Vermont Community Broadband Board

Presentation to the Vermont House Energy and Technology Committee
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Role of the Vermont Community Broadband Board

"Universal Service" - Connect every underserved Vermonter to 100 Mbps symmetrical broadband

Provide resources to Communications Union Districts in the form of administrative and technical support

Provide grants for the preconstruction and construction costs of broadband projects for eligible providers

Facilitate partnerships between Communications Union Districts and potential partners

Address workforce and material shortages

$150 Million in State Fiscal Recovery ARPA funds for 2021; $100 Million in 2022. Additional funds from the Infrastructure Bill

Identify State, federal, nonprofit, and private broadband funding opportunities

VCBB Status

August 9 Kick-off;

Meeting at least bi-weekly

Met with most of Vermont's telecom providers, Communications Union Districts, and other interested state and national partners in Vermont.

Staying "ahead of the curve" According to Pew, only 20 states have announced broadband plans. Most have not yet deployed federal funds.
GOAL: Maintain this advantage

STAFFING UP – By the end of January, staff will consist of Director, Deputy Director, General Counsel, Broadband Project Developer and Executive Assistant. Additional capacity at PSD

OUTSIDE PARTNERS – By the end of January, the VCBB will have outside legal support to review operating agreements, GIS support, Fiber Optic Engineer, and potentially additional economic analysis and grant writing support

SHARED RESOURCES – Supporting efforts to provide shared resources to the CUDs – Materials, GIS, Audit, etc – AND building relationships with philanthropic, financial institutions, and other organizations

VCBB Status

GRANTS: Issued $21 million in grants from Preconstruction Grant Program to 7 of 9 CUDs (so far) to fund detailed design, make-ready applications and capacity building

INNOVATIVE FINANCE: Facilitated the Purchase of over 2,000 miles of fiber by VCUDA arriving this spring in time for the construction season and saving the state $2 million

STANDARDS: Approved Outside Plant Design Standards and a $116 Million Construction Program. RFP will be formally issued mid-January

