

CHAMBER OF PROGRESS

A DEMOCRATIC COST OF LIVING AGENDA:

A LOW-COST FRAMEWORK FOR HELPING FAMILIES BUILD ABUNDANT HOMES, CARE AND ENERGY



SENIOR ADVISOR, CHAMBER OF PROGRESS;

Associate Professor of Political Science and Director of the International Politics and Economics Program, Middlebury College

DEMOCRATIC COST OF LIVING AGENDA:

A LOW-COST FRAMEWORK FOR HELPING FAMILIES BUILD ABUNDANT HOMES, CARE, AND ENERGY

Executive Summary

High cost of living is the great villain in today's economy. There are young couples who worry that they'll never be able to buy a house. There are families who are anxious about what next month's electricity bill is going to be. There are seniors who are afraid that an unexpected illness is going to bankrupt them. There are would-be parents who want a child but don't know how they're going to afford daycare. These are the people Democrats need to speak to and govern for.

Voters consistently tell pollsters that inflation is their top economic concern right now, and yet, neither party has paid sufficient attention to their inflation-related frustrations nor provided a serious policy agenda for bringing the cost-of-living down. We aim to fix that.

Democrats should not trick themselves into thinking that they can effectively address high cost of living through price controls and demand subsidies. Those approaches, however intellectually seductive, do not and will not work. The answer is supply-side progressivism.

The Democratic Cost of Living Agenda that we present here is focused on policies that will increase the supply of goods and services that have risen the most in cost. In each of these areas, we offer specific, actionable recommendations for federal, state, and local policymakers that will make a difference for Americans' wallets. Together, these policy recommendations provide a low-cost roadmap for Democrats to tackle the rising cost-of-living without driving further growth in the deficit or more inflation through additional federal spending.

We focus on five main areas:

- To bring down housing costs, we need to reform zoning, embrace innovative housing types, and lean into globalization.
- To increase the supply of energy and infrastructure, we need policy reforms that make it easier to create and transmit energy and that make it easier to build infrastructure.
- To make healthcare less costly, we need to raise the number of providers and promote competition.
- To make it less expensive to raise kids, we need more childcare and a better social safety net for children.
- To ensure that our country's bright future includes everyone and doesn't leave some people and some places behind, we need to embrace new technologies related to rural broadband, health and disability, climate change, and autonomous vehicles.

Democrats should imagine a world where Americans of all social classes have good housing that doesn't eat 40% of their paycheck, where climate action, economic growth, and affordability all go together, where medical services do not financially annihilate sick people, and where every family that wants a child can afford to raise them. And then we should set about delivering that world. Here's how we do that.

TABLE OF CONTENTS



I. INTRODUCTION

A. How Democrats Can Respond to Rising Costs: Four Options

- B. Success Story: How The Biden/Harris Administration Brought Down Hearing Aid Costs
 - 1. Technology Does Not Just Benefit the Elite
 - 2. Hearing Aids are a Globalized Product
 - 3. Regulatory Reform Can Be Progressive
 - 4. Achieving Supply Abundance Was the Key to Bringing Down Costs for Everyone

C. Contrasting Our Innovation and Consumer-Oriented Approach With Trump's Bad Ideas

II. HOUSING: THE BIGGEST DRIVER OF COST-OF-LIVING INCREASES

A. The Problem

B. Zoning Reform

- 1. More Mixed-Use Zoning
- 2. Duplex/Triplex and ADU Reform
- 3. Minimum Lot Sizes
- 4. Repeal Parking Minimums

C. Innovation in Housing Types

- 1. Five-Over-Ones: The Workhorse of Affordability
- 2. Single-Stair Reform
- 3. Mass Timber
- 4. The Problem of Big, Expensive Elevators
- 5. Re-Legalize SROs
- 6. Remove the Chassis Rule for Small Manufactured Homes

D. Globalization Makes Housing Construction Cheaper

- 1. Free Trade With Free Countries: Building Inputs
- 2. Immigrants are Critical to the Construction Industry

E. Summary

III. ENERGY AND INFRASTRUCTURE: A SOCIETY THAT BUILDS

A1. The Problem

A2. An Updated Environmentalism That Builds

B) Building

- 1. Permitting
- 2. The Jones Act, Wind Energy, Outside the 48, and Home Heating
- 3. Nuclear
- 4. Better Air Conditioners and Heat Pumps
- **C)** Transmission
 - 1. Great News on Green Energy Production, But Transmission is the Achilles Heel
 - 2. P is for Persistent Permitting Problem
 - 3. We Already Have an Interstate System for Moving Cars, Let's Put the Interstate System for Moving Electricity On Top of It

D) Inputs

- 1. Green Steel and Green Concrete
- 2. Free Trade in Green Goods
- 3. Make It Easier to Mine Critical Minerals

E) Transportation

- 1. Procurement
- 2. Airline Cabotage
- 3. E-Bikes and Bike Lanes
- 4. Facilitating Work-From-Home

F) Summary

IV. HEALTHCARE

A. The Problem

B. Increase the Number of Providers

- 1. Increasing Residencies
- 2. Scope of Practice for Physician Assistants (PAs) and Nurse Practitioners (NPs)
- 3 Allowing Foreign Trained Doctors to Provide Services in the U.S.
- 4. Telemedicine

C. Promote Competition

- 1. Repeal Certificate-of-Need Laws
- 2. Greater Antitrust Enforcement on Hospital System Mergers
- 3. Allow Consumers to Have Access to Foreign Products Like Better Sunscreen

D. Summary

V. RAISING CHILDREN

A. The Problem

A2. The Reverse Agatha Christie Problem

B. Childcare

- 1. Small Reforms to Child-Teacher Ratio Requirements
- 2. Increase the Au Pair Time Limit
- 3. Occupational Licensing
- 4. Zoning

C. A Better Safety Net for Kids

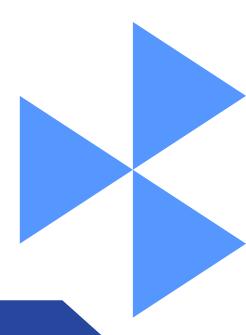
- 1. An Expanded Child Tax Credit
- 2. Medicare for Kids
- 3. Universal Free School Lunches
- 4. There Should Never Again Be a Baby Formula Shortage

D. Helping Both Two-Earner Households and Households With One Stay-at-Home Parent

E. Summary

VI. INCLUSIVE FUTURE

- A. Satellites Delivering Rural Broadband
- **B. Health and Disability Tech**
- **C.** Autonomous Vehicles
- **D. Climate Tech**
- E. Ozempic For All



I. INTRODUCTION

The American Dream is predicated on rising economic prosperity. How citizens feel about the economy is not purely based on their wages, it is based on what their wages can buy. Even before the inflation spike of 2021–2023, Americans' wages weren't buying as much as they'd like.

After that inflation spike, the cost of living remains the central drag on people's lived experience of the economy. More than twice as many Americans say that inflation is the most important problem than say that about unemployment, the gap between the rich and the poor, and taxes combined. When asked which issue matters most to them, 18–29 year-olds place inflation as their number one priority, with healthcare and housing coming in second and third respectively.

Housing, energy, and services like health care and childcare are all more expensive than Americans would like them to be because they are scarcer than they should be. It doesn't have to be this way.

Working to substantially increase the housing supply would make it easier for middle-class people to afford a home. Working to substantially increase the supply of green energy would make it easier to meet our climate goals. Working to increase the supply of health care would bend medical cost curves down. And working to increase the supply of child care and create a more robust social safety net would decrease the cost of raising children.

Democrats should imagine a world where Americans of all social classes have good housing that doesn't eat 40% of their paycheck, where fighting climate change and growing the economy go hand-in-hand, and where everyone can afford the services like medical care and childcare that they need to live a full life.

We haven't been building enough. The main problem is not really about distribution, it's about supply. You cannot redistribute your way out of a shortage, so the answer is to try to create abundance.

As Derek Thompson put it back in 2022, "The U.S. doesn't have enough COVID tests—or houses, immigrants, physicians, or solar panels. We need an abundance agenda." As Ezra Klein argued not long thereafter, "We need to build more homes, trains, clean energy, research centers, disease surveillance. And we need to do it faster and cheaper." In other articles, Klein has made the case for progressives thinking harder about supply and considering how our penchant for trying to advance multiple goals at once can constrain supply, a dynamic he famously coined as "everything bagel liberalism." Klein and Thompson have a forthcoming book, Abundance, that expounds upon these arguments.

Matthew Yglesias has been arguing for the abundance agenda and for policies that support abundance for years. Jerusalem Demsas has written extensively on housing affordability, homelessness, infrastructure, and environmental politics from an abundance agenda perspective.

Noah Smith has argued for pursuing green energy abundance through solar and batteries and for an environmentalism that builds. Alec Stapp, Caleb Watney, and their team at the Institute of Progress have done thought-provoking, detailed analyses on how America can better leverage technology to build a bright future. As they say, "progress is a policy choice."

We see our cost of living agenda as part of that supply-side progressive family of ideas. What we are doing here that is different is that we are explicitly focusing on cost of living. While abundance is conceptually great and many people who are very tuned into current events will recognize what the term 'abundance agenda' means, for most people it is their day-to-day costs that are most concerning.

There are young couples who are anxious that they'll never be able to buy a house. There are families who are worried about what next month's electricity bill is going to be. There are seniors who are afraid that an unexpected illness is going to bankrupt them. There are would-be parents who want a child but don't know how they're going to afford daycare. These are the people we wrote this for. Abundance is a means, but it is their Cost of Living that motivates us and that we argue should motivate Democrats.

This Democratic Cost of Living Agenda is focused on policies that will increase the supply of goods and services that have risen most in cost, and policies that will reduce the roadblocks that stand in the way of building. Together, these policy recommendations provide a low-cost roadmap for Democrats interested in tackling the rising cost of living without driving further growth in the deficit or inflation through additional federal spending.

Moreover, these policies are popular. As we will discuss below, polling shows that Americans support making it easier to build new housing. They support policies that promote green energy. They support policies aimed at bringing healthcare costs down. And they support policies that make it more affordable to raise a family. Democrats need to be talking more about these cost of living issues both because it is the right thing to do and because it will help Democrats win elections.

A. How Democrats Can Respond to Rising Costs: Four Options

Democrats have four policy options when it comes to addressing rising costs.

The first option is the ostrich option: stick our heads in the sand and pretend like the high cost of living isn't a problem. Traveling down that path is likely to be politically disastrous. Voters do not like to be told that their perceived hardships are fictions. Moreover, cost of living is a very real issue in certain sectors, including housing, health care, child care, and education, and one that policymakers should prioritize for their constituents.

The second option is to scapegoat: blame corporations for higher prices. There are a few examples where the business in question seems to be a middleman delivering little to no discernible value while charging big fees (almost no one likes Ticketmaster, and many people have negative experiences with car dealerships). And, the Biden/Harris administration, to their credit, has started to crack down on junk fees and other deceptive pricing practices.

