

Green Banks & Catalytic Blended Finance to Accelerate Clean Energy Investment

April 5th, 2022

Agenda

- **What is CGC & How Did I Get Here**
- Why Do We Need To Accelerate Climate Investment
- What are Green Banks & What Do They Do
- History & Political Theory of Mixing Public & Private Investment in the U.S. & Why Federal Support Now
- What Next if No Federal Action

About Coalition for Green Capital



- Commenced operations 2010, 501(c)(3) status granted 2012
- Manages American Green Bank Consortium, network of 21 green banks
- Working with partners in 20+ states to develop new green banks
- Hybrid org - Advocacy & thought leadership + TA consulting & operating support - we come up with the ideas, convince people to adopt them, and then implement leveraging expertise
- Primarily funded by foundations - ClimateWorks, Energy Foundation, Hewlett Foundation, MacArthur Foundation, McKnight Foundation, NY Community Trust
- We are still a start-up Grew from \$0 rev & 1 person in 2014 to \$5M rev and 20 people in 2021 - but CGC is still a start-up.
- Political at heart - Founder & CEO was FCC chairman & leader on Obama transition; former Board member & policy director now work on White House on climate policy

About the Coalition for Green Capital



Our Mission

Drive rapid clean energy market penetration and an equitable climate transition through catalytic finance and Green Bank institutions.

Our Work

- Expand & Strengthen the Network of Green Banks & Mission-Driven Institutions
- Meaningfully Embed Climate & Energy Justice and DEI Into Network Activities
- Pursue Capital on Behalf of Network Members to Scale Total Investment
- Support Industry Growth through Awareness and Thought Leadership

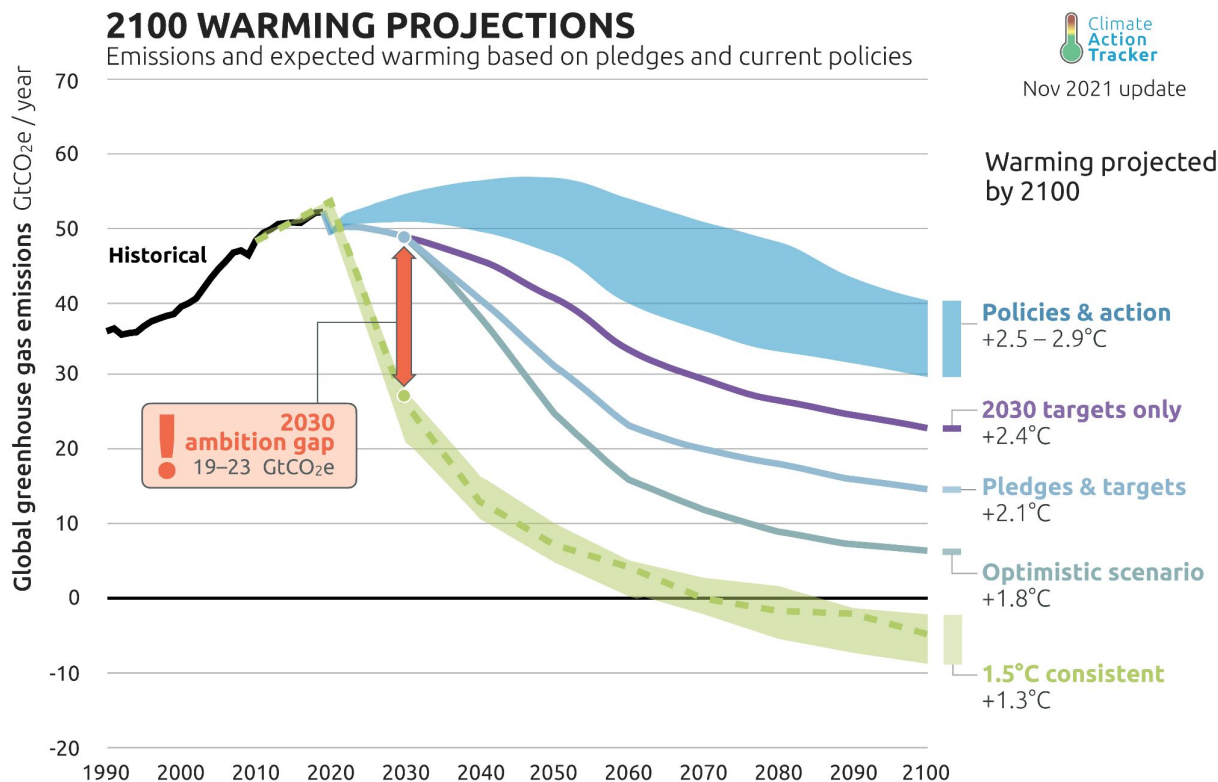
I have never worked at fin inst, nor an energy co, nor in govt, but lead org at intersection of all three

- Econ & Policy undergrad, 3 years consulting, MBA with focus on clean energy finance, then CGC - no background in non-profits, fundraising or working in finance
- As ED of small nonprofit org, main roles are:
 - Get the money
 - Biz dev & advocacy
 - Partnerships & external engagement
 - Team management
 - Admin & operations
- Key drivers of career path
 - Passion and commitment to mission
 - Constant and proactive learning
 - Try, fail, learn, and try again
 - All about people

Agenda

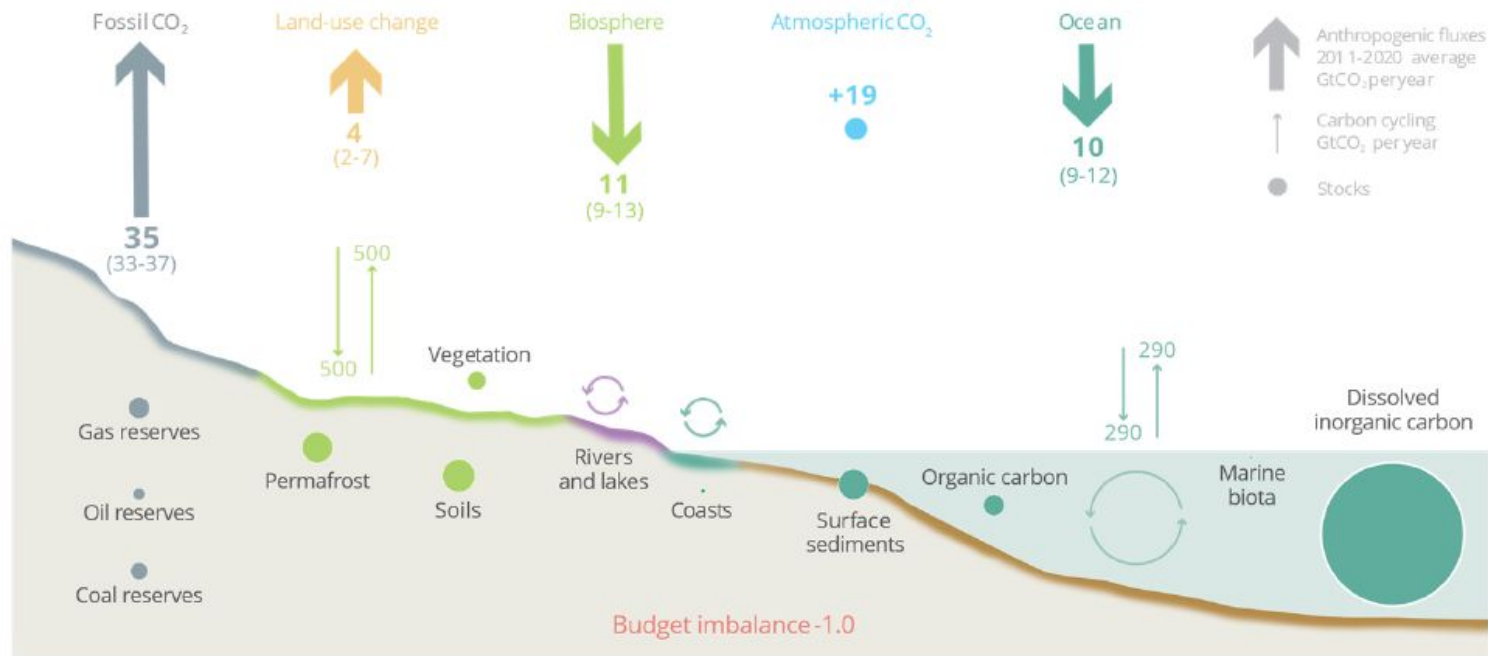
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Climate disaster upon us, must rush to avoid the worst



~20GtCO₂ net emissions per year; fossil fuels largest by far

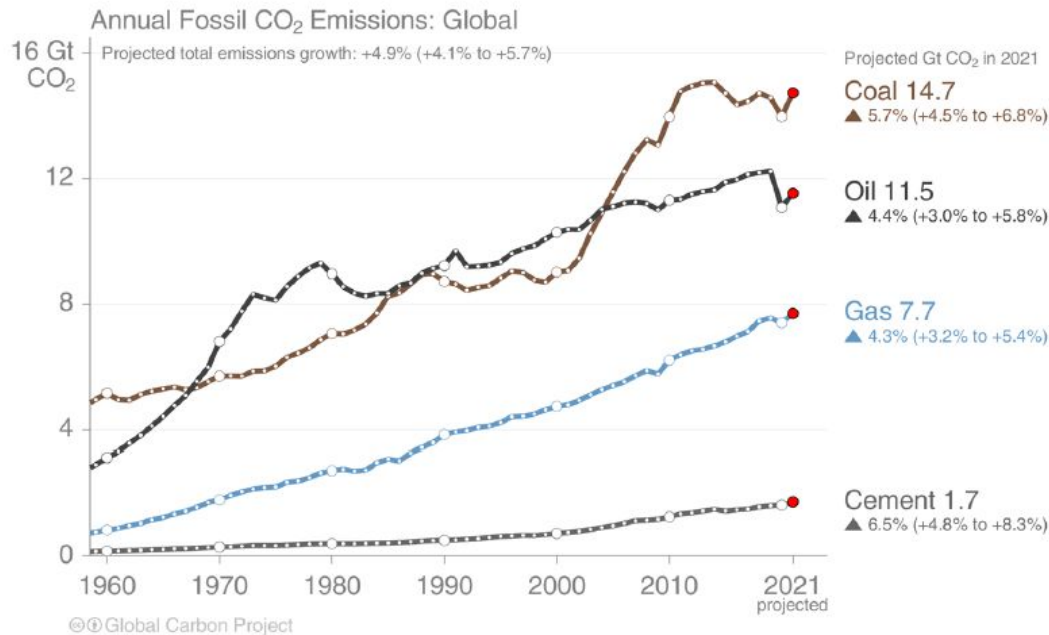
Perturbation of the global carbon cycle caused by anthropogenic activities,
global annual average for the decade 2011–2020 (GtCO₂/yr)



