependent on retransmission consent and advertising, will be more willing to participate in the auction, though stations with more market power will see no benefit in it. In short, the financial gains from retransmission consent regulation enjoyed by TV broadcasters works directly against the goal of getting spectrum to its highest and best use.

\section*{Potential Consumer Welfare Losses}

In the upcoming auction, spectrum is expected to be repurposed for wireless services, such as high-speed Internet services. If retransmission consent regulations discourage broadcasters’ participation in the spectrum auction, wireless services will be plagued by congestion, slower speeds, dropped calls, more restrictive service caps and potentially higher prices for rationing use. This means that consumer welfare will suffer, but by how much?

To address this question, it is necessary to estimate how much wireless providers will bid, in terms of dollars per megahertz per population (MHz/POP). Based upon earlier auctions, TV spectrum in the 700 MHz band was auctioned and generated $19 billion in revenue for the U.S. Treasury in 2008, which equals approximately $1.20 per MHz/POP.\textsuperscript{53} A similar result would value the current spectrum used by TV for 49 channels at approximately $100 billion.\textsuperscript{54} Using the 2008 price and assuming today’s population size, if TV stations were encouraged to vacate 20 channels (120 MHz), the spectrum auction would gross $45.6 billion before any allocation to the various parties.

A number of studies have estimated the link between spectrum value and the resulting consumer welfare gain from wireless services. Using estimates of consumer welfare by Hausman, Rosston estimated that the consumer welfare may be ten times higher than the value of spectrum.\textsuperscript{55} Similarly, Hazlett and Munoz reiterate that the consumer surplus from wireless services are roughly ten times higher than the revenue obtained from selling wireless services.


\textsuperscript{53} A summary of these results are available at the Federal Communications Commission’s (FCC) website at http://wireless.fcc.gov/auctions/default.htm?job=auction\_summary&id=73.


licenses. In another study, Bazelon, Jackson and McHenry observe that consumers receive ten to twenty times the benefit for each dollar spent on spectrum.

Based on these economic studies and the potential sale of 120 MHz of spectrum, consumer welfare, if deployed for wireless broadband services could conservatively increase by $456 billion in present value, or roughly one-half of a trillion dollars for this one auction alone. The potential massive welfare losses highlight the consumer risks if these auctions were to fail or not be fully achieved.

Because retransmission consent rules discourage TV station participation in the incentive auctions, they pose a major obstacle to the auction’s success and a major threat to consumer welfare. Even if the upcoming spectrum is somewhat successful and manages to clear the entire UHF spectrum, because these retransmission consent regulations remain firmly in place and act to inflate station values, the remaining TV spectrum may never reach its highest and best use. Instead, the remaining VHF stations, particularly stations associated with the major national affiliates, have every incentive to keep broadcasting, even if no consumer ever tunes into or receives over-the-air signals.

Conclusion

Retransmission consent rules – by pushing higher pay-TV prices to consumers, threatening blackouts and discouraging the repurposing of spectrum to wireless services – are not welfare enhancing and do not benefit consumers. If policymakers are serious about getting spectrum to go to its highest and best use, changing or ending retransmission consent regulations is necessary in order to achieve auction success. Retransmission consent regulations encourage broadcasters to keep broadcasting because they provide generous financial rewards for doing so. This clearly runs counter to the incentives provided in the reverse auction. Failure to modify retransmission consent regulations will undermine future spectrum auctions, thereby resulting in massive consumer welfare losses, on the scale of a half a trillion dollars.

58 This study uses a similar approach used in Thomas W. Hazlett (2011).