But junk fees, as annoying as they are, are a relatively small percentage of spending. For example, total revenue in the accommodations sector in 2022 was \$316 billion; hotel resort fees add up to \$3.3 billion. So that's about 1% of total spending in that industry. Conversely, shelter makes up 36% of the Consumer Price Index, meaning it's more than a third of what the average American spends overall, and housing inflation has been running very hot at 5.4% annually. Similarly, hospital services have gotten 7.2% more expensive over the last year while home health care for the disabled and elderly is up 11.1%.

Junk fees are largely not what is driving cost increases in our most important economic sectors. And rent controls do not work. It is not businesses that are the cause of the housing shortage in blue cities and states nor energy businesses that are blocking offshore wind turbine construction. Nor are multinational corporations responsible for the high costs of childcare.

While rhetorical attacks on the private sector poll well, regulating corporate behavior will not address underlying cost of living issues.

The third option is to subsidize demand. At first glance, it is understandable why Democrats want to use government funds to subsidize demand for low-income people. They are often the people who need help the most and with limited resources, means-testing makes some sense. One example of this approach is Section 8 housing vouchers in which households below a certain income threshold receive a voucher they can use to rent housing. Childcare subsidies work in a similar

way.

Some redistributive policies make sense and the government plays a crucial role as provider of the social safety net. We advocate for expanding that role in our section on Raising Children by creating a Medicare for Kids program, providing universal free school lunch, and expanding the Child Tax Credit.

But the primary long-term path to affordability in most policy areas does not run through demand subsidies. The problem is that simultaneously subsidizing demand while not addressing supply constraints creates what's been called 'Cost Disease Socialism', under which prices for the subsidized goods or services rise for everyone. Those who do not receive the subsidy are left worse off via higher cost of living, and the government spending in question does not end up accomplishing much.

Housing demand subsidies in the form of Section 8 vouchers means that there is more money flowing into housing as a sector, but without more supply, that money mostly just ends up being extra profit to landlords. The benefits mostly do not go to the intended beneficiaries and other renters in the market do not benefit at all. They are in fact made worse off overall because they do not receive the subsidy but do face higher rents. Something similar happens in childcare. Childcare subsidies push money into the system but without more childcare supply, all that's really doing is pushing up prices.

The problem of subsidized demand with constrained supply is made even worse by the aforementioned 'Everything Bagel Liberalism' under which the government tries to achieve so many different objectives with the same policy that supply does not increase as much as it otherwise could.

Moreover, if the underlying challenge is scarcity, as it often is, no form of subsidization or redistribution is going to get at the root of the problem. There's no redistributing your way out of a shortage. Finally, there is a class element to problems created by subsidized demand. While the very poor need government subsidies, the middle and working classes need a functioning market with lots of supply. A subsidies-oriented approach is not going to help them much.

Our fourth option, increasing supply, corrects for the failures of subsidized demand. There are times when it makes sense for the government to do the supply provision – such as Universal Free School Lunch – but for the most part, supply comes from the private sector, and so a focus on increasing supply

means reforming barriers that stand in the way of businesses producing. That means adopting more permissive zoning rules, ensuring that environmental regulations don't obstruct green projects, and updating our services regulations for the 21st century.

The Biden/Harris administration made some great moves in this direction. In April 2024, the Department of Energy finalized new permitting rules designed to accelerate the construction and upgrading of high-capacity power lines. Still, there is much more to be done on all of these issues.

We like to think of ourselves as 'Costco Democrats.' Costco has lots of fans for many reasons and virtually all of them relate to a supply-oriented approach that drives down the cost of living for ordinary Americans. As unsexy as that may sound, Costco is ambitious and pragmatic, with a zeal for attention to detail and a laser focus on prices. That's exactly what America's economic policy needs.

We can do this. If, like Austin, Texas, we make it easy to build housing, America can create enough housing supply that rents go down even as the population increases. Colorado doesn't artificially constrain health care service supply with certificate-of-need laws, and not coincidentally it has some of the lowest per capita spending on health care in the country.

If we reduce unnecessary, burdensome occupational licensing regulations, people can move near family or to a better home rather than feel trapped where they are. If we build lots of clean energy we can meet the demand from new data centers, EV charging, electric heat pumps, and more. With more supply and fewer barriers to development, we can build the kind of affordable world voters want.

B. Success Story: How The Biden/Harris Administration Brought Down Hearing Aid Costs

Not all costs have gone up over the last few years. Hearing aids have actually gotten much less expensive even as they have gotten better. The story of how that happened demonstrates three themes that we will highlight in this report. First, the road to affordability is paved with supply. Second, modernizing regulations, embracing technological innovation, and promoting competition are crucial to driving increases in supply. Third, the biggest beneficiaries of supply-driven cost reductions are the middle and working class.

In 2004, a pair of hearing aids cost an average of \$3600. The median hourly wage was \$13.83. So it took approximately 260 hours of work (six and a half weeks) at the median wage to pay for those hearing aids. Today, you can get a pair from Lexie for \$799. The median hourly wage is \$34.75, which means that it takes about 23 hours of work to purchase that pair of hearing aids.

That is a more than 90 percent reduction in the time-price of hearing aids within just two decades, and that doesn't even take into account that today's hearing aids are acoustically superior and more comfortable than their 2004 predecessors. And that's not even as cheap as they go. The most basic pair that are bestsellers on Amazon are only \$289.

Technology Does Not Just Benefit the Elite

The first part of our story is the advance in a mix of technologies. 3D printing, microelectromechanical systems (MEMS), and lithium-ion batteries made it so that hearing aids could be customized for each person, the sonic quality improved, lasted longer, more intricate and better forming internal designs could be used, made prototyping easier, and the hearing aid could be made in three steps instead of nine.

The point here is **that technological innovation is one of the main drivers in bringing down costs.** The primary beneficiaries of technological advancement are ordinary people, not some tiny, distant elite.

Hearing aids can be transformational in someone's life, improving hearing but also slowing cognitive decline and reducing falls, especially for older and lower income people that are most at risk. The rapid increase in their accessibility through lower prices and over-the-counter access will affect hundreds of thousands if not millions of people.

Hearing Aids are a Globalized Product

ThOse new production techniques combined with the capital-intensive nature of hearing aid production mean that it makes sense to geographically concentrate production in a few locations to economize on fixed costs. This meant that hearing aids became much more of an internationally traded product. From 1995 to 2022, the international trade in hearing aids grew from \$424 million to \$6.45 billion.

Meanwhile, fierce competition between the two biggest hearing aid manufacturers, Sonova and William Demant, means that each of them is strongly incentivized to cut costs. So, and this part will give some economic nationalists heartburn, they've moved much of their production away from high labor-cost locations like the United States and Denmark to Mexico and even more so to Poland which offers an attractive mix of an educated workforce and a long scientific tradition, but also relatively low labor costs.



The United States is the world's biggest importer of hearing aids. There is simply **no way the cost of hearing aids could have fallen the way they did without the efficiencies created by globalization.** Much of the discourse around trade is entirely based around jobs, but consumers' interests matter too.

Regulatory Reform Can Be Progressive

The third element in bringing down hearing aid costs was the Biden/Harris administration's 2022 move to allow hearing aids to be sold over-the-counter (OTC). Previously, someone suffering from hearing loss had to get a prescription from an audiologist, where hearing aids cost 5–6 times more. The Biden/Harris administration's new rule removed this bottleneck.

This reform also opened up more distribution channels. Lexie, the hearing aid manufacturer with the \$799 pair that I mentioned earlier, found that 94 percent of its customers are first-time purchasers. The manufacturer expects to be selling more than a million pairs annually within a few years.

Achieving Supply Abundance Was the Key to Bringing Down Costs for Everyone

Notice that in this hearing aid example cost reductions were not achieved by haranguing the businesses that manufacture hearing aids. Such an approach would have accomplished nothing. Nor were they brought about by trying to demand-subsidy our way out of the problem. Such an approach would have been enormously expensive. Instead, decreased hearing aid costs were achieved through technological advancements and increased supply. Compared to the hearing aid market of twenty years earlier, today's hearing aid market is defined by abundance.

C. Contrasting Our Innovation and Consumer-Oriented Approach With Trump's Bad Ideas

Bringing costs down isn't just about advancing good ideas. It is also about avoiding bad ones. Addressing increases in beef prices is a good example. This summer, as you were buying steaks and burgers for the grill, you may have noticed that they're more expensive than they used to be.

In May 2019, a pound of sirloin steak cost, on average, \$8.66. Today, it's \$11.66, a 34% increase. Over that time, a pound of ground beef went from \$3.82 to \$5.23, a 37% increase. Just over the last year, beef prices are up 7%, more than almost any other food item that the Bureau of Labor Statistics tracks in the Consumer Price Index. Drought, pandemic disruptions, and increases in input costs have all contributed to a shrinking cattle supply and higher prices.

Reducing beef and grocery prices for American consumers within our low-cost framework of supply side solutions could take a few different shapes. Here we offer four solutions.

First, the United States is the world's leading exporter of beef and, perhaps surprisingly, it is also the world's leading importer of beef. The U.S. subjects imported beef to what are known as tariff-rate quotas. What that means is that below a certain quota (it varies by country), the U.S. charges only a very small amount but then adds substantial taxes above that quota. The federal government can, and should, increase those quotas.

U.S. beef imports are mostly trimmings that go into ground beef and so quota increases would make burgers cheaper and, because burgers are to some degree substitute goods for steak, that would make steaks less expensive too..

It is worth pointing out here that these are basic commodities, and the countries we import from are our allies. The geopolitical and strategic factors that influence our thinking about something like semiconductors from China do not apply here. In fact, if we are trying to build an effective anti-China international coalition, we need to be trading more with our allies, not less. Trump's tariffs would undermine that anti-China alliance.



A second way to empower consumers is to stop getting in the way of innovation in plant-based and lab-grown/no-kill meat. If consumers have access to more plant-based options, at least some of them will opt for those and that market will attract investment and innovation — which in turn will improve taste, increase market share, on and on.

Unfortunately, a number of Republicans have sought to tie up the plant-based industry in red tape. Other Republicans are seeking to ban lab-grown meat. Unfortunately this culture war posturing has the net effect of reducing consumer choice and driving up prices.

Third, the meatpacking industry has consolidated considerably over the last few decades. While that comes with some benefits such as economies of scale and cost savings, it also makes it easier for these producers to behave in anti-competitive ways. Last year, a group of purchasers including Target and BJ's Wholesale filed a lawsuit against the four dominant meatpacking companies alleging that they colluded to raise beef prices. Some of these meatpackers like JBS have already had to pay large fines for price-fixing .

in the past. They've also had to pay big fines for wage-fixing. These companies have a poor track record when it comes to anticompetitive behavior. The Department of Justice and the Federal Trade Commission should continue to vigorous-ly enforce the law in this area.

Lastly - and this solution would help reduce prices in almost all aisles of the grocery store - reducing labor costs through immigration reform would help cut beef prices. In the top five meatpacking states (Nebraska, Iowa, Texas, Kansas, and Illinois), 56% of the meatpacking workforce is foreign-born and, of that 56%, 67% are noncitizens. Many are, admittedly, in the country illegally. But, these are physically demanding, dirty, dangerous, difficult jobs that most native-born Americans do not want.