Coal, oil & nat gas are 93% of global FF emissions

Share of global fossil CO₂ emissions in 2020: coal (40%), oil (32%), gas (21%), cement (5%), flaring and others (2%, not shown)

Projection by fuel type is based on monthly data (GCP analysis)



Actual yearly flows compared to average annual needs (billion USD 2015 yr⁻¹)

By sector

Energy efficiency

Transport

Electricity

Agriculture, forestry and other land use

By type of economy

Developing countries

Developed countries

By region

Eastern Asia

North America

Europe

Southern Asia

Latin America and Caribbean

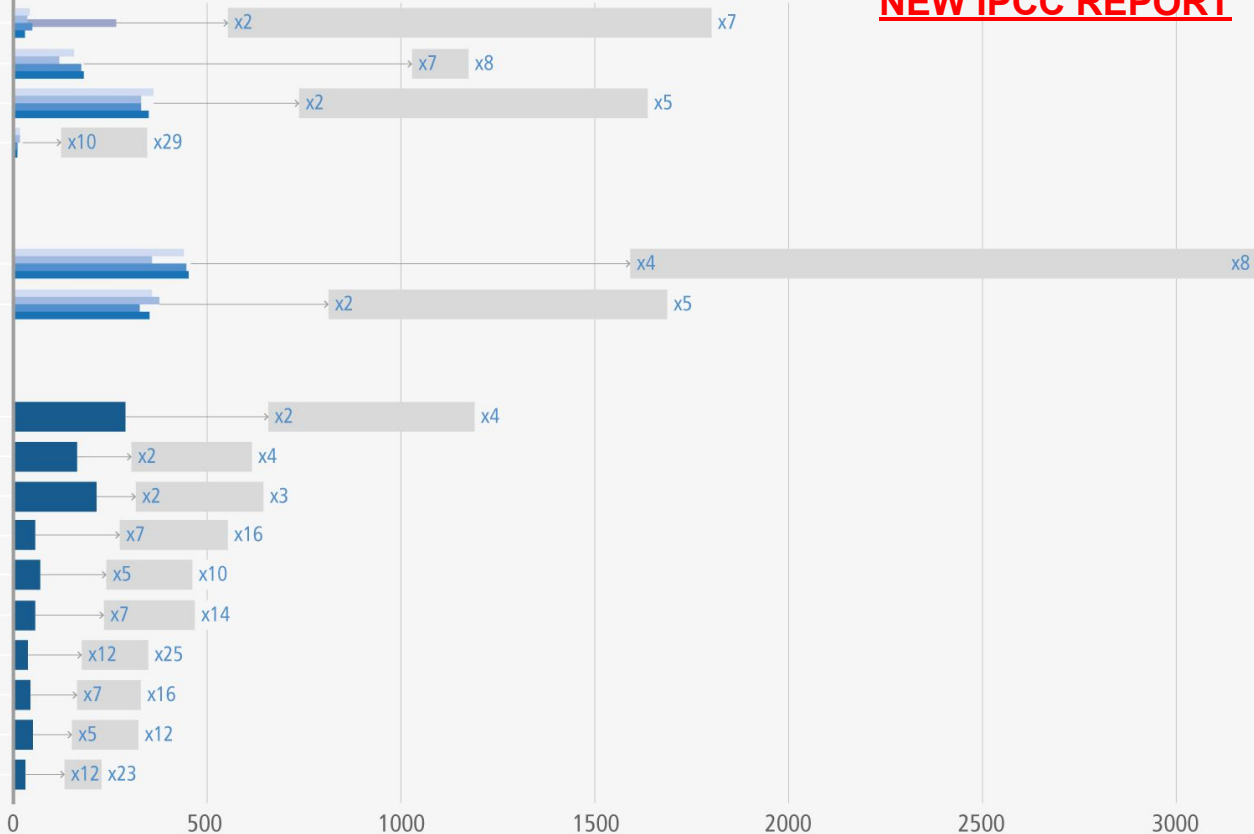
Asia-Pacific Developed

Eastern Europe and West-Central Asia

Africa

South-east Asia and Developing Pacific

Middle East



Multiplication factors indicate the x-fold increase between yearly mitigation flows to average yearly mitigation investment needs. Globally, current mitigation financial flows are a factor of three to six below the average levels up to 2030.



Yearly mitigation investment flows (USD 2015 yr⁻¹) in:

2017
2018

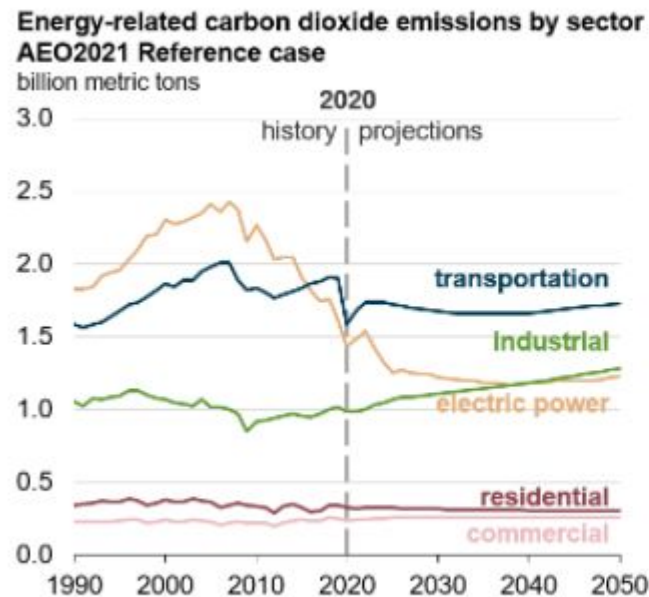
2019
2020

IEA data mean
2017–2020

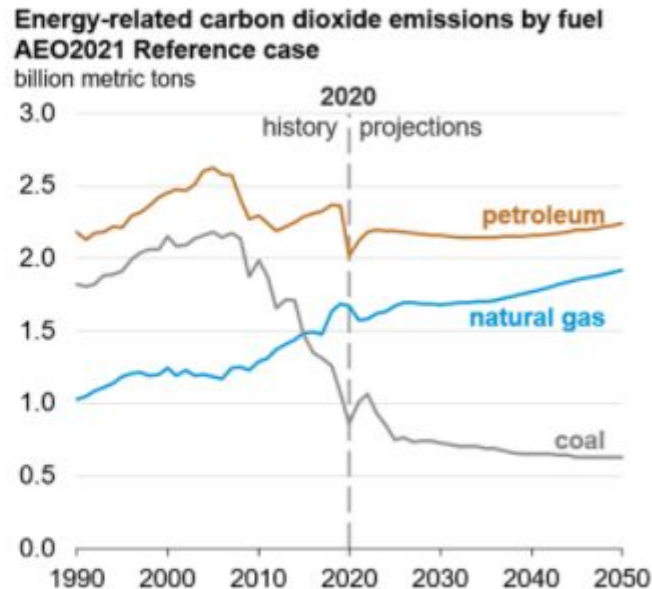
Average flows

Annual mitigation investment needs (averaged until 2030)

