Do we need a new National Broadband Plan?

FCC rolls out new rural "Connect America Fund," but bigger changes are needed.

Google may be rolling out 1Gbps Internet access (http://arstechnica.com/business/2012/07/google-fiber-launches-in-kansas-city/) to Kansas City, but there are about 19 million American households and businesses that still lack any access to broadband, according to the Federal Communications Commission. Most of them are in rural areas, and some will soon benefit from broadband projects financed by one of the last pillars (http://arstechnica.com/tech-policy/2010/04/nbp-unleash-the-dogs-of-policy/) of the FCC's National Broadband Plan: (http://arstechnica.com/tech-policy/2010/03/national-broadband-plan-arrives-quoting-shakespeare/) the Connect America Fund.

"I'm pleased to announce today that nearly 400,000 residents and businesses in rural communities who currently lack access to high-speed Internet will gain access within the next three years," declared FCC Chair Julius Genachowski on Thursday.

This first phase of the program will invest about $115 million of public money for private broadband projects in 37 states. Carriers are also bringing their own money, of course. They include ACS (Alaska), CenturyLink, Consolidated Communications, Fairpoint, Frontier, Hawaiian Telcom, and Windstream. "Of these, Frontier took almost $72 million and Century $35 million," an FCC spokesperson told us.

States receiving Connect America Phase 1 support are in color. You can browse the FCC's map (http://a.tiles.mapbox.com/v3/fcc.CAF-Phase-1-States/mm/legend,zoompn,tooltips,zoomwheel,zoombox,attribution,bwdetect,share.html#5.00/38.307/-93.142) if you wish.

CAF draws its money from the FCC's Universal Service Fund, which tithes phone consumer phone bills to subsidize rural and low-income phone service. Connect America, however, is designed to (hopefully) finance rural broadband service without incurring the famous inefficiencies and corruptions associated with the USF's ironically named "high cost" (http://arstechnica.com/tech-policy/2011/02/fcc-will-remake-87-billion-program-for-world-that-no-longer-exists/) fund. The term was supposed to signify helping carriers in low density regions where broadband delivery is expensive. But the program subsidized companies without adequate auditing or even a proper assessment of whether the service could be provided by the market. The old system, for example, paid multiple companies to provide service to the same areas, such as a region of Mississippi where, in 2009, no less than 13 carriers all received "high cost" cash.

Thus, Connect America recipients can only receive Uncle Sam's money in regions where "there is no private sector business case to provide broadband and high-quality voice-grade service," as the National Broadband Plan put it. The fund can assist only one provider per geographic area. And all broadband network technologies should be eligible for support (which may mean satellite service in some areas).

These first Connect-assisted projects must roll out their networks in three years. The FCC wants all 19 million rural households and businesses reached by 2020. "Today's action is just the beginning of our efforts to unleash the benefits of broadband for millions of homes and small businesses in unserved rural communities across the US," Genachowski promised.

A big fact

Interestingly, this development comes as the author of the FCC's National Broadband Plan is rethinking broadband development. Following the completion of the plan, Blair Levin packed his bags and relocated to the Aspen Institute, then became executive director of Gig. U.—a consortium of research universities rolling out high speed networks on their campuses. In May, Gig. U. announced plans to build "an ultra-high-speed, Gigabit Main Street Internet Network" around the University of Maine's Old Town and Orono areas.

The consortium has almost 40 member campuses, including the University of Chicago and California Institute of Technology. A month later, Levin spoke at a conference in San Jose, California. "Here's a big fact," he declared. "For the first time since the beginning of the commercial Internet, the United States does not have a national wireline provider with plans to build a better network than the currently best available network."

This is not news to us. In late May, Ars's Timothy Lee outlined four signs that the US's national broadband policy is failing, among them Verizon's announcement that it would put the kibosh on fiber-to-the-premises rollouts, "without reaching some of its most important markets, including Baltimore, downtown Boston, and my own apartment in Philadelphia."

The regional Bell operating companies don't seem to be in a rush to pick up the slack, either—fiberwise. "Instead of an arms race between telephone and cable incumbents, we seem to be getting a truce," Lee noted.

But it's an ominous sign, Levin suggested. It means that there's no fire under the feet of the cable industry to go to the next level (instead, Verizon and Comcast are negotiating spectrum deals, speaking of truces). And *that* means that for most Americans, "five

years from now, the best network they have is the network they have today."

It's true that there's still a lot of innovation in wireless, but "looking down the road, only wireline can provide the excessive bandwidth that provides the platform for creating the next generation of big bandwidth services," he added.

So the big question isn't just about rollouts, it's about upgrades.

Bandwidth psychology

"When it comes to the wireline access network, instead of talking about upgrades, we are talking about caps and tiers," Levin warned. "The government should not attempt to micromanage the packaging or pricing of a service. But those in policy positions should understand this: a country that is talking about an upgrade, and not caps, will be better off in a few years; a country that is talking about caps, and not upgrades, will not be better off in a few years, and likely will be worse off." The speech then framed the choices for future policy makers:

> So today, we can spend billions of dollars connecting rural America to baseline broadband by building on top of old technology, or we can figure out an upgrade strategy using new technology to bring far bigger broadband at far lower prices. We can spend billions trying to get everyone on a network, or we can create upgrade options for low-income individuals through the utilization of untapped resources in the existing network [and] can bring a compelling value such that market forces do most of the trick. We can, like Korea, mandate spending billions to upgrade everywhere to drive more effective use of the network, or we can upgrade in those places [that] we know... create the kinds of improvements that scale everywhere and create new market forces that incent the private sector to invest in a broader upgrade.

We spoke with Levin for a few minutes on Thursday. He acknowledged that rural broadband rollouts and network upgrades

are separate tasks. But the latter challenge generates a higher payoff for the economy as a whole, he emphasized.

How is the US supposed to get to this place? "I hope next year, the president of the United States tells the chair of the FCC that his or her mission is to deliver a strategic bandwidth advantage for the country and a psychology of bandwidth abundance for consumers," Levin's talk concluded.

Lots of wild cards here, such as who will be president next year, and consequently, who will chair the FCC. But Levin's commentary reflects a growing consensus that US broadband policy has stalled, and a restart will require more than the completion of one of the National Broadband Plan's last action items.