Without a migrant labor force, meatpacking in this country would grind to a halt, with enormously negative consequences for beef supply and beef prices. One of the things immigration policy should do is help to ensure that American businesses have access to the labor they need to affordably provide the goods that American families want to buy. Mass deportations are not conducive to that.

6

II. HOUSING:

THE BIGGEST DRIVER OF COST OF LIVING INCREASES



A. The Problem

Housing price pressures have been building for a long time. From 1970 to 2010, the median price of a home increased almost three times faster than median wages. This pressure has accelerated over the last few years. In May 2019, the median home price in the United States was \$298,638. As of May 2024, it's \$439,716. That's a 47% increase. For context, from May 2019 to May 2024, the average hourly wage has gone from \$25.72 to \$34.91, a 35.7% increase. So it's safe to say that most Americans have not seen their wages grow as fast as housing costs.

As you can see in this chart, housing has been a consistent driver of inflation and is responsible for more than half of all current inflation.

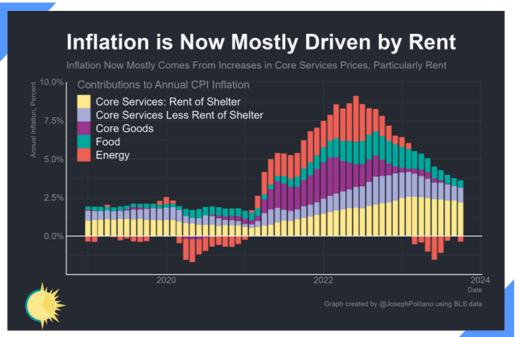


Image Credit: Joseph Politano.

Prices are at their most expensive in California's major cities -they range from \$980,000 (San Diego) to \$1,500,000 (San Jose), but contrary to what some may believe, it is not purely a California problem or a superstar city problem. The median home price has gone up by: 57% in Columbus, 57% in Jacksonville, 57% in Grand Rapids, 58% in Nashville, 61% in Boise, 69% in Raleigh, 70% in Richmond, and 72% in Tucson. Home prices have gone up especially fast in the places that were once affordable.

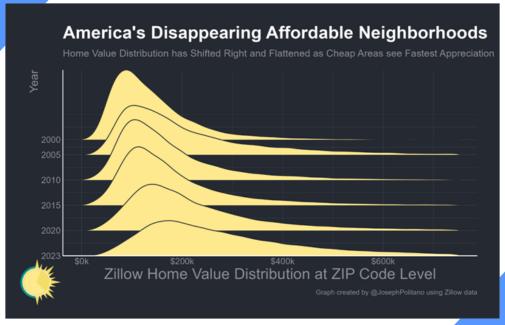


Image Credit: Joseph Politano.

Prices and rents have significantly increased because the supply of housing is constrained. Housing production peaked in May 1973 with 2.3 million new housing units completed that month (at an annualized rate). After 1973, except for one month in 2005 and a few in 2006, we would never again hit 2 million. Housing production cratered during the financial crisis and arguably never fully recovered. The 2010s in particular were a disaster for housing production. In no month in the 2010s did we even hit 1.4 million annualized rate, a level of housing production that was fairly normal for most of the 1970s, 1980s, 1990s, and 2000s.

Housing underproduction, that is production compared to household formation and population growth, has continued to worsen. From 2019 to 2021, the gap between housing production and household formation grew in 83% of all American markets. All 50 states are underproducing housing.

The reason that we are underproducing housing is that there are a bevy of regulations on housing (which we discuss below) that sharply limit where housing can be built and how much of it can be built. The economic research is clear: **these rules make it harder and more expensive to build new housing.** As far back as 2003, researchers found that these kinds of zoning rules made apartments 50% more expensive in Manhattan, San Francisco, and San Jose. That figure has almost certainly grown since then.

More recently, in 2021, economists examined 24 major metropolitan areas and found that zoning substantially raised prices (\$59,689 per quarter acre in Washington DC, \$76,672 in Philadelphia, \$174,850 per quarter acre lot in Seattle, and \$198,769 in Seattle) and found that these higher prices were strongly correlated with the stringency of the zoning. This is not just a coastal city problem though. Restrictive local zoning substantially

increases prices in places like Vermont too.

There is a long history of how we got here, of local zoning, deed restrictions, car-centric infrastructure, redlining, anti-development back-to-the-land environmentalism, and Not-In-My-Backyard (NIMBY) sentiment. Going through that history would take multiple book-length treatments but suffice it to say that we have a housing shortage. The most important question from a policy perspective is 'What do we do now? How do we fix this?'

There are several Federal housing bills sponsored by Democrats that would be strong starts to housing reform. The Yes in My Backyard (YIMBY) Act, which has been cosponsored by Senators Schatz, Warnock, and Van Hollen, makes amendments to the Community Development Block Grant (CDBG) program to promote more housing construction. Some grant recipients arewould be required to, every five years, submit a plan that addresses land-use policies. This bill asks grant recipients how they have or will implement various policies such as multifamily zoning and reduced minimum lot sizes.

The Housing Supply and Affordability Act, sponsored by Amy Klobuchar and co-sponsored by Senators Kaine and Lujan, would create a grant program to help local governments develop and implement new housing policies.

The Build More Housing Near Transit Act, sponsored by Scott Peters (D-CA) and co-sponsored by 18 other House Democrats, aims to promote more housing near transit by adding affordable housing incentives to certain capital investment grants for transit projects.

The Reducing Regulatory Barriers to Housing Act sponsored by Senator Fetterman and Representative Blunt Rochester, instructs the Secretary of Housing and Urban Development to provide technical assistance to states and localities on zoning, develop and publish guidelines and best practices for state and local zoning to support housing development, and creates a grant program for local governments to establish pre-approved designs for certain types of affordable housing structures.

The Biden/Harris administration, through the Bureau of Land Management, the U.S. Postal Service, and the U.S. Forest Service, wants to repurpose federal land to allow for new housing development. Particularly in western states where the federal government owns a lot of the land, this is a great supply-oriented idea.

These are excellent bills. To build upon them, we argue that there are three main axes of housing affordability reform: zoning; innovation in housing types; and leaning into globalization.

B. Zoning Reform

1. More Mixed-Use Zoning

Recommendation: Local governments should allow more mixed-use zoning. The easiest place to start with this is to allow more housing in areas that are currently zoned as commercial. State governments can incentivize and encourage this as befits their state's economic context.

There are two major types of zoning: <u>use</u> and <u>density</u>. If you look at almost any local zoning map in the United States, you'll see that there are three main uses of land: industrial, commercial, and residential, with the idea being that you do not want heavy industry right next to houses and that you want to cluster businesses. At one level, this makes sense, at least in theory. We don't want chemical factories next to elementary schools.

But most of the United States has gone too far with this, especially with the commercial/residential split. In most places, we have one set of areas that are industrial, an entirely separate set of areas that are businesses, and a wholly distinct third set of areas that are residential. Americans take this system for granted but it does not have to be this way. Many places around the world do not do this.

If you've been to Europe and really liked it, there's a good chance that one thing you really liked without realizing it is mixed-use zoning. In Europe, land-use regulation is mixed use by default. There's housing so that people can live there. There are amenities so that people can shop, eat, and recreate. There are businesses so that people can work. And they are right next to each other and mixed amongst each other. That creates <u>vibrancy</u>, shorter and more pleasant commutes, and more economic activity.

Unfortunately, we largely don't do that in the United States.

As M. Nolan Gray, author of Arbitrary Lines: How Zoning Broke the American City and How to Fix It, writes: "walkable, mixed-use, reasonably dense development patterns....are outright prohibited under most American zoning codes." That's a real shame because mixed-use zoning has a wide range of benefits.

Renters and first-time homebuyers benefit from the increase in housing supply. There is huge potential for more supply here. According to the Lincoln Institute for Land Policy, if we redevelop just 20 percent of the country's underutilized commercial corridors to mixed-use sites with ten housing units per acre, we could add more than one million homes.

It's good for workers who can live closer to their jobs and thus enjoy shorter, less stressful commutes. It's good for businesses who benefit from increased foot traffic. It benefits seniors who can maintain independence longer in a walkable environment. And it saves money for taxpayers.

That's a long list of winners from having more mixed-use zoning. With fewer restrictive zoning regulations that allow for more mixed-use development, private sector developers will gladly create a greater supply of these kinds of areas to meet that demand. A city that leans into capitalism is a city that will de facto be leaning into this kind of very attractive mixed-use development.

There's also a lot that we can learn from other countries. The liberal, nationally determined nature of Japanese zoning is particularly effective compared to what we do in America. Likewise, Matt Yglesias points out that:

"One of Italy's real strengths seems to be a lot less fussiness about the idea that everything needs to be in the right little box. Every Italian community I saw contains a mix of detached houses, townhouses, and apartments. Every Italian community I saw contains a blend of old and new structures."

The politically easiest place to start with mixed-use zoning is not to try to add commercial space in areas that are currently residential. As nice as that might be, it would be more likely to attract opposition. An easier starting point is to add housing in areas that are currently commercial.

This kind of mixed-use zoning polls well. 75% of respondents support allowing more apartments to be built near offices, stores, and restaurants. People like being able to live, work, and play conveniently close to each other, with their housing being affordable, their commute being short, and fun amenities they enjoy being nearby. That preference is widely shared. 60% of Houston residents for example say that they would prefer to live in a mixed-use development as opposed to single-family only zoning.

2. Duplex/Triplex and ADU Reform

Recommendation: State governments should legalize duplexes or triplexes on any lot that currently allows a single-family home. They should also streamline the permitting process for constructing accessory dwelling units (ADUs).

The second basic kind of zoning is about limiting how much building can be constructed in a given space. These are particularly prevalent and often very strict in residential areas. These can take the form of:

- Minimum lot sizes (ex: each lot must be at least one acre)
- Number of housing units per acre (ex: no more than three units per acre)
- Bans on accessory dwelling units, i.e. 'granny flats'
- Single family only zoning, i.e. no duplexes or triplexes
- Height limits (ex: no building may be taller than 30 feet)
- Setbacks (ex: the housing must be at 20 feet from the road or property line)
- Lot coverage limits (ex: buildings may take up only 20% of the lot)

Density limits mean that less housing supply gets built. Instead of putting a triplex on a half-acre lot, a developer has to only put one single-family home there. Instead of a five-story apartment building on a lot, a developer may only be able to put a fourplex. This kind of zoning can also add a layer of unpredictability to development, further discouraging building.

Much of the housing discourse has focused on how to add more housing supply to urban areas, but to truly address Americans' housing affordability challenges, we need more housing supply in the suburbs as well. In 94 percent of San Jose, density zoning effectively bans multifamily housing. It is one of the wealthiest areas on PLanet Earth and almost all of it is zoned single-family only. That's a nightmare for affordability.

This is not only a Silicon Valley problem though. In nearly every major city, density zoning makes it impossible to build more than a single-family home on 70 percent of the available land. A lot of suburbs are nearly 100% single-family only zoning. One good way to add housing supply in suburban areas is to make **duplexes and triplexes** legal everywhere that a single-family home can be built.