In the U.S., coal on decline, n.g. rising, and cars are king



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2021*, February 2021

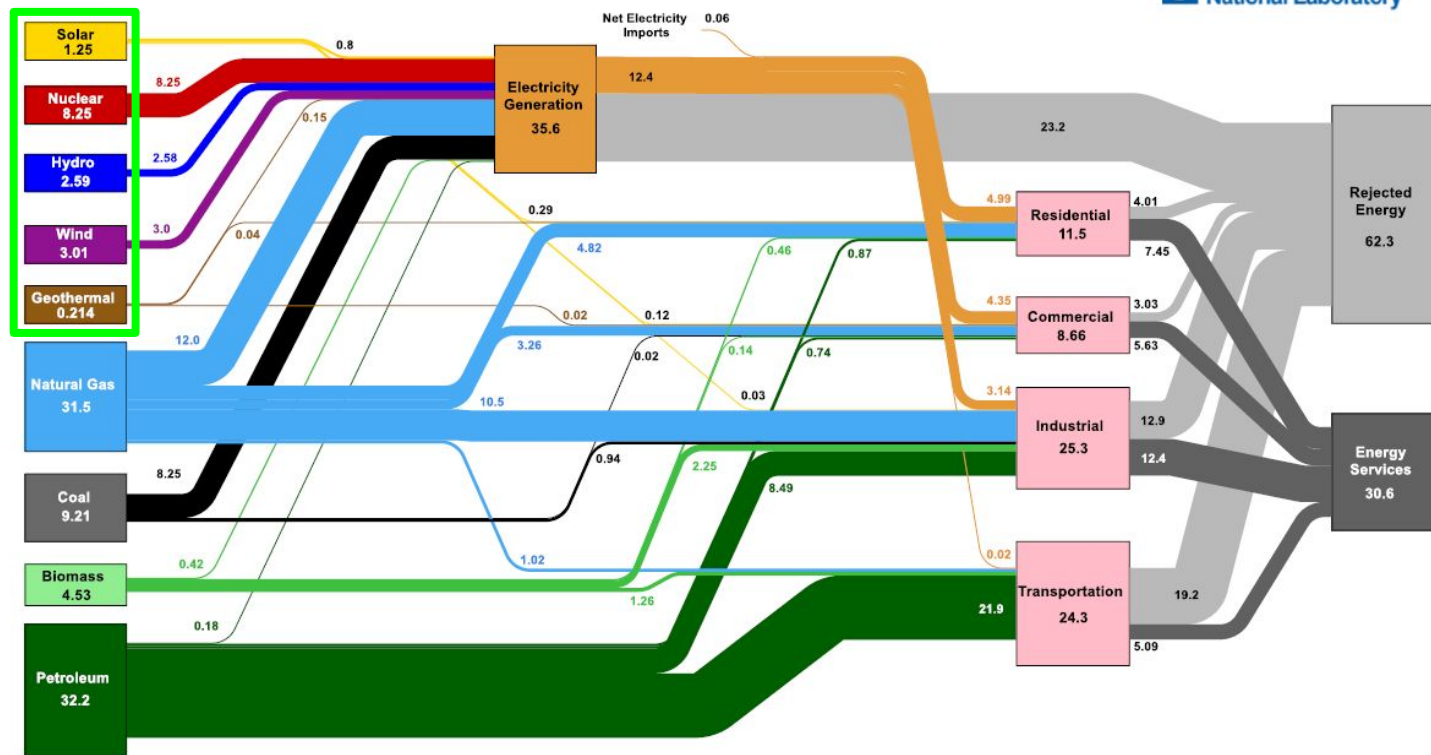


Source: U.S. Energy Information Administration, *Annual Energy Outlook 2021*, February 2021

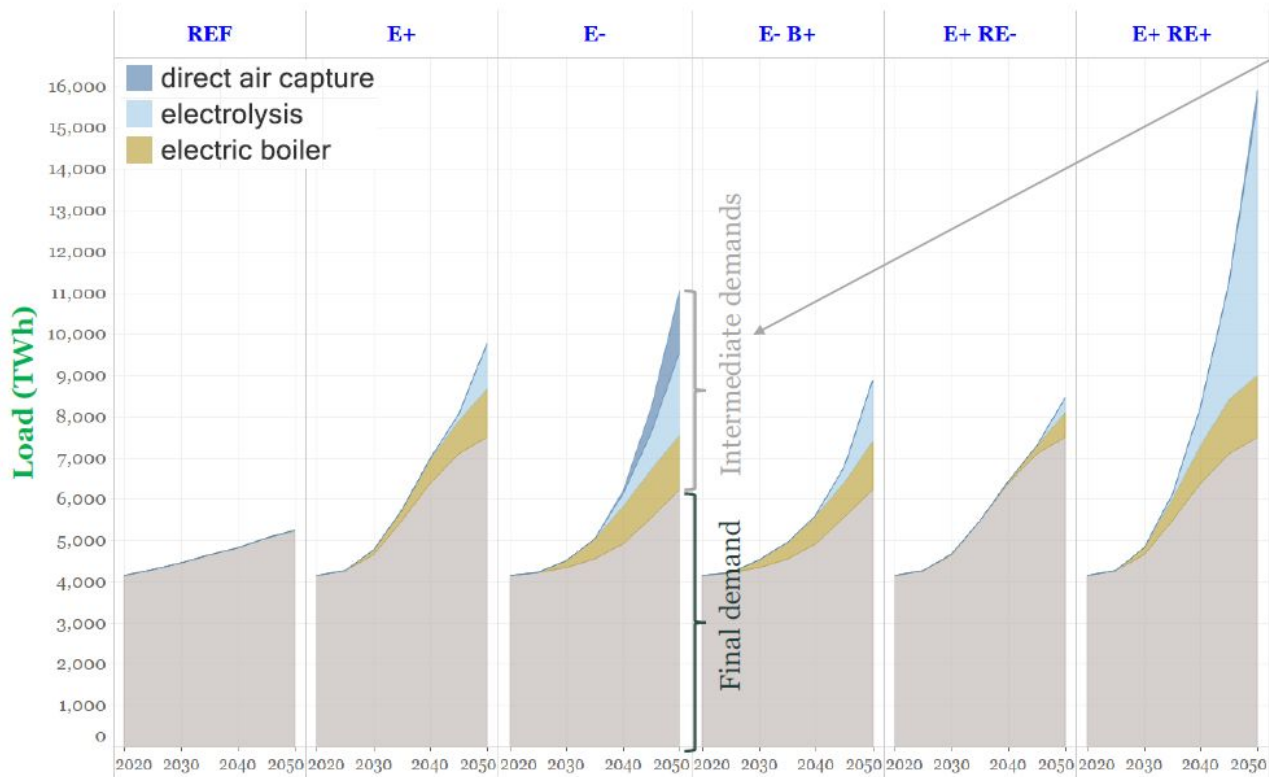
If net zero is the goal, what are the necessary interventions?

Estimated U.S. Energy Consumption in 2020: 92.9 Quads

Lawrence Livermore
National Laboratory



Electricity transport & buildings w/ clean power

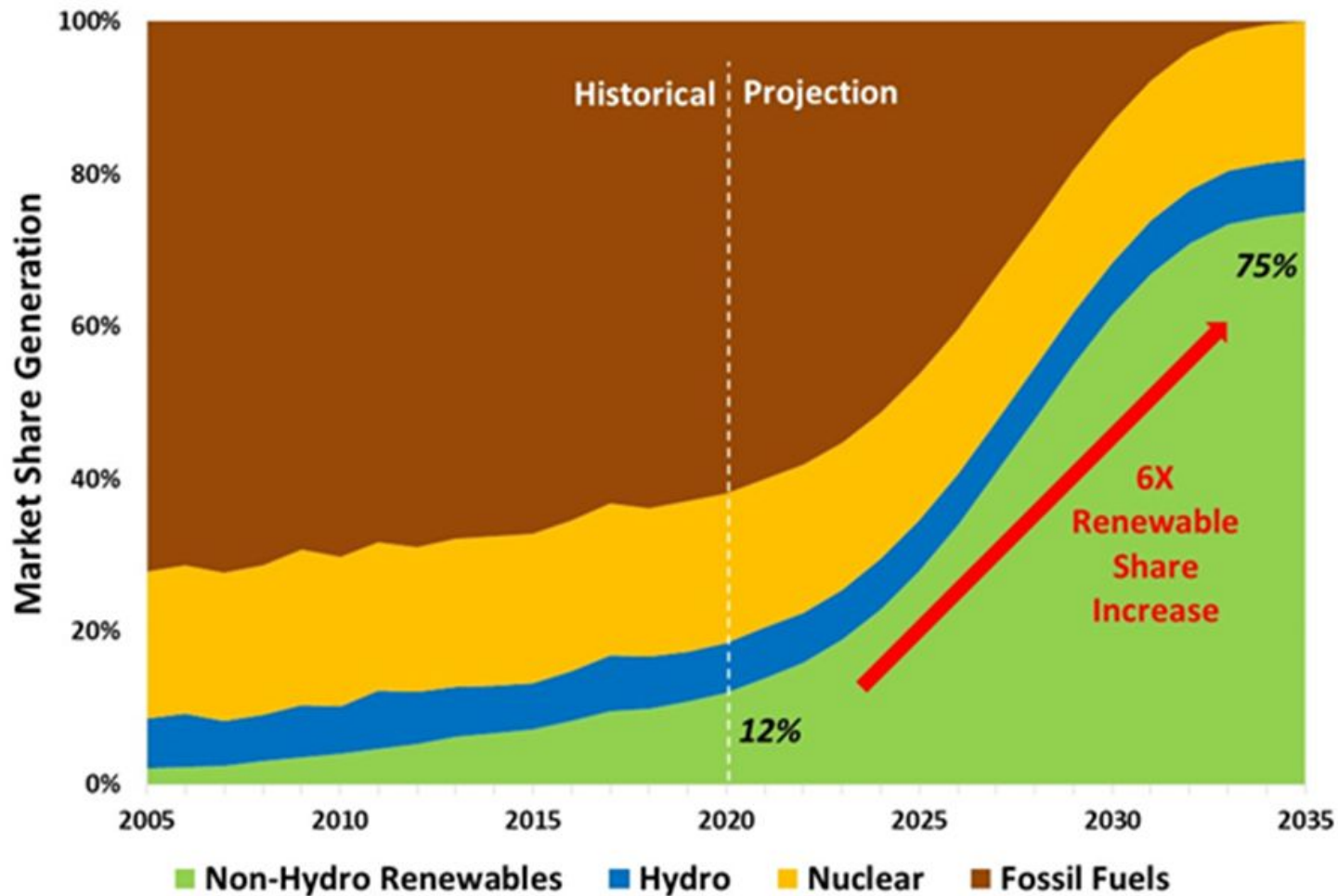


Intermediate demands are flexible loads:

- Electrolysis making H_2 from water (hourly flexibility).
- Electric boilers in parallel with gas-fired units in industry (hourly flexibility).
- Direct air capture (daily flexibility).