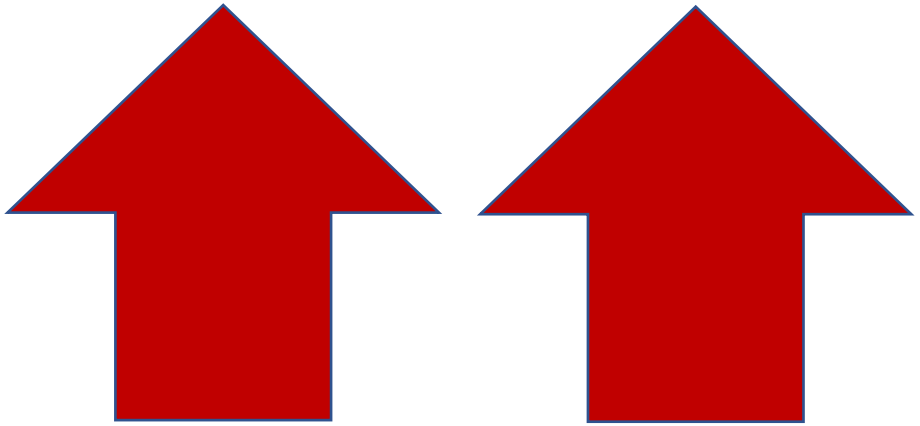
KEY ISSUE: Rising costs

KEY ISSUE: Supply chain and workforce issues

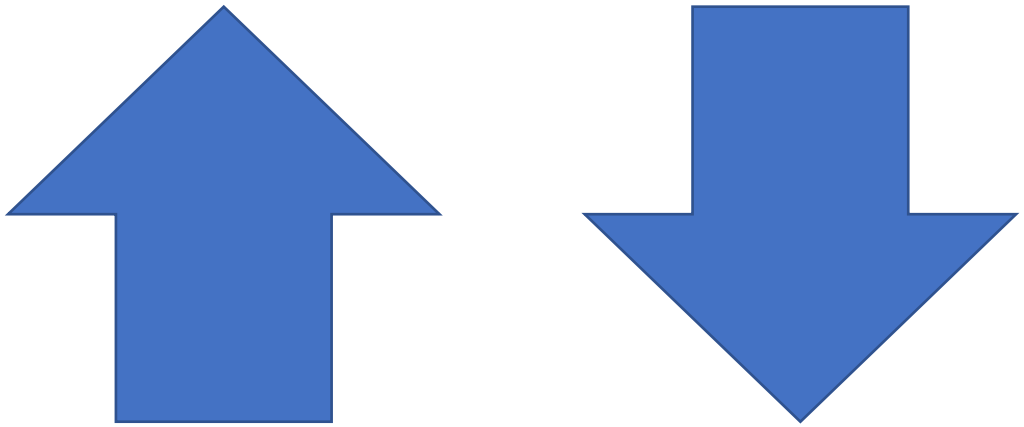
KEY ISSUE: Enough funding to ensure the networks built are affordable to all Vermonters

Basic Model

- Grant funding and donations provide initial funding
- CUDs build and own infrastructure. Operator provides the service
- CUDs access the Revenue Bond Market to complete the build-out of their district
- Continue the cycle - Revenue bonds pay for additional build-out



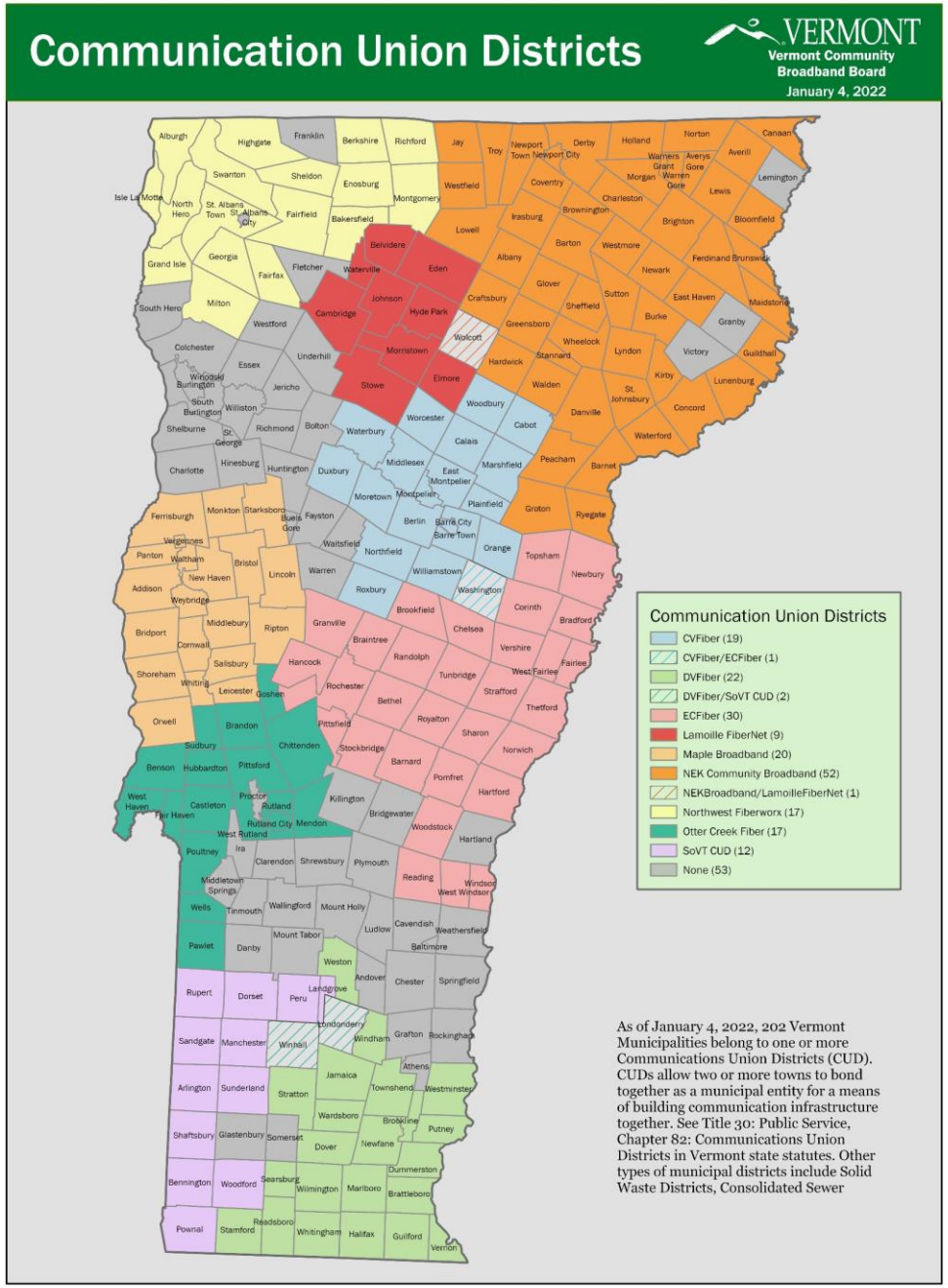
Borrowing (loans, bonds) = **Higher Consumer Prices**