An example of a duplex. Image Credit: Architectural Designs.

As you can see from this image, these are not massive apartments that fundamentally restructure the look and feel of a suburban area, but they do allow developers and property owners to put up two or three homes where there would currently only be one allowed. Building our housing supply so that housing is affordable for the middle class and working class requires policy reform but it does not require revolution. If you live in a suburb and you like it, there's nothing to be afraid of. This kind of policy reform is popular too.

Another good way to expand housing supply through increased density is to legalize accessory dwelling units (ADUs), sometimes referred to as 'granny flats.' This is where someone builds a small second apartment on their property. ADU reform polls well too. More than 70% of poll respondents support allowing homeowners to build ADUs over their garages or to convert a basement or attic.

Success Story: California

While California is usually thought of as the poster child of anti-development housing policy, the Golden State has achieved considerable success with respect to ADUs. In 2016, the state set statewide ADU standards that streamlined the permitting process. It then took this further in reforms spanning 2017 to 2023. These reforms have led to a significant increase in ADUs being permitted. As of 2022, about one in five new housing units in California was an ADU. And, ADU have made inroads in even the most exclusive places; statewide laws have forced California municipalities that ferociously resisted new apartment buildings to allow ADU construction.

Success Story: Colorado and Montana's Recent Reforms

Earlier this year, Colorado passed a bill that prohibits most local regulations that block ADUs and creates a state grant and loan program to help finance construction of ADUs by low and medium-income households. In 2023, Montana also pre-empted local zoning rules that block ADUs and made duplexes legal anywhere that single-family homes are allowed to be built.

When asked why he pursued zoning reform, Colorado Governor Jared Polis succinctly explained the heart of a supply-side oriented approach to housing affordability saying: "We need to remove artificial barriers to housing, get rid of bureaucracy and paperwork and make it easier to build...we simply have to get the government out of preventing housing from being built and allow the market to create a greater supply."

3. Minimum Lot Sizes

Recommendation: Local and/or state governments should reduce minimum lot sizes, ideally as low as Houston's 1400 square feet, and should provide the water/sewer infrastructure to make that feasible.

Another important form of density zoning is minimum lot sizes. These mean that single family homes are forced to take up more space than the homebuyers might even want. An acre of land is 43,560 square feet. So a minimum lot size of a half-acre means that the homeowner must purchase more than 20,000 square feet of land even if they only want to live in a 1500 or 2000 square foot home.

On average, land is about one-third the cost of a home and so this increases the price of that home substantially. If the new higher price caused by these regulations is above the market clearing price in that area, the project won't pencil for the developer and so that new housing doesn't get built at all. Unrestrained by these regulatory barriers, a developer might put three or four homes in those 20,000 square feet of space. With these regulatory barriers, they build one house, or maybe none. There is an opportunity for bipartisanship here. Because land is relatively expensive, minimum lot sizes strongly disincentivize building starter homes. Social conservatives are concerned about the difficulty of family formation. The relative lack of starter homes is arguably a contributing factor to that. So, social conservatives should be even more opposed to minimum lot sizes than other regulatory barriers constraining housing supply.

Success Story: Houston's Housing Bonanza

In 1998, Houston passed a land-use reform that reduced minimum lot sizes to 1400 square feet and so it meant that several homes could now be put in the space that used to be occupied by only one home. On top of that, Houston has next to none of the density limits discussed above. The result: despite welcoming more than 400,000 new residents since then, Houston developers have built so much new housing that the price of a median home in Houston is about \$75,000 lower than the median price in the United States.

The average rent for a two-bedroom apartment in Houston is \$1,631 compared to Los Angeles (\$4,522), New York City (\$5,488), and Philadelphia (\$2,935). Simply put, Houston has done better at remaining affordable than, arguably, any other growing city in America.

4. Repeal Parking Minimums

Recommendation: Local and/or state governments should reduce (or ideally fully repeal) parking minimums.

Parking minimums make it so that parking lots take up a lot of urban space that could be used for housing.

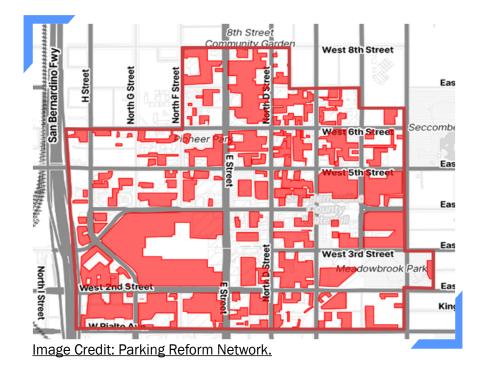
In most places, the local government mandates that businesses and other institutions build a certain number of parking spots for their establishment. In Los Angeles, churches must have a parking spot for every 5 pew seats and hospitals must have two parking spots for every bed. When Apple wanted to build its new headquarters in Cupertino, the city required it to build 11,000 parking spaces to go with it (against Apple CEO Steve Job's clearly stated wishes just before he died in 2011). Dallas requires bars to have one parking spot for every 100 feet of floor space, which arguably encourages drunk-driving. There are parking minimums for public swimming pools, mini-golf, cemeteries, you name it.

For a parking lot to operate effectively, each parking spot plus the necessary in and out lanes take up approximately 300 square feet, so a mandated parking spot amounts to requiring three times as much space as the Dallas bar's floor area and many times as much space as the LA church's main worship room. While not as extreme as Dallas with bars, a lot of suburban municipalities have such high parking minimums that they are de facto requiring that retail developers devote more space to parking than to the retail itself.

The result is an over-allotment of property for parking; depending on the estimate one uses, there are between 3.4 and 8 parking spaces for every registered car in the United States. There is little justification for this much parking. As Donald Shoup, arguably the leading expert on parking mandates says, the planning for parking is "pseudoscience."

Even basic surface parking can be more expensive to build than people may realize (\$28,000 per spot plus the land) and parking minimums often de facto force developers to build parking spots below ground which can be quite expensive (over \$75,000 per space in some cases). Parking increases the cost of building a shopping center by between 67 and 93%. These costs get passed onto consumers in the form of higher prices.

Parking minimums can be surprisingly high. In San Bernardino California, parking takes up 49% of all land. Everything you see here in red is parking.



Parking takes up 39% of all land in Arlington TX, 36% of Virginia Beach, 30% of Orlando, 28% of Grand Rapids, and 27% of Indianapolis.

Cities should repeal their parking minimums. State government can also step in and repeal parking minimums statewide. Lots of policymaking is complicated and involves difficult tradeoffs. This is an opportunity for an easy win that is good for affordability, doesn't cost taxpayers a dime, encourages growth, fights climate change, and helps businesses.

Success Story: Buffalo New York

Buffalo repealed its parking minimum in 2017, making it the first major city in this wave of parking reform to do so. Since then, Buffalo has seen the development of more than 1,000 new housing units. More than two-thirds of these units would have been illegal to build under the old parking minimums. When Seattle eliminated its parking minimums, they had similar results, which suggests that this is not some idiosyncrasy of Buffalo.

Buffalo developers at 36 new projects put in about half of the parking they would have been required to. Developers have been able to construct mixed-use areas that would have been infeasible with the parking minimums. Adaptive reuse projects became a lot more viable too. The reforms were particularly helpful to small-scale developers who often have less financial capacity and less ability to petition for variances than larger developers.

A number of cities have recently followed in Buffalo's footsteps and repealed their parking minimums including Lexington, KY, (Aug. 2022), Gainesville FL (Nov. 2022), Burlington VT (Jan. 2023), Bend OR (Jan. 2023), Austin TX (Nov. 2023), Duluth MN (Dec. 2023), Longmont CO (May 2024), and Birmingham AL (May 2024)



C. Innovation in Housing Types

1. Five-Over-Ones: The Workhorse of Affordability

Recommendation: Cities should embrace and welcome the Five-Over-One apartment building as a highly desirable building type and should remove regulations, such as very low height restrictions and density limits, that block the construction of Five-Over-Ones.

The three reforms above (use, density, and parking minimums) can help unleash a boom in new Five-Over-One apartments. These buildings typically have five stories of residential that are built of wood (Type 5 construction in the International Building Code) over one floor of retail that is made of concrete (Type 1 construction in the IBC). In 2009, the IBC was amended to allow up to five stories of Type 5 construction; previously it had been limited to two stories. Building more of these can substantially increase the housing supply in in-demand cities and thereby bring rents down.



Image Credit: MinnPost.

Five-Over-One's hit a sweet spot of maximizing the number of units that a developer can build for the least cost. They can deliver between 80 and 115 housing units per acre of land. Compare that with single family homes, which typically deliver an average of 1-4 units per acre. At the same time, light-frame wood construction saves a lot of money on development over concrete and steel, so developers can build more housing for less money. Building to four or five stories maximizes the number of units that can be built while staying within that part of the building code (meaning more supply).

The Five-Over-One is the workhorse of dense, walkable, affordable market rate housing. Wherever housing costs are too high, making it as easy as possible to build lots of these can reduce costs. These Five-Over-One's should be allowed by-right in commercially zoned areas, providing popular abundant housing in dense, walkable neighborhoods.

Some people have aesthetic objections to these buildings. Two things are important to keep in mind. The first is much of their external look is due to developers having to comply with local design standards that require them to, for example, break up the massing. If people want Five-Over-Ones to look differently, then local governments need to stop indirectly mandating they look like this. Second, the most important aesthetic truth in housing is this: nothing is uglier than scarcity, nothing is more beautiful than abundance.

Success Story: Minneapolis Brings the Whole Package

What would it look like if a place didn't just implement one or two of these policies but several? We have an example of that: Minneapolis, Minnesota. In 2018, Minneapolis voted to allow duplexes and triplexes on any lot that had previously been single-family-only zoned. In 2015, it reduced parking minimums and then got rid of them completely in 2021. In 2020, it allowed for more construction of Five-Over-One and similarly sized apartment buildings along transit corridors.

What happened? Compared to other parts of Minnesota, Minneapolis built more housing, saw slower rent increases, and saw a drop rather than a rise in homelessness. Minneapolis shows that a society that builds more is a society that's more affordable. From May 2019 to May 2024, the median home in the United State got 46.9% more expensive; in Minneapolis, that figure was just 11.4%. The <u>Minnesotans for More Homes Initiative</u>, led by Sen. Lindsey Port and Rep. Mike Howard, is now seeking to advance some of these successful missing middle housing policies statewide.

2: Single-Stair Reform

Recommendation: When states adopt the IBC, they can modify it as they see fit. States should modify their adopted IBCs such that they allow single-stair point access block apartment buildings up to six stories as long as they have appropriate fire safety provisions such as regulations on the number of units per floor per stairway and on the distance from the units to the stairway as well as sprinkler requirements and extra fire-resistant construction.

Allowing single-stair point access block apartment buildings can help reduce housing costs by promoting more dense infill housing in cities, particularly on small or irregular lots that are currently impossible to profitably build housing on.