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Electricity Fuel Mix to Meet Biden 2035 Goal

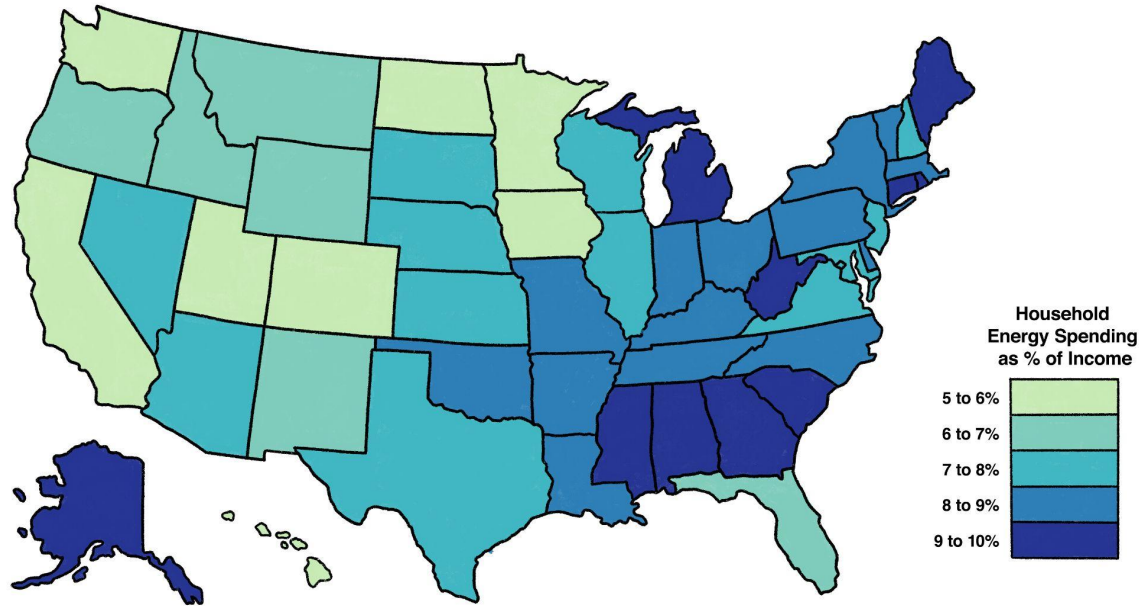




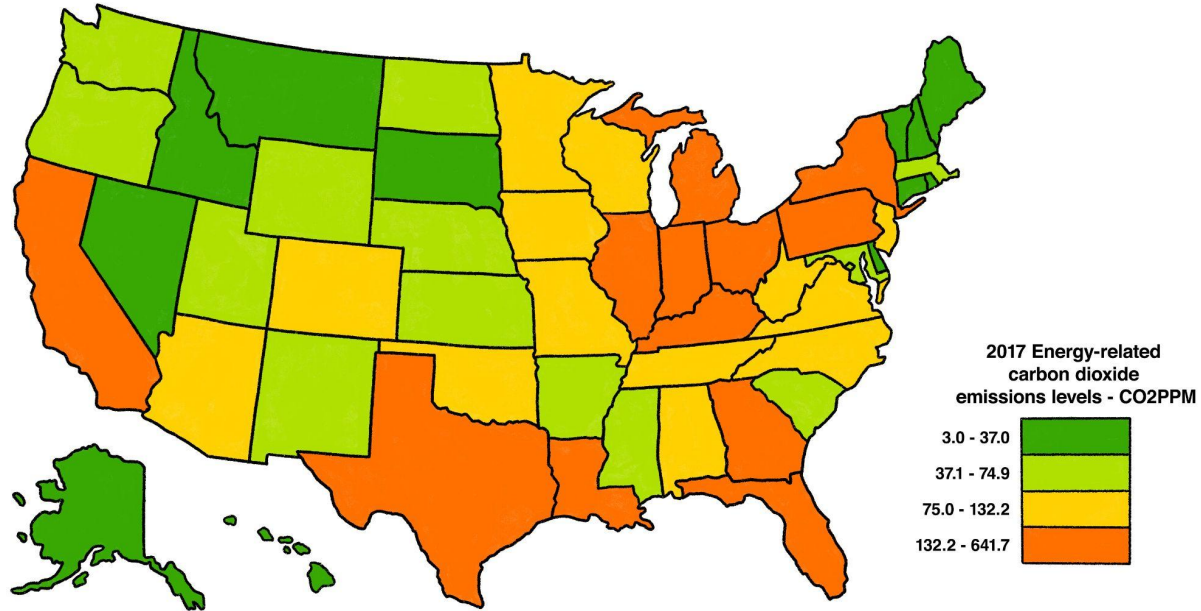
The Financing Problem

Explained in 4 U.S. Maps

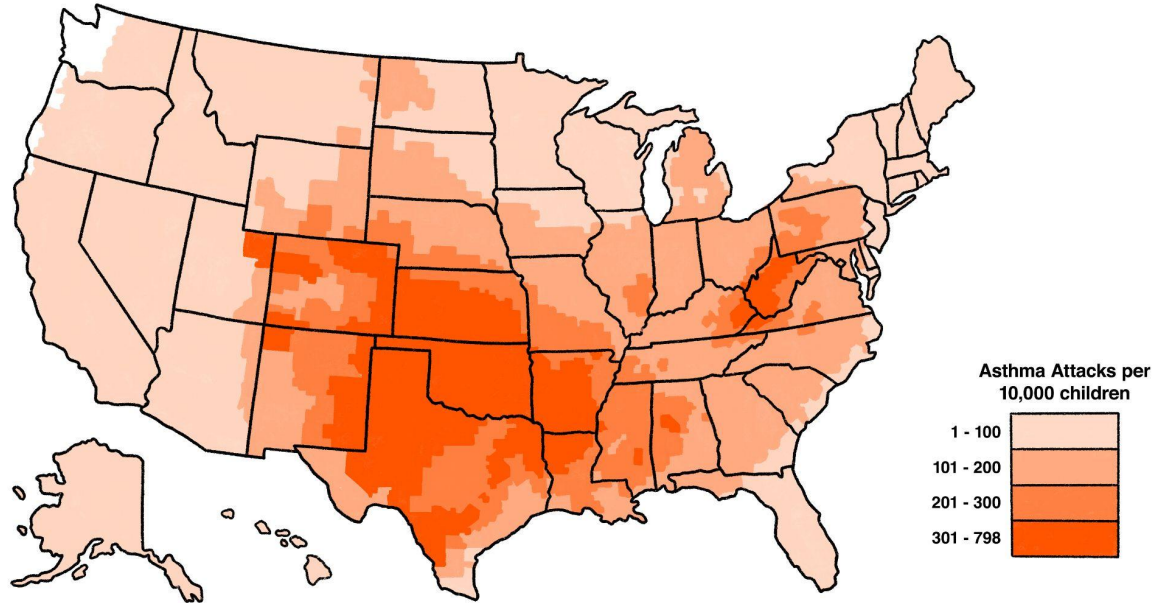
1. Power prices affect U.S. consumers differently



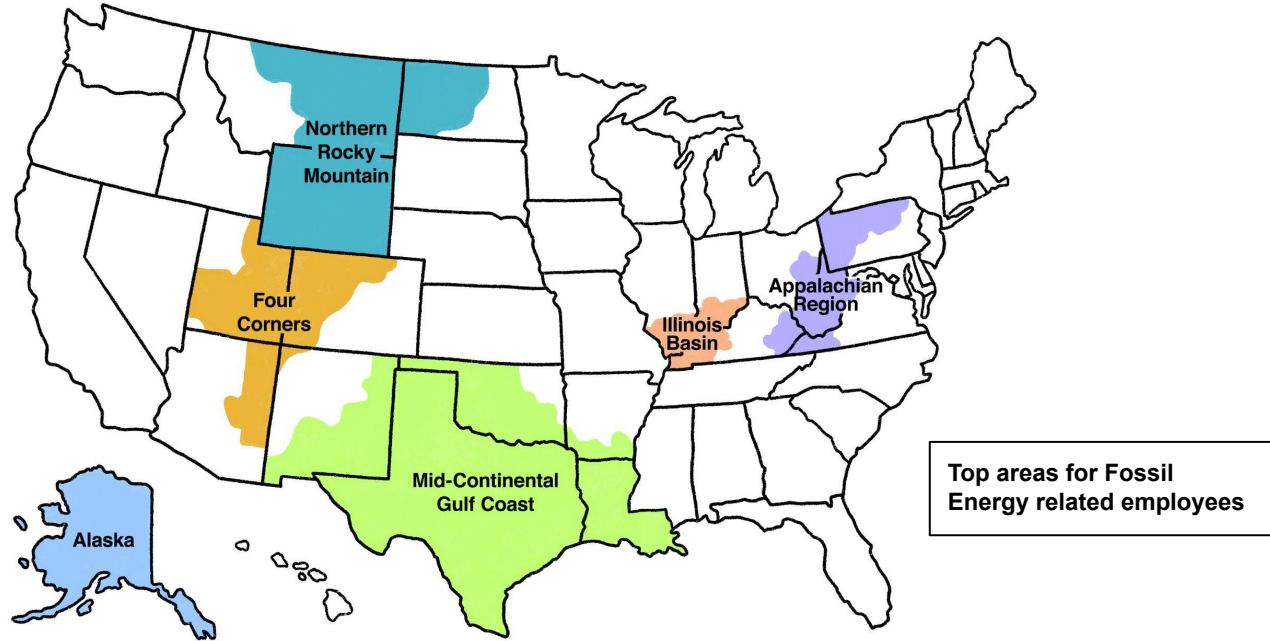
2. States differ in carbon power use



3. Harming children's health at varying levels



4. Requiring more new job creation where transition has more impact



Speedy, cheap and targeted - no way to succeed without all 3, and private capital on its own won't do it

- Private sector on its own not investing fast enough, but not enough public capital - must be a mix
- Private capital won't always deliver power that is affordable to all customers - no sustained political support if prices go up
- Emissions & impacts vary widely across U.S. - strategic and targeted investment is only way to get to targets on time

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Green Banks provide catalytic finance for rapid decarbonization, focus on underserved

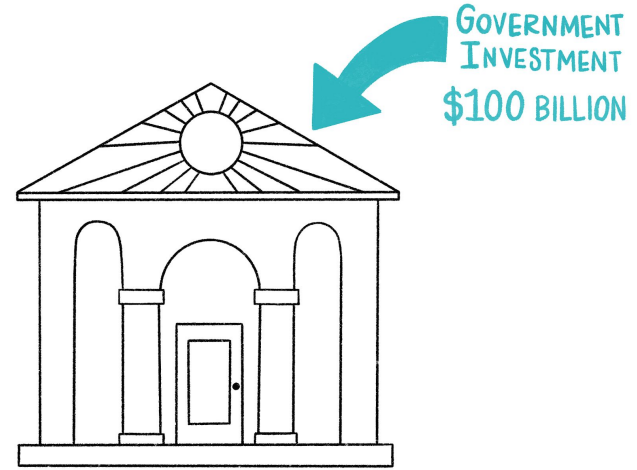
Green Banks are mission-driven institutions, operating with intentionality, that use innovative financing to accelerate the equitable transition to clean energy and fight climate change.

