



Vermont Community Broadband Board

Presentation to the Senate Finance
January 20, 2022

Christine Hallquist
Vermont Community Broadband Board
Executive Director
Christine.Hallquist@vermont.gov
802-636-7853

<https://publicservice.vermont.gov/vcbb>

Role of the Vermont Community Broadband Board

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“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 grant 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

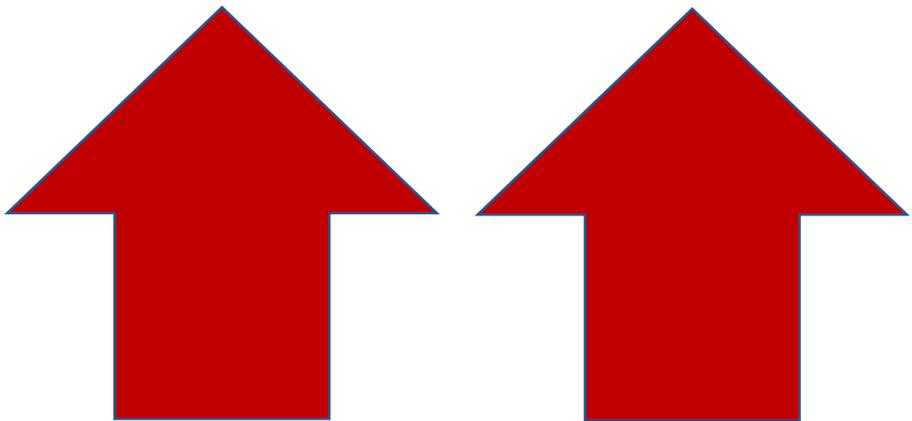
CONSTRUCTION GRANT PROGRAM: RFP issued on January 19 for \$116 Million Program.