The U.S. building code differs from the building codes of many other countries, and even differs from the National Fire Protection Association's model building code, in that it mandates that any residential building taller than three stories has to have two stairways. The allowable height in other countries for single-stair residences is often much higher: France and Sweden (16 stories), Belgium, Poland, and Norway (8 stories). The two walled-off stairways at opposite ends of the building mandate essentially forces apartment buildings into a set up known as a "double-loaded corridor" where you have a central corridor with units on each side of the hallway.

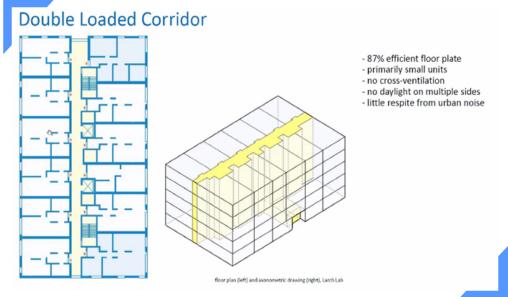


Image Credit: Mike Eliason.

in most of the rest of the world, this kind of layout is usually only used for student dorms or hotels, but "in most of North America, it has become the only realistic way to build apartments."

There are three problems with the double-loaded corridor design. The first is that it greatly constrains developers in building apartments with more ventilation and natural light. The second problem is that the double-loaded corridor makes it very difficult to build units with diverse layouts and bedroom sizes. This makes it a lot harder for developers to build apartments that are sized for and cater to families' needs (for example having a larger master bedroom and two smaller bedrooms). Third, the need for two staircases on small or irregular lots mean that buildings there cannot be profitably constructed and so often prevents infill development on those lots altogether.

By contrast, point-access blocks allow for better ventilation, more natural light, a better variety of layouts and bedroom sizes and thus more apartments for families, and most important of all for affordability, a much greater ability to fit well in smaller or more irregular lots. Eliminating the second staircase, also allows developers to cut out the long corridor connecting them, resulting in less wasted, unrentable space in the floorplan. That allows for more infill development and, because single-stair is important for these smaller lots and buildings, single-stair reform is especially helpful to small-scale developers.

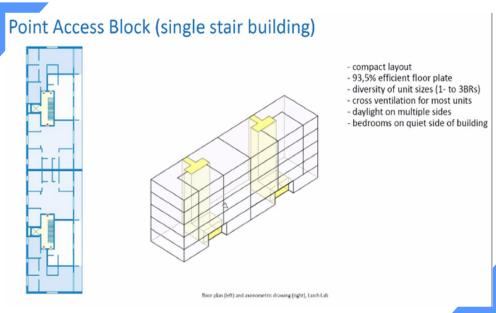


Image Credit: Mike Eliason.

Success Story: Seattle

Seattle's approach to single-stair is more similar to Germany's than the rest of the United States. They both allow four units per floor per stairway and regulate the distance from the units to the stairway. Seattle's code requires sprinklers and extra fire-resistant construction. It bears repeating that no one is calling for buildings that are not fire-safe, but there's more than one way to do fire safety, as point access block buildings around the world and in Seattle show. Point access blocks can deliver fire safety as well as the benefits discussed above. Oregon has adopted single-stair reform that is set to go into effect in 2025. Further efforts to enact single-stair reform are underway in California, Colorado, Virginia, and Pennsylvania. Other states should do this too.



3. Mass Timber

Recommendation: To promote an accelerated rollout of mass timber, Congress can 1) direct OSHA to develop specific safety guidelines for mass timber construction which will simplify compliance for builders, 2) direct the U.S. Forest Service to streamline processes related to permitting sustainable timber harvesting for mass timber production, 3) direct HUD to create an expedited approval track for mass timber designs in federally funded buildings, and 4) provide funding to the American Wood Council and APA- The Engineered Wood Association to do further research on mass timber prefabrication. The 26 states that have not already adopted the 2021 IBC updates on mass timber should do so as soon as possible.

New mass timber buildings can help reduce housing costs by increasing supply. Their benefits related to prefabrication, exposed wood, and compatibility with midrise building are especially helpful.

Mass timber involves using engineered wood products that have been cross-laminated (a new technique) to increase their collective strength. These products have strength to weight ratios comparable to other building materials like concrete and steel and the new production processes mean that they are far more fire-safe than the raw lumber typically used for single-family homes. As Paul Crovella, a professor of Environmental Science and Forestry at SUNY put it, "Mass timber really means that it's timber in a scale that's not traditionally used and it's got these inherent fire-resistant properties that go along with it." The first mass timber building that was constructed in the United States was in Montana in 2011. The 2021 update to the IBC now recommends allowing mass timber buildings of up to 18 stories.

Mass timber is starting to become much more commercially viable. In fact, the new Walmart headquarters in Bentonville Arkansas is made of mass timber. The tallest mass timber building in the world is now in Milwaukee Wisconsin. In 2020, there were only about 500 mass timber buildings in the United States; by 2023, there were more than four times as many completed or under construction. Demand for this technique is expected to continue to quickly rise and perhaps reach 24,000 new buildings by 2034. As of February 2024, 24 states from across the country have adopted the IBC 2021 regulations on mass timber and construction of these projects is starting to spread throughout the country.

Mass timber has three big benefits.

The first is that it improves productivity (and thus affordability) in construction. Most of the work is done off site at factories and then shipped ready-to-install to the construction site. This allows housing construction to achieve some of the efficiencies of assembly-line manufacturing, which it usually lacks. Because so much of the mass timber work is done off site, it requires fewer construction workers (as few as a quarter of what traditional methods need) and thus saves on labor costs. Additionally, since the developer doesn't need to wait for concrete to set, HVAC, plumbing, and electrical construction can start more quickly. This is why mass timber construction takes 25% less time to complete than traditional approaches. It also generates less onsite waste. And, mass timber is conducive to safer, cleaner work environments for construction workers.

Second, mass timber buildings typically have a lot of exposed wood popular in today's homes. Rather than asking citizens to sacrifice or tolerate higher costs of living, Democrats should be trying to create an abundant, climate-friendly society that people like the look and feel of. Mass timber achieves that goal. Mass timber buildings sequester carbon and do not use old growth trees but rather use the kinds of small diameter trees that foresters say need to be thinned anyway in order to prevent forest fires.

This is not just a Pacific Northwest thing either. The Southeast is seeing a rapid expansion in mass timber in part because the yellow pine that grows throughout the Southeast is ideal for mass timber.



Image Credit: Architizer.

Third, mass timber goes particularly well with midrise buildings. Because they are so much more fire-resistant than normal light-frame wood construction, mass timber complements the kinds of building layout that would be unlocked by single-stair reform *and* goes well with midrise construction that is taller than a Fiver-Over-One can go

4. The Problem of Big, Expensive Elevators

Recommendation: NIST should develop a model code for smaller, more prefabricated elevators. The federal government can use its power of the purse, particularly through HUD, to encourage the adoption of this model code.

Reducing the cost of installing elevators would reduce the overall cost of apartment construction and so would help to increase the housing supply.

Installing an elevator in the United States is a lot more expensive than it is elsewhere. A standard four-stop elevator costs about <u>\$36,000 in Switzerland</u>; it costs <u>\$158,000 in New York City</u>, nearly four times as much. A six-stop elevator costs <u>three times as much in Pennsylvania as it does in Belgium</u>. These high costs mean that a lot of apartment buildings that otherwise would have a small elevator have no elevator at all. What we have done here is a great example of making the perfect the enemy of the good.

The origin of the problem is that the regulated size of elevators has continually increased, lots of individual jurisdictions have their own bespoke modifications to elevator building codes, we do not use the elevator standard common in most of the rest of the world (which limits competition and availability of parts), and special interests have prevented pre-assembly and prefabrication from being allowed. <u>These four factors</u> mean that elevators have to be very large by international standards and have to be constructed in unnecessarily costly ways.

To remedy this, in collaboration with the American Society of Mechanical Engineers (ASME) and the International Code Council (ICC), the National Institute for Standards and Technology (NIST) should create a model building code that allows for smaller and more prefabricated elevators. This code should ideally be substantially similar to the European standard so as to facilitate more competition and parts availability.

This model building code would amount to considerable technical assistance for cities and states, would help simplify and standardize regulations across state and local lines, and would improve accessibility, particularly for seniors and low-income people.

To encourage adoption of this model building code, HUD can offer additional points in competitive grant applications for housing projects that use this model code. Accessibility grants can be leveraged to retrofit apartment buildings that do not currently have elevators with these smaller prefabricated elevators. Even if it cannot fit a stretcher, a small elevator is much better than no elevator. Lastly, the federal government could condition housing assistance funding on states and cities adopting the model elevator code.

To remedy this, in collaboration with the American Society of Mechanical Engineers (ASME) and the International Code Council (ICC), the National Institute for Standards and Technology (NIST) should create a model building code that allows for smaller and more prefabricated elevators. This code should ideally be substantially similar to the European standard so as to facilitate more competition and parts availability.

This model building code would amount to considerable technical assistance for cities and states, would help simplify and standardize regulations across state and local lines, and would improve accessibility, particularly for seniors and low-income people.

To encourage adoption of this model building code, HUD can offer additional points in competitive grant applications for housing projects that use this model code. Accessibility grants can be leveraged to retrofit apartment buildings that do not currently have elevators with these smaller prefabricated elevators. Even if it cannot fit a stretcher, a small elevator is much better than no elevator. Lastly, the federal government could condition housing assistance funding on states and cities adopting the model elevator code.

5. Re-Legalize SROs

Recommendation: Congress should pass a law clarifying that the Department of Housing and Urban Development (HUD) has, under the authority of the 1968 Fair Housing Act, the right to legalize single-room occupancy buildings on any site it chooses in any state with a homelessness rate above 40 per 10,000 residents.

Allowing the construction of more single-room occupancy buildings would significantly increase the housing supply for the most budget-constrained renters.

It can be helpful to think of housing as a ladder, with the nicest mansion at the top and homelessness being when someone has fallen off the bottom rung of the ladder completely. One of the reasons that certain parts of the country have such high homelessness is that they've sawed off the bottom rung of the ladder entirely: single-room occupancy (SROs).

SROs are buildings that rent a single room to the tenant, and the tenant has access to a shared bathroom and kitchen. Historically, these were the cheapest accommodations one could get in American cities. They have never been fancy, but they were a safe place to sleep and store minimal possessions, with a door that locks, and access to basic hygiene and cooking facilities. In other words, they were miles better than being homeless. But after World War II, cities across the country <u>either outright banned them or made them de facto illegal</u> through zoning. This plays an important role in the high levels of homelessness seen in many American cities; when you chop the bottom rung off the housing ladder, a lot more people are going to fall into homelessness.

As Andrew Justus of the Niskanen Center <u>put it:</u> "While homelessness has myriad causes and individual struggles with homelessness are diverse, it is hard to ignore the correlation between the postwar decline in single-room rental supply and the massive increase in homelessness that began in the 1980s as the available stock of single-room rentals waned. Mass individual homelessness in its modern urban form was essentially unknown in America before 1980."