Public & Philanthropic
Funds to Leverage
Private Investment And
Drive Capital at Scale

Goal is Rapid Deployment -
Evolution of Model from
Cheaper Capital to
Focused Capital

Target Underserved
Markets & Underserved
Communities to Ensure
Just Transition

Green Banks combine \$1 public money with \$3 private money



- Mix low cost public financing with private sector to deliver cheaper overall financing & produce cheaper clean power
- Mitigate risk & structure transactions to induce private investment
- Mobilize private investment into overlooked markets (i.e. poor & BIPOC)

IPCC tells us this is the way

There is sufficient global capital to close global investment gaps, but there are barriers to redirect capital to climate.

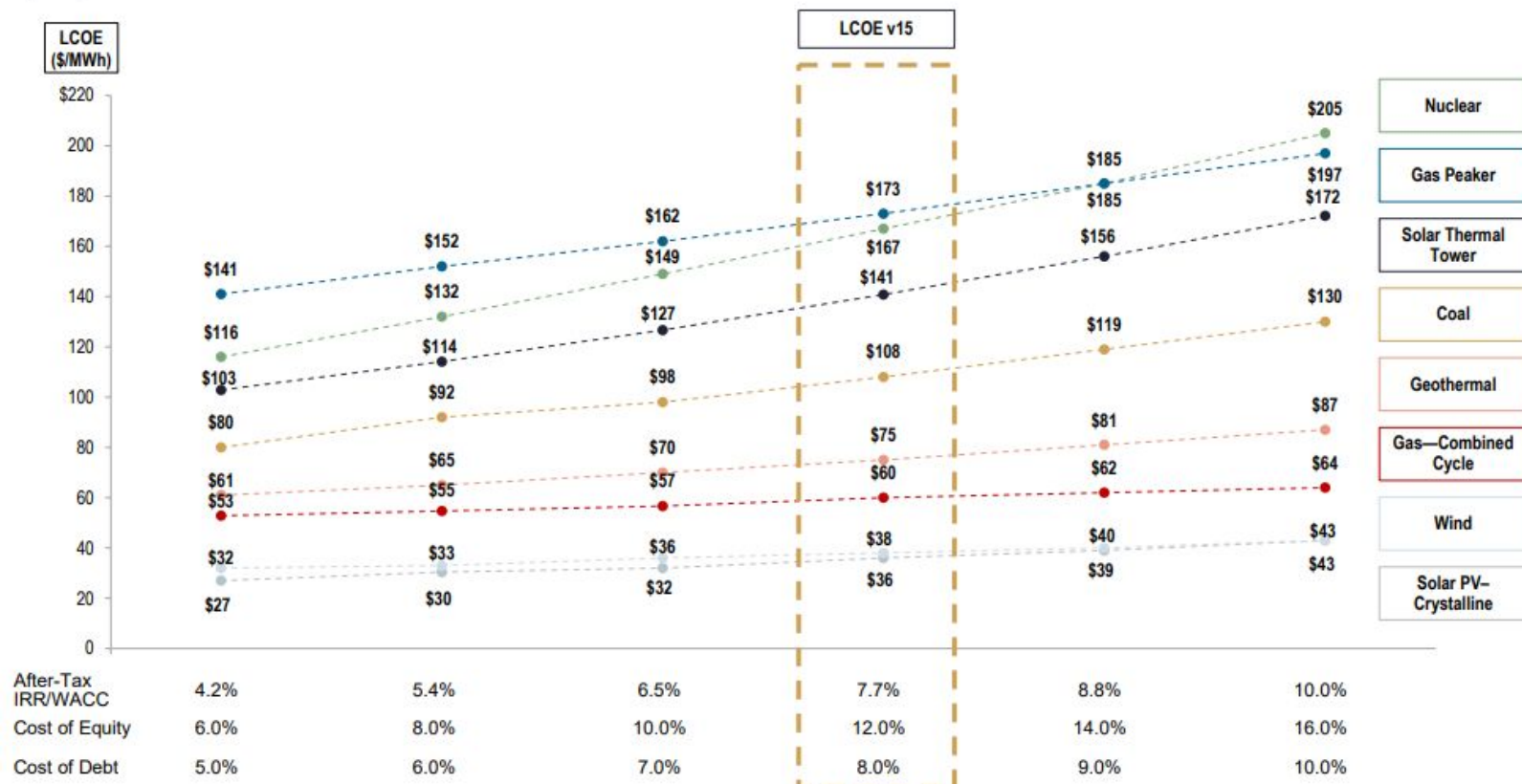
Options for scaling up mitigation include increased levels of public finance and publicly mobilised private finance flows and increased use of public guarantees to reduce risks and leverage private flows at lower cost.

Clear signalling by governments including, a stronger alignment of public sector finance and policy, and higher levels of public sector climate finance, reduces uncertainty for the private sector. Financial flows can be aligned with funding needs through a continued role for multilateral and national climate funds and development banks; lowering financing costs for underserved groups through entities such as green banks existing in some countries, and funds and risk- sharing mechanisms.

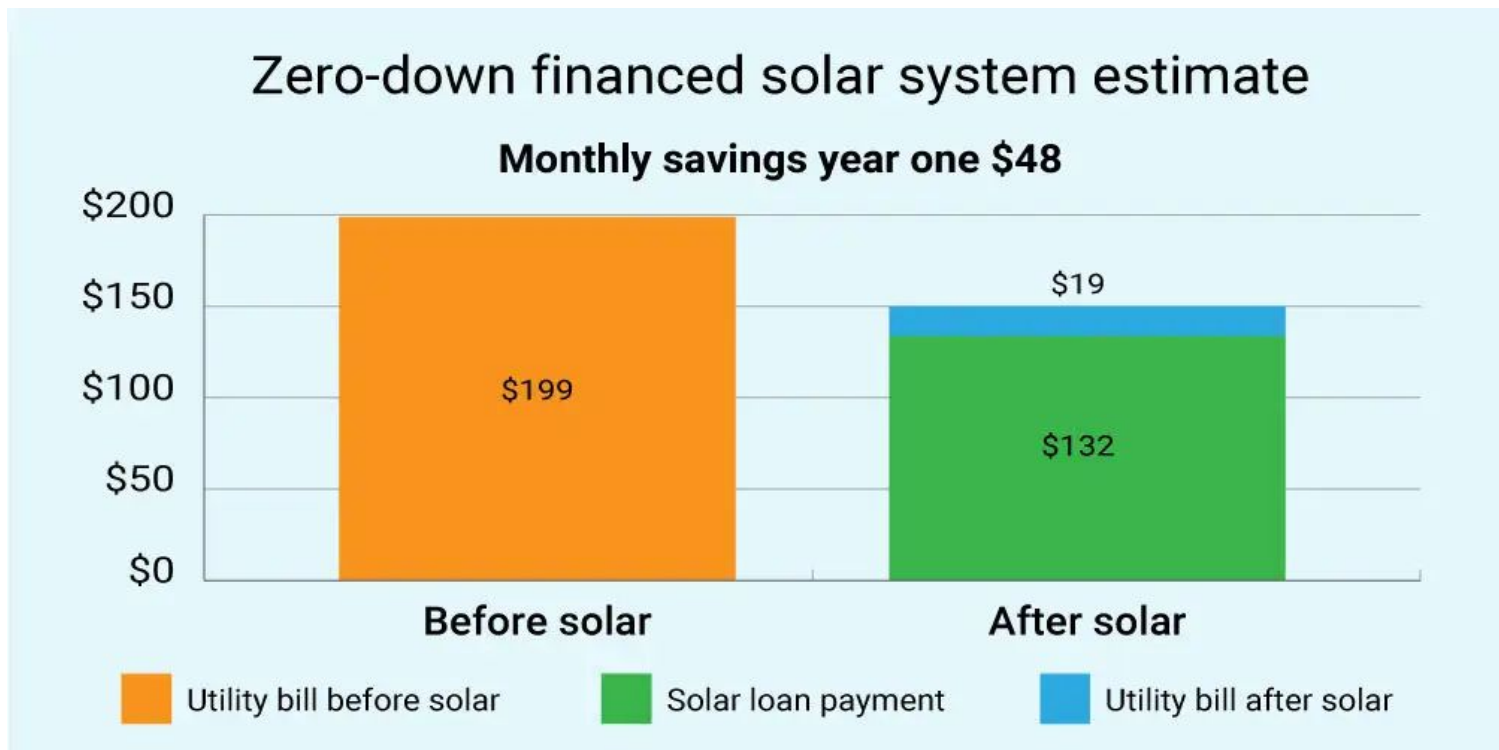
Levelized Cost of Energy Comparison—Sensitivity to Cost of Capital