Grants = **Lowers Prices for Consumers**

Communications Union Districts

- **Winter 2022**
  - 9 Districts
  - 202 Member Towns
  - 404 Volunteer Board Reps & Alternates
  - More than half the State's population
  - 90% of premises statewide without access to 100/100 Mbps broadband
  - Represented by the Vermont Communications Union Districts Association (VCUDA)



Jumping on a Moving Train

- Limited time for Board policy development or training – still bouncing between Storming, Norming and Performing
  - VCBB started up over a year after the CUDs were established
  - Understaffed
  - Vermonters are impatient!
  - EVERYONE, EVERYWHERE is exploring broadband
- Responding to the interests of the CUDs, Non-CUD towns, and other eligible providers
- Defining a “Universal Service Plan” for Non-CUD towns served by more than one telephone company
- Need the funds not only to get every underserved address connected, but to ensure affordability and accountability
- Act 71 8086 requirement that puts the State in “first position” in case of network failure limits access to bond market

Key Challenges for 2022

- **Access to Capital**
- **Access to Materials**
- **Access to Labor**
- **Rising Costs**

With billions of dollars being invested nationwide in fiber optic broadband networks, exponential demand combined with supply chain challenges are increasing costs.

CHALLENGE: Access to Capital

- CUDs are under capitalized
- $116 million construction grants program opening later this month will help, but a lot more is necessary to ensure affordable access
- Encourage private financial and philanthropic organizations providing Letters of Credit
- Ask towns to support the effort with Local Fiscal Recovery Funds. *$16 million in matching funds via Construction Program*
- Continuous funding is necessary to ensure ongoing access to labor and materials. *(Gap between ARPA $ and Infrastructure $ would be costly and set projects back years)*

CHALLENGE: Supply Chain

- Material lead times are increasing – Up to one-year for fiber optic cable.
- Large established providers have access to distributors because of the volume and history of purchases
- ARPA requires domestic procurement
- Aggregated needs of all CUDs for 2022 and part of 2023 = Over 2,000 miles of fiber-optics
- VSECU and Vermont Community Foundation provided no cost Letters of Credit to gain access to distributors and secured the purchase of over $6M in Fiber
- By purchasing NOW, we saved $2M that can be deployed to connect more Vermonters with broadband and ensured access to materials in 2022

CHALLENGE: Labor Shortages

LABOR

- Need 200 additional fiber technicians - 150 “outside”; “50” inside
- Fiber technicians require 144 hours of class-room training and 2000 hours of apprenticeship
- Puts labor pressure on electric utilities who have to prepare the utility poles – “Make-Ready” - 4 years of apprenticeship required for an electric line-worker
- In collaboration with VCBB, Social Finance and VCF are exploring the feasibility of a pay-it-forward fund to meet Vermont’s urgent broadband workforce needs and expand statewide broadband coverage
- Short-term labor needs – survey and pursuing innovative solutions