Re-legalizing SROs would be especially beneficial in high homelessness states. The homelessness rate for the median state is <u>11 per 10,000 residents</u>. But some states perform much worse. There are 5 states with homelessness rates of <u>more than 40</u> unhoused people per 10,000 residents: New York (52), Vermont (51), Oregon (48), California (46), and Hawaii (43). Except for Alaska, no red states are above <u>19 per 10,000</u> and many are below 10 per 10,000.

A broad federal takeover of any form of zoning is likely not politically possible or even desirable, but SRO housing is an area ripe for federal intervention. Under the 1968 Fair Housing Act, the federal government is obligated to "affirmatively further fair housing." This means that the federal government has the legal

authority to require these states to allow SROs to be built until and unless they increase their housing production such that their homelessness rates fall.

There is an opportunity for bipartisanship here. If Republicans understand that there is essentially zero chance that an SRO-legalization law applies to their states, they will be more likely to support it. Most blue states are also well below the 40 per 10,000 threshold. An SRO-legalization bill could unite Republicans and most Democrats, and any of these five states that disliked being singled-out in this way could always fix their housing policies to bring their homelessness rates down.

If that is politically infeasible, a less punitive approach would be for the federal government to provide financial incentives to states and cities with high homelessness to re-legalize SROs.

6: Remove the Chassis Rule for Small Manufactured Homes

Recommendation: Congress should strike the phrase "and is built on a permanent chassis" from the Definitions section, Manufactured Homes subsection of the National Manufactured Home Construction and Safety Standards.

Removing the chassis rule would facilitate the construction of more small manufactured homes and so would bring housing costs down, particularly in exurban and rural areas.

Much of the housing discourse focuses on urban areas and building multifamily housing, but there are people in exurban and rural areas struggling with housing costs too. There, the best way to help with affordability is to remove the unnecessary regulatory barriers standing in the way of small manufactured homes (SMH). Often left out of today's housing discourse, SMHs are providing <u>8.4 million</u> affordable homes in the United States.

Small manufactured homes, often colloquially called mobile homes or trailers (even though they are not meant to be moved or pulled behind a vehicle) are the lowest cost form of single-family homes. There are often negative, classist stereotypes around SMHs and the people who live in them. But the families who live in SMHs are good people who face affordability challenges just like their counterparts in urban and suburban neighborhoods. We owe it to them to consider housing policy that addresses their needs as well.

One issue that needs to be addressed to increase SMH affordability is the chassis rule. During the Great Depression, itinerant Americans looking for work would affix some form of very basic shelter to a chassis and tow it behind a vehicle as they searched for work. Because these shelters had no real sanitation facilities, local zoning rules were often adjusted to ban them.

Unlike those trailers, later small manufactured homes were much higher quality and were not intended to be moved, but the National Builders Code, which was created in 1974 with significant lobbying from developers of stick-built homes, still requires small manufactured homes to have a permanent chassis. As a working paper from the Federal Reserve notes:

"The permanent chassis requirement has a significant negative impact on the industry. First, by requiring a chassis, the regulation endeavors to make the small modular home resemble a trailer, linking the prejudices of trailers with small-modular homes. Second, since the house has a chassis, local zoning laws can often be applied to block it from the local area. Third, since it has a chassis, it's argued that it can be moved (though they aren't moved), so that the houses are financed as cars (with personal loans) and not real estate. Fourth, the regulation increases the cost of manufacturing the house."

Removing the chassis rule would make small manufactured homes more attractive, lower in costs, more widely available, and easier to finance. Removing the chassis rule is a good place to start too because it is part of federal, rather than state and local, regulations. For Congress, the legislative fix is easy, requiring only that lawmakers strike "on a permanent chassis" from the definition of a manufactured home in the National Builders Code, and that HUD and the Manufactured Housing Consensus Committee revise their rules to accommodate off-chassis construction. Another area of potential reform is that programs that subsidize the construction of small homes typically exclude small manufactured homes.

This will help level the playing field for manufactured homes. As Matt Yglesias argues, once the chassis has been removed, "every other aspect of the law – zoning, mortgages, etc. – should draw no distinction between a house built in a factory and placed on a foundation and a house built on-site." This would be a big win for lower-income Americans in exurban a nd rural areas.

D. Globalization Makes Housing Construction Cheaper

1. Free Trade With Free Countries: Building Inputs

Recommendation: Congress should amend 19 U.S. Code §1677 (7), which governs trade remedy law, such that it includes a Consumer Welfare Test that ensures that imposing antidumping and countervailing duties does not impose greater hardship on American consumers that it does benefits to American producers. This would part K to that subsection and could read something like "Before recommending the imposition of anti-dumping or countervailing duties, the Commission shall determine that the benefits of such duties to the domestic industry substantially outweigh the potential harm to consumer welfare in terms of price and product availability and, when making this assessment should consider the impact both for end users and for downstream industries."

Another major construction cost is the building materials themselves. Unfortunately, federal policy makes these a lot more expensive than they need to be. There are tariffs (i.e. taxes) on virtually everything that goes into building a home: lumber, cement, tile, quartz, nails, rebar, washing machines, solar panels, flooring, sinks, steel pipe, cabinets, and more. Lumber is perhaps the most important input to building homes. Canada, our neighbor and closest ally, is a major producer of lumber, which should make this building material accessible and cheap, but the U.S. places a 14% tariff on Canadian softwood lumber. In 2021, homebuilders asked Congress to at least temporarily lift tariffs on construction inputs from Canada. Congress did not oblige.



This is not a small problem. Materials comprise about half of the construction cost of new housing development once it has made it through the regulatory process. Because zoning is usually less of a problem in exurban/rural areas, these tariffs are, relatively, a much worse impediment to housing construction there.

U.S. trade remedies laws around antidumping and countervailing (AD/CVD) expressly forbid agencies from taking consumers' interests into account. Congress should reform the antidumping and countervailing duties laws to change that. If that proves politically impossible, Congress can at least make those reforms with regards to lumber and other key building materials.

2. Immigrants are Critical to the Construction Industry

Recommendation: The President should not order immigration authorities to conduct mass deportations.

Migrant workers account for approximately 40% of all construction workers and an even higher percentage in certain occupations. Undocumented migrants represent 23% of all construction workers and an even larger share of specific jobs, including 38% of drywallers, 32% of roofers (a particularly dangerous job), 29% of painters, 25% of brickmasons, and 24% of floor and carpet installers. Immigrants are building America, as they always have.

Researchers have found that deporting undocumented immigrants leads to a substantial reduction in home building. Contrary to popular myth about immigrants taking jobs, those researchers found that these immigrants were complements to rather than substitutes for native-born construction workers. Simply put, migrant workers often perform dangerous, difficult, necessary jobs that native-born workers do not want to do. So, deportation of these workers can halt an entire project, reducing employment for native-born workers as well. This is in line with other research showing that deportations kill more jobs for native-born workers than they create.

Immigration enforcement that disrupts the construction workforce means higher home prices. This is another area, like trade policy, where the federal government can play the lead role. Whatever one thinks of overall immigration policy, we need migrant workers if we are going to build out a lot more housing.

E. Summary

| What Can the Federal Government Do? | What Can State and Local Governments Do? |
|--|---|
| Technical Assistance and Grants Fiscal Carrots and Sticks on Local and State Zoning Create Streamlined National Standards for Mass Timber Re-Legalize Single-Room Occupancy Buildings in States with High Homelessness Eliminate the Chassis Rule for Small Manufactured Homes Remove or Reduce Tariffs on Imports From Allies of Key Construction Inputs Ensure that Immigration Enforcement Doesn't Undermine Homebuilding | More Mixed Use Zoning Duplex/Triplex Reform ADU Reform Eliminate Parking Minimums Embrace Five-Over-Ones Single-Stair Reform Adopt the IBC 2021 Standards for Mass Timber |

III. ENERGY AND INFRASTRUCTURE:

A SOCIETY THAT BUILDS



A. The Problem

America's energy and infrastructure challenge sits at the confluence of several factors.

The first is that energy is a crucial input for everything else. It's how we keep the lights on, the factories producing, the cars moving, and the air conditioning running. Consequently, it's a big cost component for families; it comprises 7% of the Consumer Price Index.

Second, demand is projected to continue rising. Rapid advances in artificial intelligence and cloud computing mean that there are more and bigger data centers that have to be constructed. That adds to electricity demand. A gigawatt of electricity is about what is produced by a large nuclear power plant. In 2017, data centers needed nine gigawatts of electricity. By 2029, they are expected to need 32 gigawatts.

As climate change continues, there is greater demand for air conditioning. The building of clean tech manufacturing means more electricity demand. Utilities projections of how much electricity these kinds of factories will need over the next five years has doubled and will likely grow further.

Third, even while energy abundance is critical to affordability and growth, we want as much of that energy as possible to be green in order to mitigate climate change. There's a big environmental difference between a 2.8C rise and a 2.1C rise in global temperatures. And that will require a lot of new infrastructure.

Fourth, the American public wants to address climate change but is ambivalent to hostile to costs being allowed to rise in order to fight climate change. It is worth noting too that less affluent Democrats are more moderate on environmental issues than rich Democrats.

Fifth, the Biden/Harris administration already passed the Inflation Reduction Act, which was the largest investment in climate technology in America's history. There is much to like about it, but given that the IRA has already happened, and given how high the current federal budget deficit is, a second big spending package on green energy and infrastructure is unlikely to materialize. Therefore, if Democrats want to promote green energy abundance in order to lower Americans' cost of living while simultaneously taking further climate action, we will need to look to regulatory policy to deliver that.

In this section, we argue that reforms in four areas (Building, Transmission, Inputs, and Transportation) can do that.

- First, we explain how changes to NEPA, the Jones Act, the Nuclear Regulatory Commission, and refrigerants can make it easier and cheaper to **Build** abundant green energy.
- Second, we look at how policy changes can make it cheaper and easier to Transmit green electricity from where it is produced to where it is needed.
- Third, we examine how policy reforms can unlock greater production and greater imports of key green energy Inputs.
- Finally, we lay out how better procurement policies and facilitating work-from-home coupled with more bike lanes and more autonomous vehicles can make it easier and cheaper both for the government to build necessary **Transportation** infrastructure as well as cheaper and easier for Americans to get around.

A2. An Updated Environmentalism That Builds

The first Earth Day was in 1970, fifty-four years ago. Since then, environmentalism has had some impressive successes. Since 1980, carbon monoxide is down 80%, sulfur dioxide is down 93%, lead in the air is down 99%, cap and trade effectively addressed acid rain, the Montreal Protocol stopped and then reversed ozone layer damage, and 99% of species on the Endangered Species List have been saved. The median lead level in children's blood in the United States is less than 5% of what it was in 1978. Deforestation is down and global tree cover is up. We have a Clean Water Act, a Clean Air Act, and the Inflation Reduction Act (the Green New Deal in all but name).

Regrettably, much of that late 60s/early 70s environmentalism came with an anti-capitalist streak that remains a part of environmentalism today. Many progressives continue to believe that effectively addressing climate change requires some kind of fundamental reordering of our political and economic system. Lately, the far-left has even ventured into "degrowth", the insane idea that, in order to beat climate change, we must sacrifice or even reverse economic growth.