A key consideration in determining the LCOE values for utility-scale generation technologies is the cost, and availability, of capital⁽¹⁾; this dynamic is particularly significant for renewable energy generation technologies

Midpoint of Unsubsidized LCOE⁽²⁾

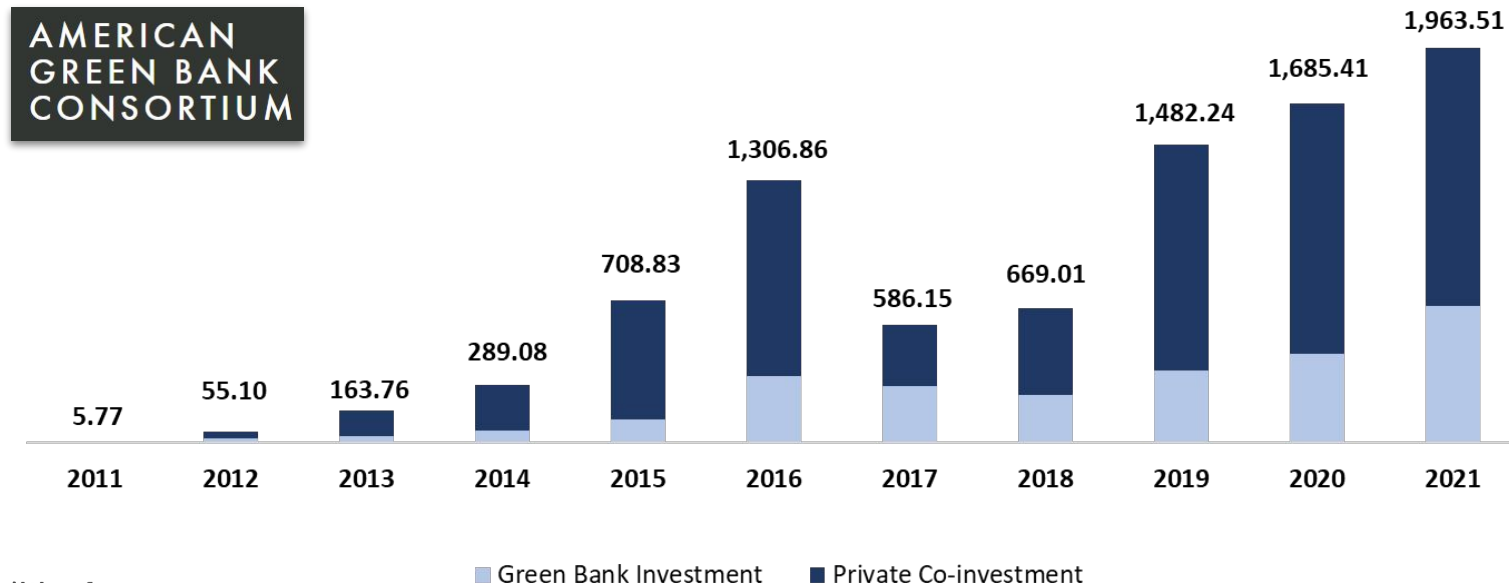


Delivering savings depends on financing terms

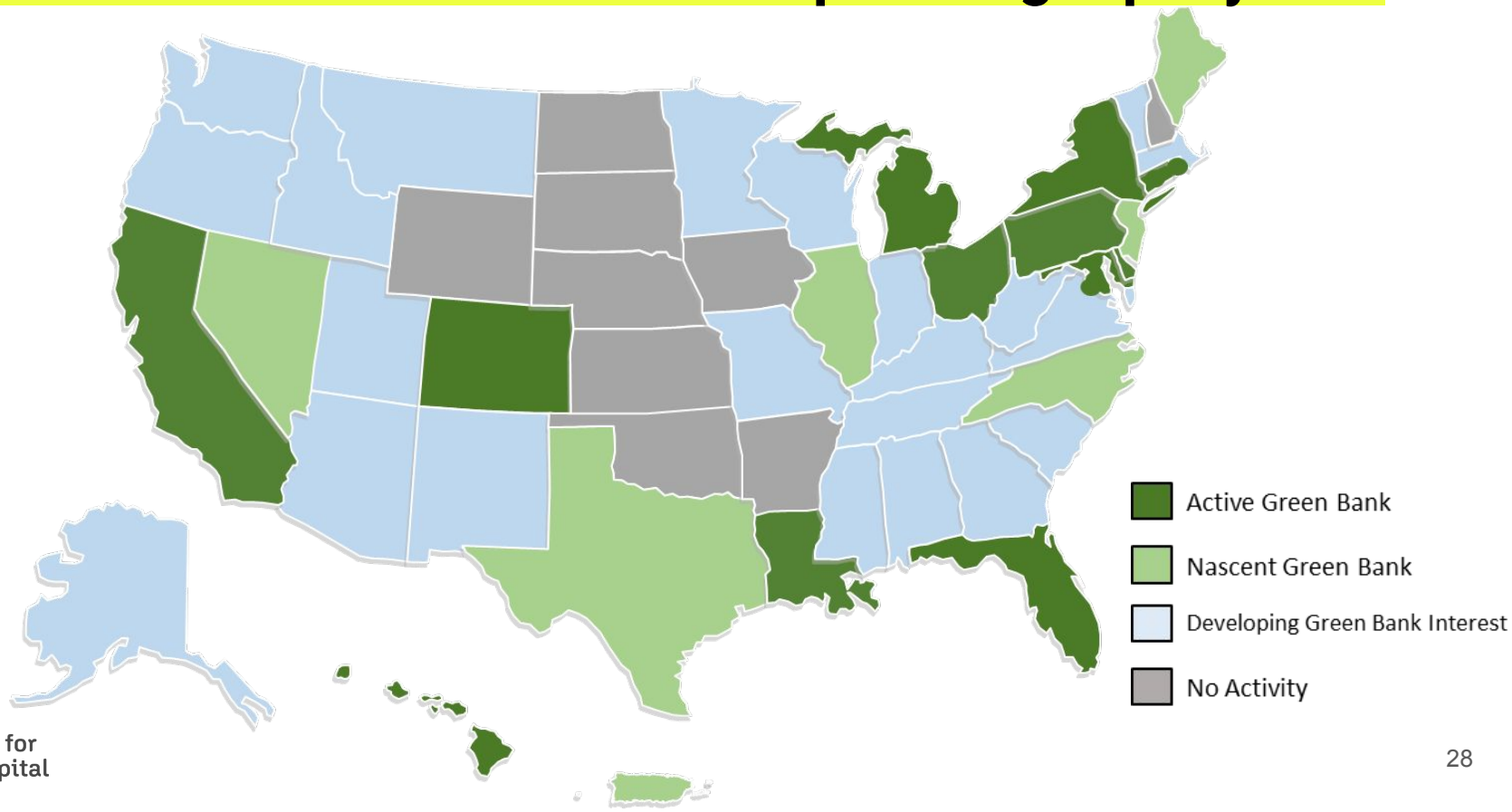


From that idea, CGC has built a nationwide, state-by-state movement and sparked \$9B of clean energy investment

American Green Bank Consortium Investment by Year
(\$, in millions)