CHALLENGE:
Rising Costs

2021 Vermont Telecom Plan

*Future proof infrastructure to serve every unserved and underserved premises with fiber-to-the-premises will cost **between $362 million and $439 million**, depending on a range of factors, including market conditions at the time. For example, the cost estimate assumes certain material and labor costs; actual costs for these elements at the time of execution will have a large effect on the total project cost.*

20% increase → $435 to $527 Million

30% increase → $471 to $571 Million

40% increase → $507 to $615 Million

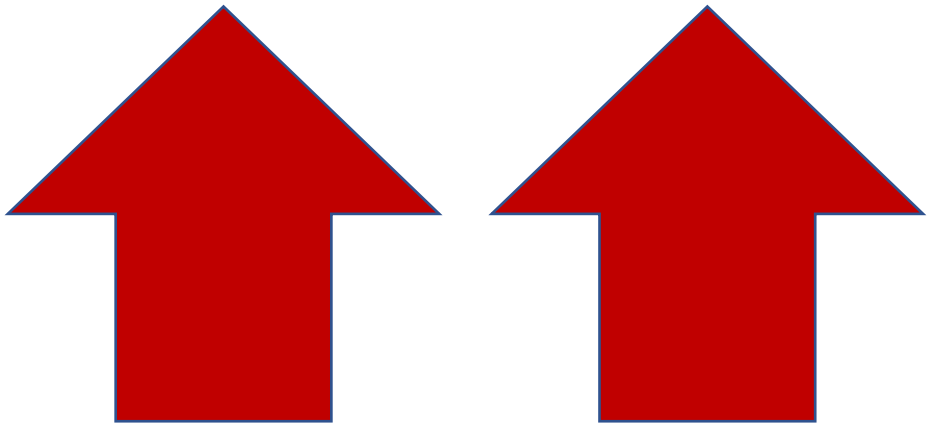
NEK Broadband now estimating $45k/mile plus another $10k/mile for drops = $594 Million Statewide

CHALLENGE: Rising Costs

According to Doug Dawson, of CCG Consulting, in a blog post from September,

"The broadband industry is facing a crisis. We are poised to build more fiber broadband in the next few years than has been built over the last four decades. Unfortunately, this peak in demand hits a market that was already superheated, and at a time when pandemic-related supply chain issues are driving up the cost of broadband network components…. We've not really yet seen any market impact from RDOF and other big grant programs. We've seen some impact from CAREs spending, but that was a drop in the bucket compared to what we're likely to see from ARPA and federal infrastructure spending…. I chatted with a few folks recently who speculated that the best investment they could make this year would be to buy $1 million of fiber reels and sit on them for a year – they might be right."

Why (Additional) Grant Funding is Important



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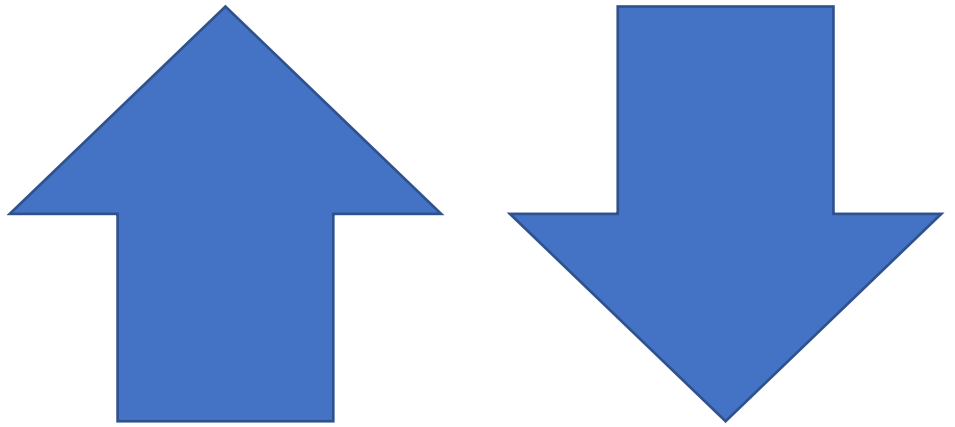

Grants = **Lower Prices for Consumers**

Pay Now or Vermonters Pay More Later

Questions?
Concerns?