That argument has a number of serious problems. For starters, it isn't necessary. More than 40 countries including the United States, have decoupled their economic growth from carbon dioxide emissions. Moreover, the public hates the idea of sacrificing economic prosperity for climate action. A political party that actually embraced degrowth as a governing philosophy would face electoral obliteration. Not to mention the fact that would require an unprecedented level of central planning and coercion. Also, whatever the pretensions of degrowth advocates, the consequences of scarcity, self-imposed or otherwise, fall hardest on those at the bottom rather than those at the top.

The question before us is not how to convince people to have less but how to fully decouple growth from carbon emissions and how to unleash innovation and green energy production such that reducing emissions and raising living standards go hand-in-hand. To do that, we have to build.

A great start on this is The Energy Permitting Reform Act of 2024 sponsored by Senators Manchin and Barrasso. The bill is an excellent, bipartisan, all-of-the-above approach to energy. It calls for a wide variety of different policy changes.



It would establish a 150-day judicial review 'shot clock' (Title I) and require FERC to assess any future federal regulations' impact on reliability (Title V). It would set deadlines on decisions on liquified natural gas exports (Title VI) and would allow for extensions of construction deadlines for hydropower projects (Title VII). It requires the Secretary of the Interior to have at least one offshore wind lease sale and at least one offshore oil and gas lease sale per year (Title III). The bill's other two Titles related to onshore permitting (Title II) and transmission (Title IV) are arguably even more ambitious.

With regards to accelerating permitting for onshore energy projects, it:

- Streamlines oil and gas leasing.
- Extends drilling permits from three-year to four-year.
- Expands Indian tribes' ability to grant right-of-way access on their land if they choose to do so.
- Instructs the Secretaries of the Interior and Agriculture to promulgate rules for categorical exclusions for low-disturbance renewable energy projects and for certain electrical transmission upgrades.
- sions for low-disturbance renewable energy projects and for certain electrical transmission u
- Sets a goal of 50 gigawatts of renewable energy on federal land by 2030.
- Streamlines leasing and permitting for geothermal energy.
- Clarifies rules for locating critical minerals mines on public lands.

With regards to electricity transmission, it:

Amends the Federal Power Act to streamline permitting for electricity transmission.

Expands FERC's authority to issue permits for electricity transmission projects it deems to be in the national interest.

- Updates cost allocation procedures.
- Designates FERC as the lead agency for the purposes of interstate and interagency coordination.
- Clarifies that FERC's interregional transmission plans are not a "major federal action" for the purposes of NEPA.

This bill is great. There are even more reforms needed though.

B. Building

1. Permitting

Though it was not intended to be when it was written in 1970, the National Environmental Policy Act (NEPA) has become a major problem for green energy project construction. NEPA and its state-level equivalents have blocked or delayed wind energy off of Cape Cod, a geothermal energy project in Nevada, congestion pricing in New York City, solar power in Nevada, a light-rail project in Seattle, upzoning in Minneapolis, wind energy in Wyoming, and much more. NEPA makes it so that a geothermal project needs up to six different lengthy, complicated, costly assessments that make it take 7 to 10 years to complete. There are currently 42 megawatts of offshore wind energy in operation along America's coast; there are more than 20,000 megawatts worth of wind energy projects stuck in the permitting process.

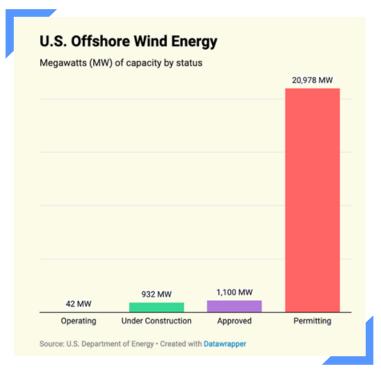


Image Credit: Institute for Progress.

Many federal projects are required to go through NEPA review even if they have no plausible environmental impact at all. During the Great Recession, President Obama's key stimulus package, the American Recovery and Reinvestment Act, got stymied by 192,705 NEPA reviews. In addition to all of the holdups, NEPA has a chilling effect; many developers and investors shy away from green energy because they fear the relentless delays and headaches that NEPA will cause.

State-level permitting can also be a problem. SNCF, the French national railway tried to help California build high-speed rail but ultimately couldn't navigate the state's byzantine maze of regulations and left in 2011. As Dan McNamara, a project manager at SNCF, recalls "SNCF was very angry. They told the state they were leaving for North Africa, which was less politically dysfunctional. They went to Morocco and helped them build a rail system." Morocco got a bullet train in 2018. California still doesn't have one. With regards to their 'baby NEPAs', state governments should implement reforms similar to the Congressional recommendations described above.

2) The Jones Act, Wind Energy, Outside the 48, Home Heating, and Heat Pumps

Recommendation: Congress should repeal The Merchant Marine Act of 1920 ("The Jones Act") or should create significant exemptions to it with regards to Hawaii, Alaska, the five overseas territories, liquified natural gas, and wind turbine installation vessels (WTIVs).

The Merchant Marine Act of 1920, more commonly known as The Jones Act, inhibits the construction of offshore wind energy. Building these projects requires specialized construction ships known as Wind Turbine Installation Vessels (WTIVs). These special ships take major components like the tower and the blades from a port to where they will be installed.



The Jones Act exacerbates this bottleneck, requiring that only U.S.-owned and U.S. flagged ships may transport goods between U.S. ports. That leaves only one Jones Act-compliant WTIV in existence, which forces offshore wind builders to use a complicated, inefficient feeder barge system that drives up costs and so discourages wind energy buildout. The lack of WTIVs has forced developers to cancel planned wind energy projects and creates an invisible graveyard of an untold number of wind energy projects that were never pursued in the first place.

Of the more than 60,000 ocean-going commercial ships today, only 99 of them are Jones Act-compliant to ship goods between states. This drives up the cost of everything that has to be shipped to Alaska, Hawaii, and the five overseas territories (Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands). The Jones Act hurt them quite badly. For example, it costs Hawaiians more than \$1 billion a year. Residents of these places are American citizens and so if we're thinking about how to address high cost of living for Americans, this is something that should be at the top of Congress' agenda.

Meanwhile, natural gas is used to heat many of the homes in the Northeast and so, during winter, demand for natural gas there rises. The Jones Act makes it impossible for foreign-operated or foreign-flagged ships to move liquified natural gas between states. If they can be found at all, using Jones Act-compliant ships costs three times as much as a foreign-owned ship would; these costs get passed onto consumers. New England governors have asked for a waiver from the Jones Act so their citizens may more affordably stay warm in the winter. These waiver requests have not been approved.

Pipelines that could move natural gas to the Northeast have been stymied by the permitting challenges discussed in the previous section. To summarize, many U.S. consumers need natural gas to heat their homes during winter except -via excessive environmental regulations- we've made it harder and more costly to pipe natural gas to them and also -via the Jones Act- we've made it harder and more costly to ship natural gas to them. Moreover, by slowing the adoption of natural gas as a heat source, these rules prolong the use of heating oil in Northeast, which is much dirtier than natural gas.

Ideally, Congress would repeal The Jones Act entirely, but at least for the purposes of this discussion, waivers for offshore wind production, transportation of liquified natural gas between states, and full exemptions for Alaska, Hawaii, and the overseas territories would be a good start.

3) Nuclear

Recommendation: To further facilitate nuclear energy, the Nuclear Regulatory Commission needs to allow firms to continuously use developed, practiced designs repeatedly so that they can advance down the learning cost-curve and should streamline the Part 52 Process.

Nuclear energy has many advantages. It takes up far less land than wind and solar, it produces emission-free energy, and the amount of nuclear waste it creates (about 3 cubic meters per year per million people served) is very small and something we have lots of experience handling safely. Building more nuclear power in a cost effective way is not impossible. France gets about 70% of its electricity from nuclear energy. But here in the United States, we've made it very expensive to build new nuclear power plants; South Korea builds nuclear power for roughly one-third the cost of what we do.

This is especially problematic because for nuclear plants, the major cost is construction, not the fuel cost as is the case for fossil fuel plants. That means reducing construction costs would dramatically lower the cost of the electricity generated by nuclear, increasing access to affordable, abundant, green energy.

So why is nuclear so much more expensive in the United States than France? The first reason, as outlined by Brian Potter of the Institute for Progress, is that regulation increased a lot from the late 1960s to the late 1970s, and this necessitated higher labor costs, especially for expensive skilled labor such as engineers and managers, doubling the amount of labor, material, and equipment and tripling the amount of engineering services that go into a plant. Second, bespoke quality control requirements force nuclear builders to use special nuclear-grade components and materials even though they can cost 50 times more and there are no performance differences.

Third, new Nuclear Regulatory Commission (NRC) requirements are often applied not just to new plants but also to plants already under construction. That forces the company building a plant to go back several steps, redesign, and rebuild that part of the process. In 2009, Westinghouse was forced to go back and redesign its containment shells to withstand an aircraft strike, which caused delays and cost increases on two in-progress power plants.

All of these continuously changing regulations create the problem of FOAK (first-of-a-kind). A former chairman of the U.S. Nuclear Regulatory Commission once joked that in France they have hundreds of kinds of cheese but only two kinds of nuclear reactors, whereas in the United States it's the reverse. It is generally understood that, like anything else, the first time you build a certain kind of nuclear reactor it is going to be quite expensive but then the costs drop as the project managers and engineers build that same kind of reactor more and more. In France, nuclear reactors come in three standard types. That standardization brings down cost. In the

United States it's the reverse. It is generally understood that, like anything else, the first time you build a certain kind of nuclear reactor it is going to be quite expensive but then the costs drop as the project managers and engineers build that same kind of reactor more and more. In France, nuclear reactors come in three standard types. That standardization brings down cost. In the United States by contrast, essentially every new nuclear reactor is the first of its kind, eliminating the cost-saving part of the learning curve.

All of these cost increases mean that several nuclear plants already under construction have been canceled and many fewer are built than would otherwise be the case. One specific way to promote standardization would be for for the NRC to streamline the Part 52 Process for Combined License Applications and Design Certification to better accommodate standardized designs.

Success Story: The U.S. Navy and the ADVANCE Act

The U.S. Navy has built more than 200 nuclear ships and more than 500 reactor cores, all with zero reported reactor incidents. It has more experience building nuclear reactors than any other organization in the world and it has a strong track record of controlling costs and safely finishing construction on-schedule. How did it do that? It focused on keeping costs down (something the NRC does not do), repeated designs, and leaned into moving down the learning cost curve rather than doing FOAK-style new design parameters each time. That worked. The builders of the Virginia class nuclear submarine were, over time, able to cut over 100,000 labor hours from the construction process by learning from experience, simplifying design, and automating.

