

# Big Federal Money Ahead ... But Proceed with Caution

Here's a roadmap for reviewing your deployment plans in these exciting but strange times.

By Steven S. Ross / *Broadband Communities*

**A**mong the nation's most nimble regional and specialized deployers, early movers already see unexpected hurdles as a result of labor shortages, backordered fiber and electronics, inflation and unforeseen financing issues. Many are not meeting cash flow projections because they can't finish projects on time.

Added to the upheaval in what residential and business customers want and need, new technologies (can you hear me now, 5G?), and new demands on national carriers by Wall Street, unforeseen just a few months ago, seems daunting. And, oh yes, most new federal funds will come through the National Telecommunications and Information Administration (NTIA) at the Department of Commerce, which is still writing the regs. NTIA will send the funds to state broadband offices – a third of which were not up and running at the end of January – setting priorities with maps that do not yet exist.

In my last column, I covered the big picture (November/December issue, pages 8 and 9, [www.bbcmag.com/community-applications/bandwidth-hawk-about-50-billion-for-new-broadband-deployment](http://www.bbcmag.com/community-applications/bandwidth-hawk-about-50-billion-for-new-broadband-deployment)). Now let's get to the details. They have already added up to more trouble than deployers and their consultants expected, even without emerging federal funds in the mix.

## INFLATION

The current administration should not take any blame for inflation. Nor should it take any credit for the best year of economic growth since 1983. Both phenomena are global. As big as it is, the U.S. economy is going along for the ride. The enormous federal deficits since 2017 – about half from tax cuts and half from aid specific to COVID-19 – haven't made that much difference in the overall economy, either.

The infrastructure bill, rolling out about \$200 billion in new spending for each of the next five years, also has little net inflationary effect as it adds to economic efficiency. Nor would the “family”-oriented benefits in Build Back Better that have led to the bill's being blocked. They almost certainly grow the economy enough to make up for the federal borrowing, which is apparent even under the Congressional Budget Office's conservative rules.

## COST AND AVAILABILITY OF CAPITAL

Interest rates remain low and are likely to stay low all year, in part due to households' putting about \$2 trillion into savings. But banks, looking beyond the next few years, are tightening credit. A 10-year municipal general obligation bond (interest is tax-free and the bond is backed by “full faith and credit” of the community) pays 1.4 percent interest, so even a one percentage point rise over the next year (as the Federal Reserve has signaled it wants) does not mean much.

The problem is that even after broadband proved its worth during the pandemic, taxpayers are leery about general obligation pledges. At best, that means revenue bonds at a higher interest rate for matching federal funds. I've been telling prospective deployers who use the **BROADBAND COMMUNITIES** financial models (see [www.bbcmag.com/tools-and-resources/ftth-financial-analyzers](http://www.bbcmag.com/tools-and-resources/ftth-financial-analyzers)) that, under the circumstances, plan for a 4 to 6 percent effective overall cost of capital, depending on the project and the region.

On purely economic grounds, this suggests that public-private partnerships (PPPs) are a good deal for small deployers seeking the cheapest funding. Banks and many deployers tell me that, ideally, they want guaranteed access to public rights of way as collateral, especially for large projects. That, in turn, suggests regionalization with nearby private carriers, mainly if low- or zero-cost federal money

in the mix lowers overall capital needs and rates.

It is unclear why. Some of my contacts blame Wall Street firms. Indeed, Wall Street is particularly risk-averse on broadband collateral, and some of the money local banks lend filters down from big financial centers. But small, more self-contained projects, such as multiple-dwelling-unit (MDU) buildings or industrial or residential developments, generally rely on pledging the value of the project. For the past few years, an MDU fiber project, typically built for \$1,000 to \$1,500 per door passed, could be sold to a larger carrier for twice that if necessary. Now, deployers must get a firm commitment from their banks; the old formulas may not hold.

One reason may be a financial quirk rarely covered in mass media. Historically, the Federal Reserve has had a balance sheet under \$1 trillion. During the 2007–2010 economic upheaval, that grew to \$4 trillion. It is now about \$9 trillion and is on course to start shrinking as the Feds stop supporting high-risk bonds by purchasing them.

Unwinding those positions shrinks the money supply. So does consumer spending that cuts the size of household bank and brokerage accounts. In the short term, it tends to make life less comfortable for local banks that are used to the Federal Reserve flexibility in borrowing “overnight” to meet their reserve requirements. The funds available for that are beginning to shrink a bit. That translates into slightly less money to lend locally.

### LABOR SHORTAGES

As I detailed in the November/December issue, federal infrastructure spending will increase the need for builders, designers, consultants and even lawyers. New deployment activity adds up to about \$10 billion a year. Usually, the broadband industry spends about \$70 billion a year improving old networks, replacing equipment, and building new networks.

I’ve tended to think of that in terms of a lower number, closer to \$50 billion, as most of the rest is for access points (in-home or business gateway modems

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and set-top cable boxes) that major carriers finance through “rental fees” from customers. Thus, the new federal funding looks like a 20 percent bump in labor for deploying the networks themselves – technicians, designers, software specialists and so forth. But there is a twist.

### COMPONENTS AND FIBER

Twist? There is a worldwide shortage of gateway modems, fiber and other materials. The whole world is building more broadband networks, of course. There’s a shortage of chips, of course. But the new deployments come at the same time as a technology generation change (to 5G and Wi-Fi 6) and a realignment of the supply chain because the electronics are becoming more standard, software plays a more significant role, and the world’s largest supplier, Huawei, is accused of spying. In the U.S. alone, Huawei security issues claimed by regulators added more than a billion dollars to carriers’ equipment bills as they replace Huawei gear. The federal government is paying for much of that, but the new gear has to come from somewhere.

All of this has led to turf battles. Fiber? Wireless? Satellite? I’m a big fan of fiber. It’s the most future-proof of all broadband technologies and the most reliable by far, and its cost is not wildly out of line. But I have now seen more than 40 “mainly fiber” projects that could not have gone forward without some point-to-point wireless to bridge population gaps or serve low-density areas. Some of those projects have since replaced the wireless with fiber anyway.

Wireless for entire, large deployment areas? The burden of proof must be on the deployer proposing wireless. The current funding opportunity will likely be the last in this generation at the federal level. We should build it right, with fiber, unless that is simply impossible.

### CELLULAR?

**BROADBAND COMMUNITIES** readers know well that good fiber backhaul is the key to suitable cellular. National cellular carriers have been spurring fiber deployments they can lease for backhaul. For a lender, it is comforting to have a national carrier’s microcells as anchor tenants on a new fiber network. Over the past few months, though, there has been a blip, with some national and large regional carriers saying they are worried about reliability and network management issues. The IRS and accountants treat long-term fiber leases as a capital expense, too, and Wall Street hates that because the major carriers already have huge liabilities on their balance sheets.

### LOW-EARTH-ORBIT SATELLITE?

There’s a place for it – but a limited place in the U.S. and other dense, industrialized nations.

If networks are so important, why aren’t they free, like local streets? There are actually many practical reasons. Do extra-large users pay a surcharge anyway? Will local governments be persuaded to fund their construction with general obligation bonds? But given that bulk services are relatively common in MDUs and planned unit developments and the current subsidy program for poorer families is cumbersome, I would have expected more experimentation with “free.”

I hope and expect that NTIA regulations for dispersal of the most significant chunk of funding, \$42.5 billion, will be flexible enough to encourage financial and technical experimentation. ❖

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