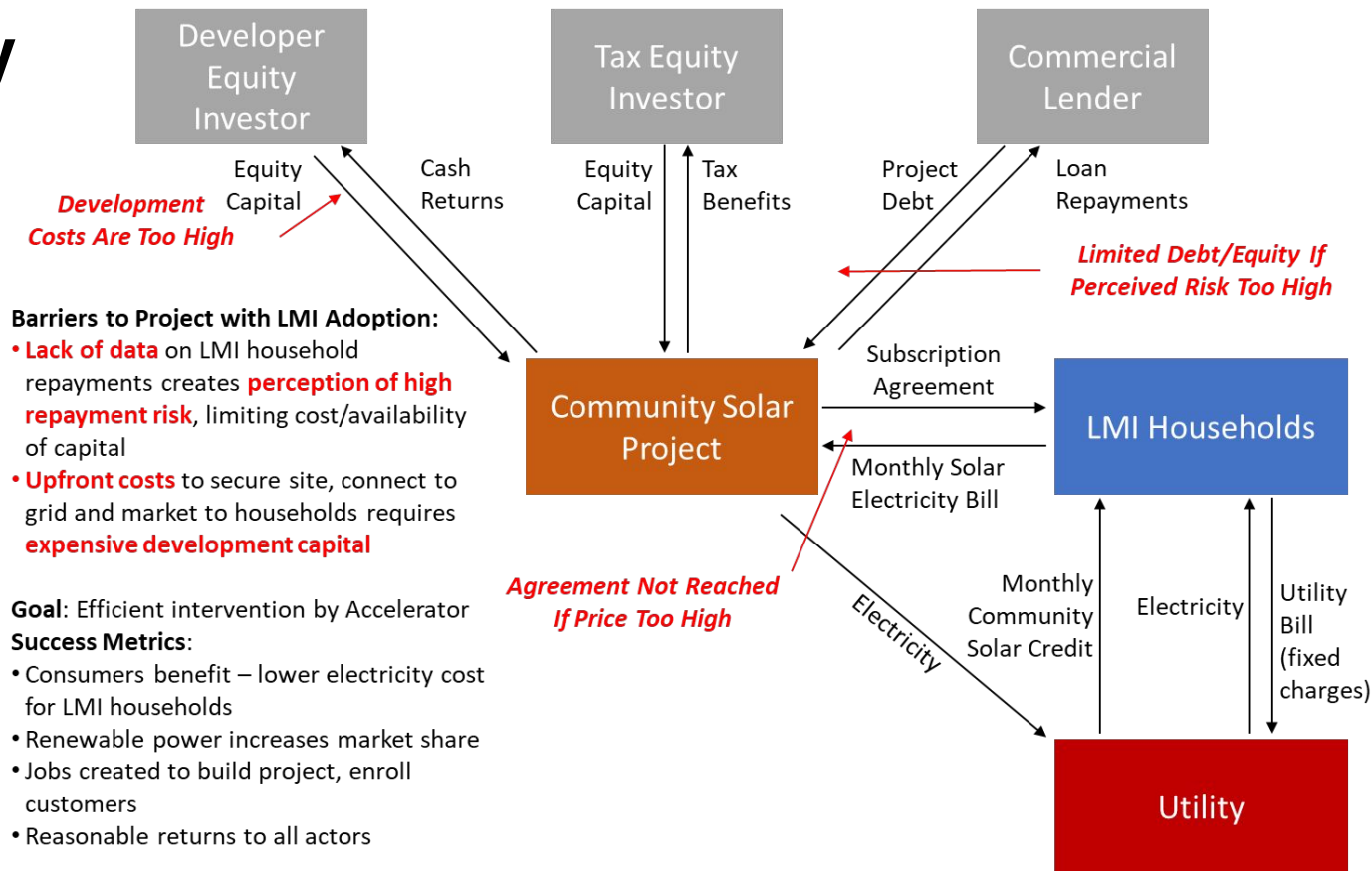


Green Bank investment & interest spreading rapidly



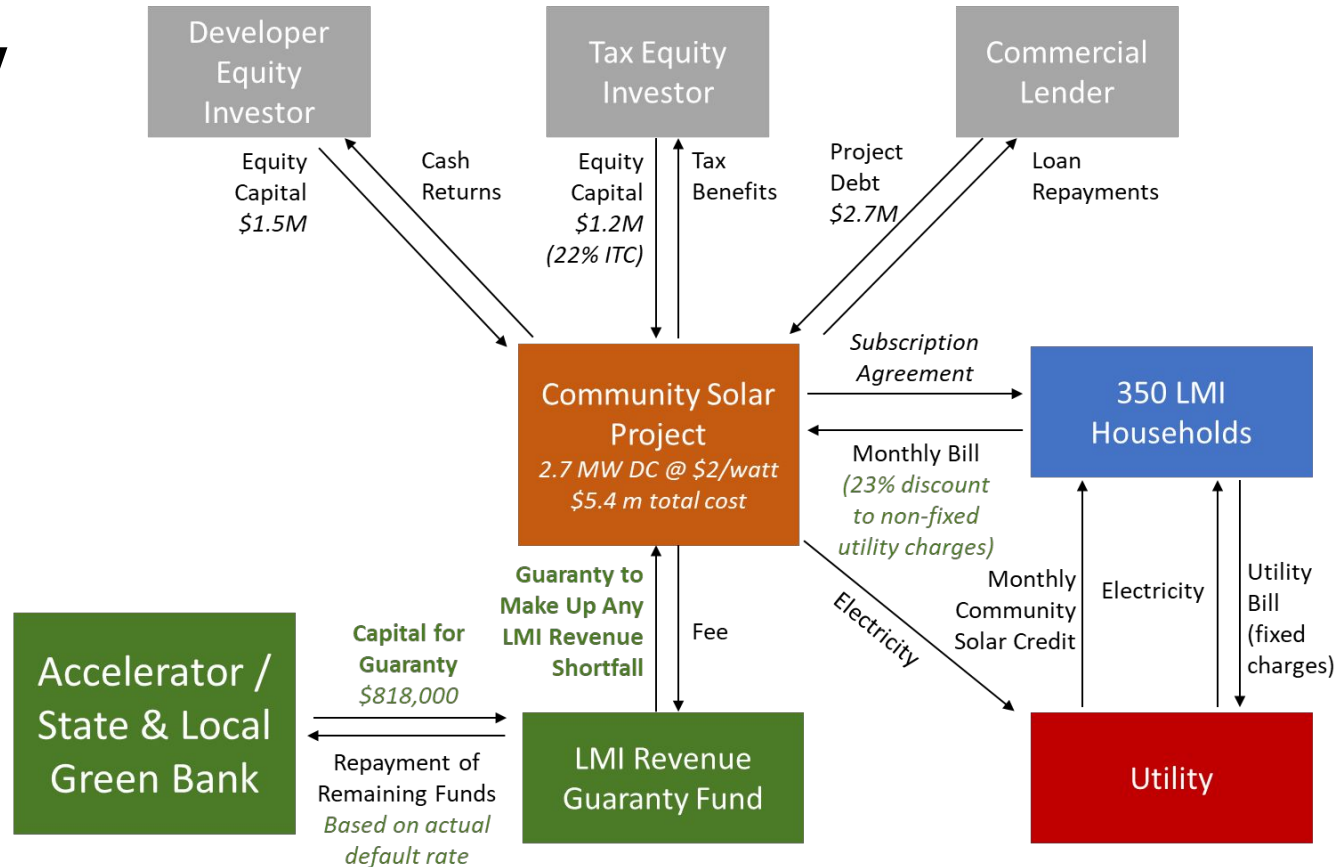
Example 1: LMI Community Solar

Lots of barriers to overcome to deliver community solar to LMI households



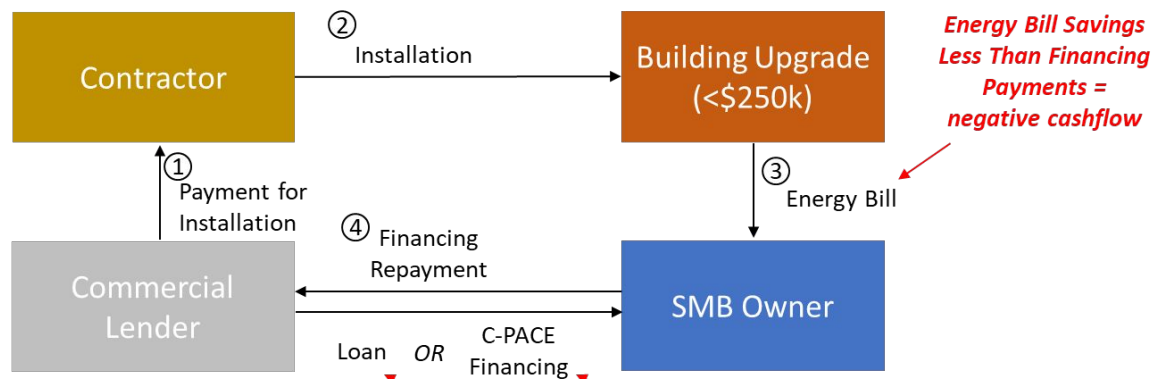
Example 1: LMI Community Solar

Accelerator Solution: Revenue Guarantee for LMI Subscribers



Example 2: Small Business Building Upgrades

But SMB's Cannot Get Financing for Clean Energy Projects That Will Lower Their Energy Costs



Barriers to SMB Projects:

- Commercial banks may not finance because **evaluating risk of a non-rated SMB is complicated and expensive**, thus reducing profit potential
- Or commercial bank will make a loan, but on **very short term** that will make **repayments high and exceed savings**
- **C-PACE providers won't finance small projects** because these projects can't individually produce sufficient returns

Banks either won't lend to SMBs due to no credit rating or will only provide short-duration loans

C-PACE Providers Won't Finance Small Projects Because Can't Meet High Return Requirements

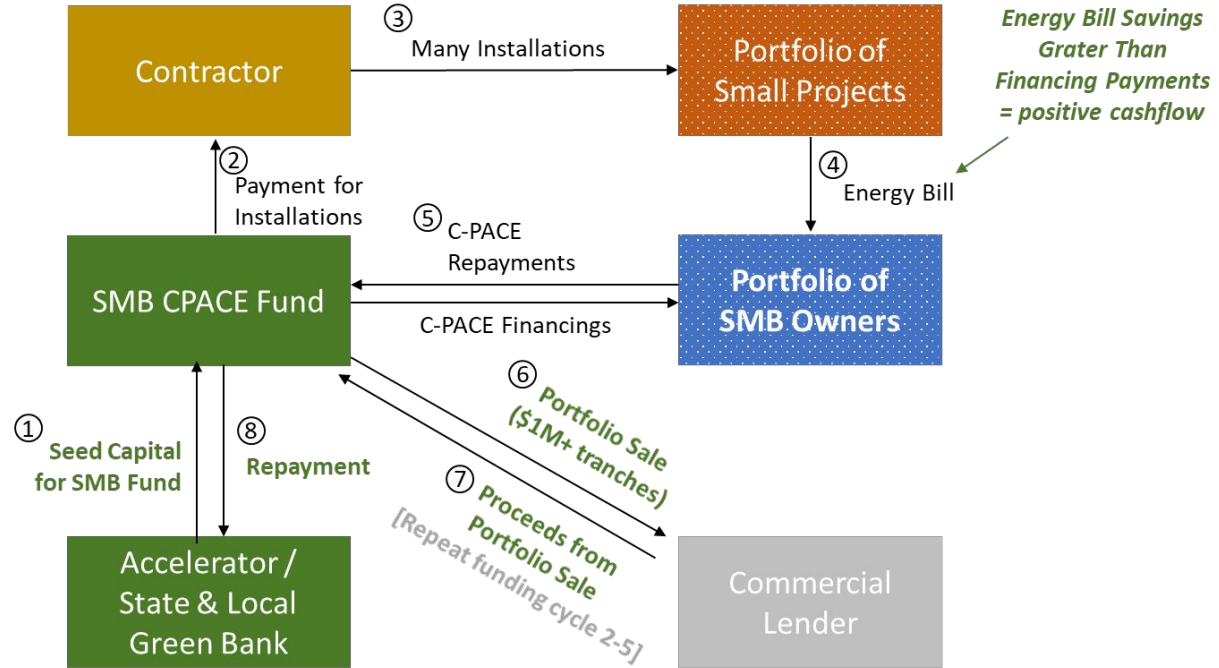
Goal: Efficient intervention by Accelerator

Success Metrics:

- SMB benefit - lower energy costs
- Increased flow of private capital
- Jobs created to source and build projects
- Reasonable returns to all actors

Example 2: Small Business Building Upgrades

Accelerator Solution: Long-Duration Capital to Aggregate Small C-PACE Projects for Resale



Intervention

- The **Accelerator provides capital to the State Green Bank** as an intermediary, which then **finances many small projects**
- **State Green Bank accepts lower returns** as compared to a commercial lender, **thus making these projects pencil**
- State Green Bank **aggregates these small projects into a portfolio**, which is then **financially attractive to a commercial lender who buys the portfolio**.
- **Portfolio sales recapitalize loan pools** so State Green Banks can **finance the next portfolio of projects**

Not just a program, but an institution.