Addressing the labor needs

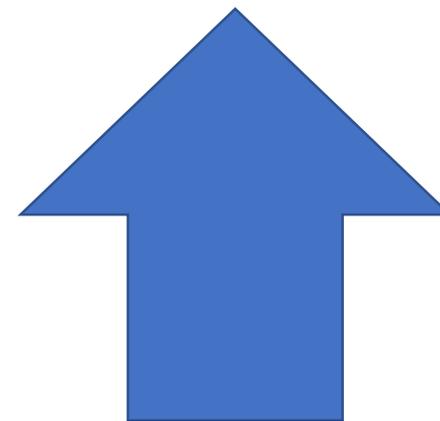
LEVERAGING ADDITIONAL
FEDERAL FUNDING

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

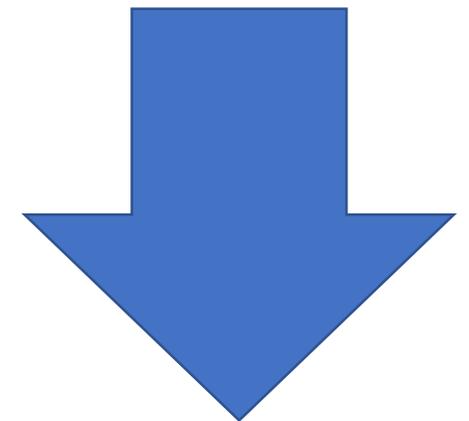


**Borrowing
(loans, bonds) = Higher Consumer
Prices**



Grants

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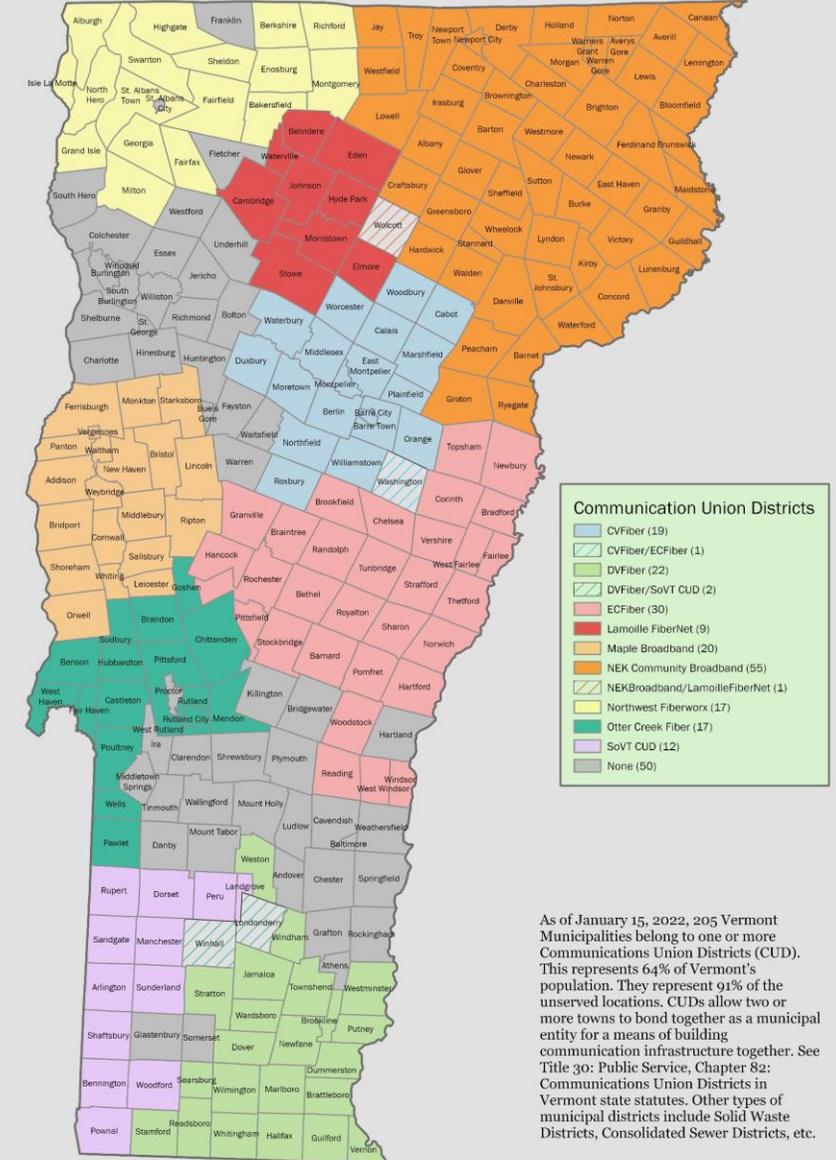


**Lowers Prices for
Consumers**

Communications Union Districts

- Winter 2026
- 9 Districts
- 202 Member Towns
- 404 Volunteer Board Reps & Alternates
- Over 64% of the State's population
- 91% of premises statewide without access to 100/100 Mbps broadband
- Represented by the Vermont Communications Union Districts Association (VCUDA)

Communication Union Districts



Jumping on a Moving Train

- Limited time for Board policy development or training
- 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 opened this week, 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 classroom 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

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.”

CHALLENGE: Rising Costs

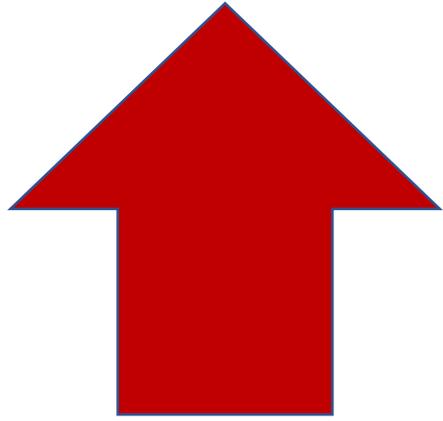
Based on a recent project, NEK Broadband is now estimating \$45k/mile plus another \$10k/mile for drops = \$55k/mile

- *Miles in the state without cable or fiber that include premises: 7342.39 miles*
 - *20% allowance for overbuild: 8,810.87 miles*
- *@ \$55,000 per mile including drops: \$484,597,850*
 - *Add a 15-25% standard contingency*

\$558,437,528 to \$606,997,312

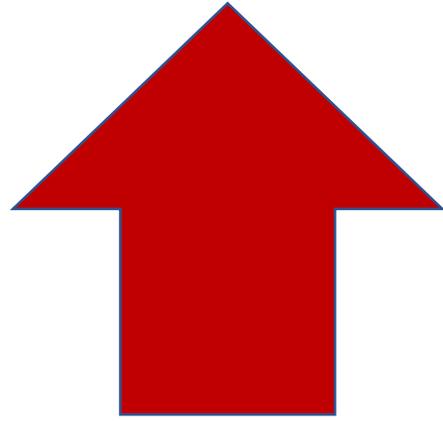
These estimated costs are based on today's known labor and material costs. There has been a large amount of funding injected into the US economy for telecommunications which will likely have an impact on future costs. The cost estimates for these elements at the time of execution will have a large effect on the total project cost.

Why (Additional) Grant Funding is Important

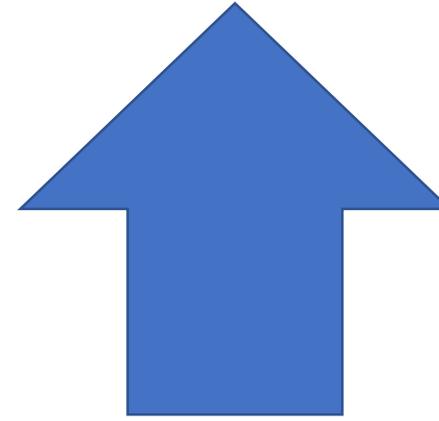


**Borrowing
(loans, bonds)**

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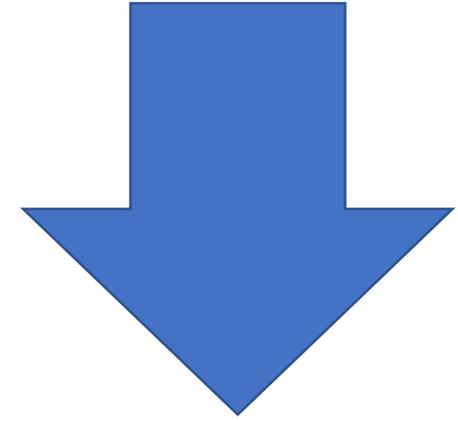