NY Green Bank financial statements - it looks like a finance business, not a government agency or program

	(Amounts in thousands)		
Summary of Net Position	March 31, 2020	March 31, 2019	% Change 2020-2019
Cash and investments	\$164,361	\$269,374	(39.0)%
Loans and financing receivables, net	441,559	299,430	47.5%
Other assets	3,207	2,438	31.5%
Total assets	609,127	571,242	6.6%
Deferred outflows of resources	1,527	1,955	(21.9)%
Net pension liability	885	234	278.2%
Net OPEB liability	528	485	8.9%
Other liabilities	2,361	2,494	(5.3)%
Total liabilities	3,774	3,213	(17.5)%
Deferred inflows of resources	486	1,529	(68.2)%
Net position - restricted	\$606,394	\$568,455	6.7%

Summary of Changes in Net Position

Operating revenues:			
Fees	\$3,347	\$3,947	(15.2)%
Loans and financing receivables interest	18,612	15,253	22.0%
Provisions for losses on loans and financing receivables	-	(388)	100%
Total operating revenues:	21,959	18,812	16.7%
Operating expenses:			
Salaries and benefits	7,484	6,421	16.6%
Investment related expenses	399	456	(12.5)%
Other operating costs	1,277	765	66.9%
General and administrative expenses	1,247	1,100	13.4%
Depreciation	189	184	2.7%
NY State assessments	112	125	(10.4)%
Total operating expenses	10,708	9,051	18.3%
Operating income	11,251	9,761	15.3%
Non-operating revenues:			
Capital contributions	20,678	119,882	(82.8)%
Investment income	6,224	7,223	(13.8)%
Total non-operating revenues	26,902	127,105	(78.8)%
Non-operating expenses:			
Capital expansion	44	1,425	(96.9)%
Program evaluation	170	211	(19.4)%
Total non-operating expenses	214	1,636	(86.9)%
Income before transfers	37,939	135,230	(71.9)%
Transfers - capital contributions (redemptions)	-	(52,926)	100.0%
Change in net position	37,939	82,304	53.9%
Net position, beginning of year	568,455	486,151	16.9%
Net position, end of year	\$606,394	\$568,455	6.7%

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What are GB's most like? Development banks! Obvious if you have international perspective, but many in U.S. don't



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In 2009, we were too early for this idea

Public & Private Capital Shall Not Mix

- Govt intervention in energy was in R&D & commercialization, not deployment (U.S.-specific phenomenon)
- Private capital markets are efficient - if there is a financing gap, there is a good reason for it (i.e. projects are no good)

Eat Your Vegetables!

- Enviro movement wanted to punish FF, not delight with CE
- Carbon tax + efficiency, NOT cheap & abundant replaces the old

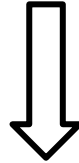
But by 2020, things were different - ideas changed + unique circumstances, though still resistance to new institutions

Public & Private Capital Shall Not Mix It is too late on climate change - more is more!

Eat Your Vegetables! Learn '09 lesson, cheaper is better, nobody wants higher costs

COVID!! 22M Jobs Lost

Gov't investment in clean energy can kill two birds with one stone

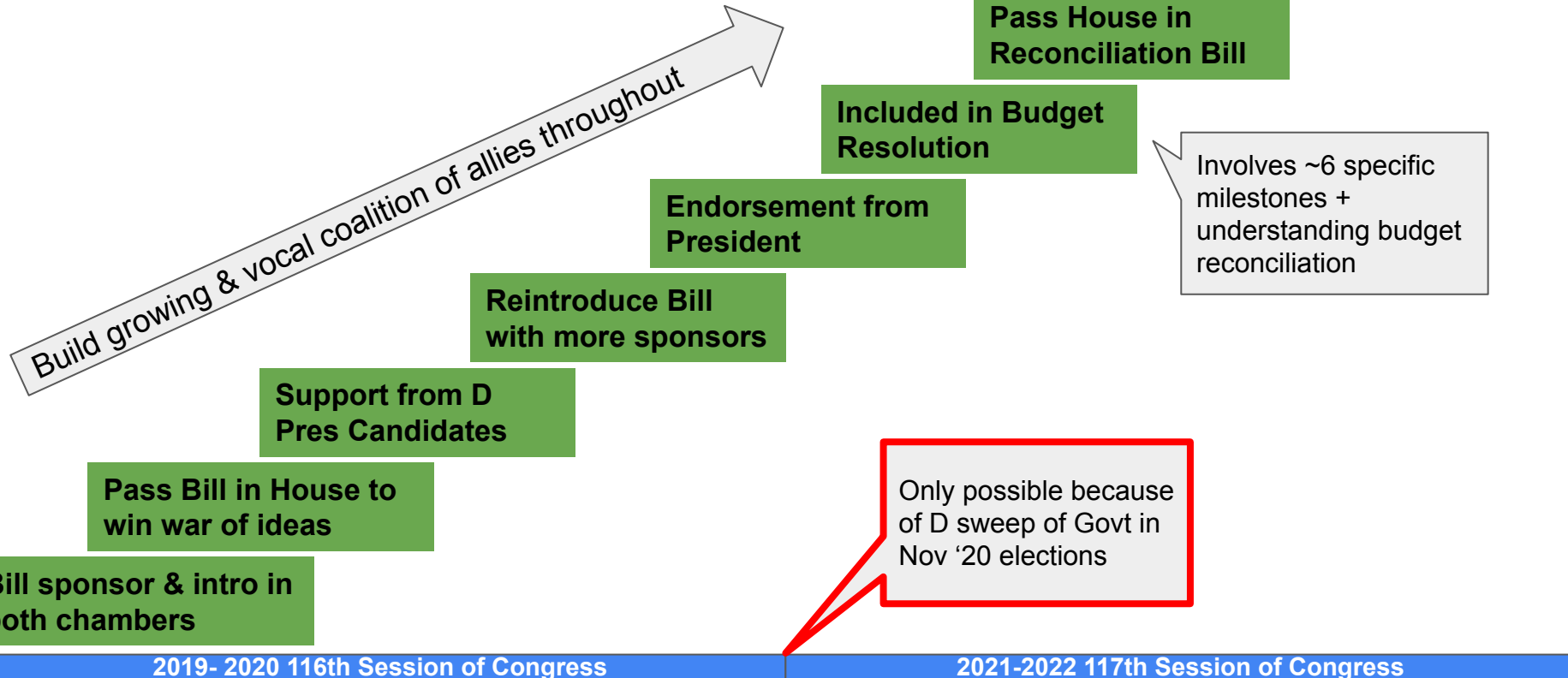


George Floyd Sparks EJ

Recognition that Gov't must make targeted investment to address energy inequities

Independent non-profit national green bank outside of government

Our 3-year campaign



National Green Bank would supercharge the movement

- \$20B in EPA's Greenhouse Gas Reduction Fund in BBB to capitalize a nonprofit national green bank
- Must invest at least \$8B in disadvantaged communities - largest energy justice policy in U.S. history
- Finance projects directly & indirectly via network of green banks, CDFIs, MDIs and community lenders
- Support & fund creation of green banks in every state in the country

- | | | |
|--|-----------------------------------|---|
| • Endorsed by President Biden | • Bipartisan co-sponsors in House | • Endorsed by 200+ NGOs, capital providers, businesses, industry associations, EJ advocates, utilities and more |
| • Passed House 4x, including as part of Reconciliation 12/21 | • No opposition among Senate Dems | |

Broad support from enviro, EJ, finance, governors, many more



Leading environmental justice and national environmental groups call for \$27B in Accelerator funding in Build Back Better



Governors in 10 states call on Congress to create and fund Accelerator



We need to leverage the local knowledge of [institutions] and invest in solutions like green banks that can take [capital] and blend it with international public and private finance.

- Larry Fink, NY Times Op-Ed, October 13, 2021

EQUITABLE & JUST
NATIONAL CLIMATE PLATFORM

Included in the Equitable & Justice National Climate Platform

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What to do if no focused federal action & investment?

Breakthrough Energy Catalyst and Major Corporations Announce Partnership to Accelerate the Clean Energy Transition

PRESIDENT JOE BIDEN
**BUILDING A
BETTER AMERICA**
BUILD.GOV

A GUIDEBOOK TO THE
BIPARTISAN INFRASTRUCTURE LAW
FOR STATE, LOCAL, TRIBAL, AND
TERRITORIAL GOVERNMENTS, AND
OTHER PARTNERS

BlackRock Investment strategies Solutions Insights & education Events & webcasts

Watch replays from our BlackRock Future Forum | Infrastructure special: Building for growth

INFRASTRUCTURE

Climate Finance Partnership



Thank You