**Higher Consumer
Prices**



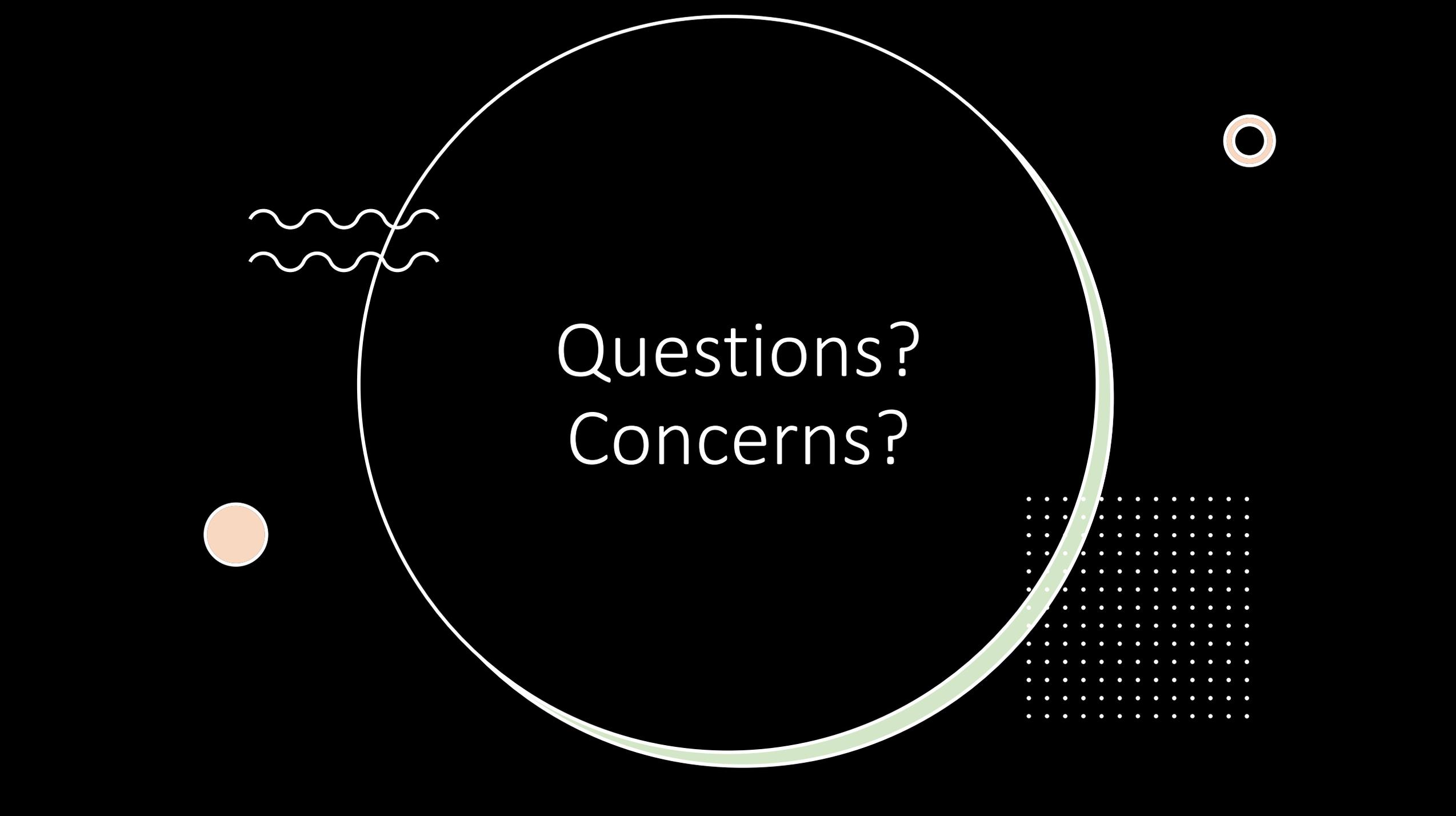
Grants

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**Lower Prices for
Consumers**

The higher the percentage of total cost that can be covered by grants; the more affordable, the service will be to Vermonters



Questions?
Concerns?