There is some room for hope here. the Bipartisan Infrastructure Law appropriated \$2.5 billion for Advanced Reactor Demonstration Projects. Small-modular nuclear reactors are also showing a great deal of promise. Congress recently passed and the President signed the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act, which among other reforms, facilitates development of Advanced Reactor and small-modular nuclear reactors. The ADVANCE Act:

- Requires the NRC to process applications more quickly
- Gives the NRC flexibility to hire staff to speed up licensing
- Reduces fees for some applicants

Requires the NRC update its mission statement to not "unnecessarily limit" the use of nuclear energy. The recommendations mentioned above can build upon the helpful reforms in the ADVANCE Act.

4) Better Air Conditioners and Heat Pumps

Recommendation: The President should invoke the Defense Production Act to permit IEC recommendations on hydrocarbon refrigerants as an exception to the UL recommendations which maintains the older, now outdated standard on those refrigerants in heat pumps.

The vast majority of U.S. air conditioners and heat pumps use hydrofluorocarbons (HFCs), particularly HFC-410a, as their refrigerant. When HFC-410a is released into the atmosphere, it is more than 4,000 times as potent of a greenhouse gas as carbon dioxide. But there's a new, better alternative.

In 2022, the International Electrotechnical Commission (IEC), the international body that sets standards for home appliances, voted to allow hydrocarbons like propane to be used as refrigerants for the first time. The United States was part of the IEC vote in 2022 and voted for the change.

These hydrocarbons have been used safely in refrigerators for many years now, showing that they do not pose an elevated safety risk, and they have less than one-one thousandth the greenhouse gas impact as HFCs. Other countries are quickly updating their building standards to allow for heat pumps and air conditioners that use these hydrocarbons.

Not only that, these hydrocarbons are cheaper to produce than HFCs and more efficient than other refrigerants. Refrigerant-grade propane costs about \$7 a pound to produce, and that price is likely to come down a lot as economies of scale are achieved (combustion propane which is already done at scale can be produced for about \$1 a pound). By contrast, synthetic refrigerants typically cost between \$40 and \$60 dollars per pound to produce. Additionally, as regulation on HFCs gets stricter, that makes hydrocarbons comparatively more attractive. That could make air conditioners and heat pumps cheaper for consumers.

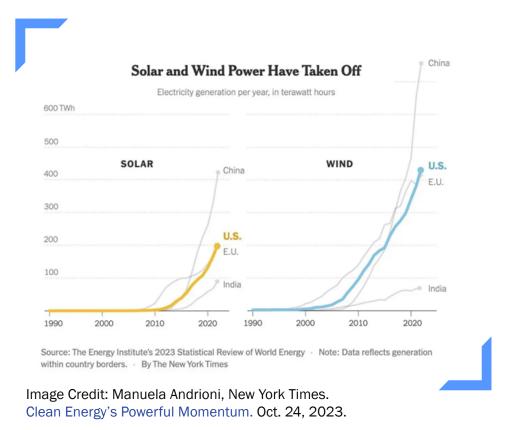
But, before these hydrocarbons like propane can be used as refrigerants, UL Solutions (UL) and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) need to update their safety standards. The UL and ASHRAE process for updating their standards typically takes years. And the UL Standards Technical Panel and ASHRAE, which both must vote to allow these hydrocarbons, are primarily comprised of producers who benefit from the status quo and would be economically threatened by the widespread adoption of these new hydrocarbons.

Fortunately, there is a fast and effective way to get around this problem: the Defense Production Act. The President can use that to allow the new IEC standard as an exception to the UL standard.

C. Transmission

Recommendation: The President should invoke the Defense Production Act to permit IEC recommendations on hydrocarbon refrigerants as an exception to the UL recommendations which maintains the older, now outdated standard on those refrigerants in heat pumps.

Solar and wind energy production capacity are accelerating at a remarkable rate, which is good because more clean energy production increases the supply of electricity, bringing down costs for consumers, helping reduce carbon emissions, and fighting climate change.



There's a problem though. The places where it makes the most sense to build a lot of this new green energy are frequently not close to the places where people want to consume that electricity.

Here's a map of solar energy potential in the United States. Parts of the Southwest are a solar bonanza but, except for Phoenix and Las Vegas, there aren't many cities there. The electricity that solar energy creates needs to be moved to elsewhere in the country.

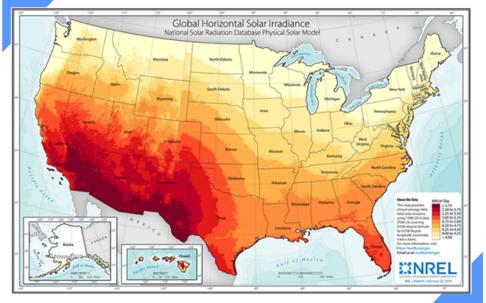


Image Credit: Energy Information Administration.

Here's a map of wind energy potential in the United States. It's strongest in the Great Plains. Again, that's an incredible resource, but there aren't many cities there. The electricity it creates will need to be transmitted across significant distances to other parts of the country.

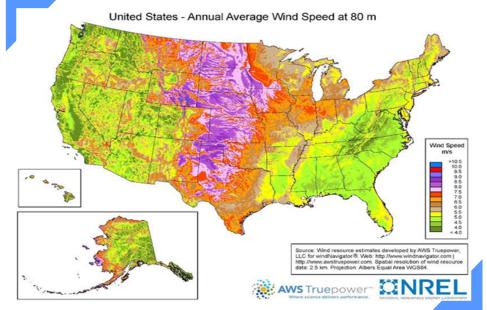


Image Credit: Energy Information Administration

What we need are high-capacity electricity transmission lines to efficiently move that electricity. And we need a lot of them. The United States currently has about 150 million MW-miles of transmission capacity in operation today; we probably need another 100 to 120 million MW-miles installed to meet the forecasted surge in electricity demand. Unfortunately, our current approach of state-by-state transmission planning and permitting is not on track to deliver.

The benefits of a different approach could be enormous. Compared to our current approach, inter-state coordination and transmission expansion could cut the cost of delivering green energy by up to 46% and save American consumers up to \$47 billion annually.

In particular, high-capacity transmission delivers great efficiency. As this graphic from Americans for a Clean Energy Grid shows, one 765 kilovolt (kV) has a cost per unit of capacity that is less than a quarter of what 230 kV can deliver; its higher voltage means there's less load loss, and it takes up far less right-of-way space than smaller capacity transmission.



The problem is that the construction of high-capacity transmission lines is rapidly going down rather than up. In the first half of the 2010s, the United States was constructing 1700 miles of high-capacity lines per year. In the second half of the 2010s, we were building 645 miles per year. In 2022, we built a paltry 198 miles.

The lack of transmission is already having an impact on building out wind and solar energy. Thousands of wind and solar projects are facing multiyear delays because, if they were built now, there'd be no way to transmit the energy they produce

The Three P's of electricity transmission are planning, paying, and permitting. In May 2024, the Federal Energy Regulatory Commission (FERC) took a major stride on **planning** and **paying**. It passed Order 1920 which, in the words of Breakthrough Energy, "might be considered the most significant regulatory milestone" concerning interstate power lines in nearly three decades. Order 1920 updates cost allocation rules and encourages long-term, regional transmission planning. FERC, and the Biden/Harris administration appointees who made the key votes to get these orders passed, deserve a lot of credit for this.

Unfortunately, **permitting** remains a major challenge as high-capacity lines must navigate a labyrinth of different states' siting, permitting, zoning, land use, eminent domain, and environmental laws. Studies by the Department of Energy, FERC, and independent researchers show that this patchwork of regulations adds

considerable complexity, time, and costs to building transmission lines. They impede reliability improvements, open up opportunities for local political obstruction, inhibit interstate cooperation, and make financing difficult due to additional uncertainty. It's worth noting that the permitting time is actually longer than the construction time. In other words, it takes longer to get permission to build these lines than it does to actually build them.

We can do permitting differently and we already do it differently...when it comes to natural gas pipelines. Unlike with high-capacity electricity transmission lines, FERC oversees a centralized process for siting interstate natural gas pipelines. This helps streamline and expedite construction, and federal eminent domain laws apply, so it is much easier to acquire right-of-way. Without this system, the natural gas boom unleashed by hydraulic fracturing would have been largely moot.

We need Congress to overhaul high-capacity, long-distance electricity permitting and **place it fully under FERC's jurisdiction.** Some areas of policy are of such national importance that we do not allow state-level preferences to stand in the way of what's best for the country as a whole. Electricity transmission, like natural gas transmission, should be understood as one of those policy areas. Several bills currently under consideration such as the Promoting Efficient and Engaged Reviews (PEER) Act sponsored by Senators Carper and Schatz and the Clean Electricity and Transmission Acceleration Act sponsored by Representatives Casten and Levin make this proposal.

While Congress is working on that overhaul, one way the federal government could try for an early harvest of this national siting would be to try to co-locate as much of this new high-capacity electrical transmission as possible along interstate highways, which the federal government already has significant power over through the Federal Highway Administration (FHWA). The FHWA gives states the ability to co-locate utilities along federal highways but this is usually for local electricity transmission purposes.

To more clearly authorize the construction of high-capacity long-distance electricity transmission lines, new legislation from Congress clarifying this is likely needed. Representative Sean Casten has, in particular, been a forward-looking champion of this reform. States can do this too if they want; in 2010, Maine designated energy corridors to this effect.

Importantly, a 765 kV line only needs 200 feet of right of way. That makes them **much easier to place along interstate highways** than the 900 feet of right of way needed by six 345 kV lines. Co-locating them along interstate highways would have the added benefit of enabling more Level 3 Direct Current Fast Charging (DCFC) stations for electric vehicles.

D. Inputs

1. Green Steel and Green Concrete

Recommendation: The most important factor in green steel being more commercially competitive and possibly bringing down the overall cost of steel production is electricity. Therefore, the most important thing federal policymakers can do to accelerate the rollout of green steel is to support the energy production and transmission policy reforms discussed above.

An additional way to help accelerate the development of green steel and green cement would be for Congress to streamline the application and approval procedures for the Industrial Demonstrations Program. This would lower administrative burdens on businesses in these industries.

One way we can combine climate action with a supply-side orientation is to facilitate the rollout of green steel and green cement. Steel is one of the most important building inputs in our society and traditional steel is very carbon-intensive (making one ton of steel produces 1.85 tons of carbon dioxide). It is for this reason that steel production makes up 8% of all global carbon emissions. If we are going to be a society that builds affordably while effectively addressing climate change, we need a greener form of steel.

Fortunately, we already have a way to do that. Steel manufacturers have developed a new process called molten oxide electrolysis that uses electricity to eliminate the need for coke and other carbon-emitting steps in the steelmaking process. As long as the electricity is green, this form of steelmaking is essentially zero-carbon. Because it is dependent on high volumes of electricity, whether or not this form of green steel is cost-competitive with traditional steel is a function of electricity prices. Estimates suggest the breakeven point is somewhere between 15 and 30 dollars per megawatt-hour. The upshot of this is that if we can get green energy to be abundant enough and thus cheap enough, green steel is not only carbon-free but cheaper to produce than traditional steel.

Scientists have also found new ways to make green concrete that sequesters 45% of the carbon produced making the concrete without sacrificing strength or structural integrity. This technology is less advanced than green steel but shows it is not inevitable that materials must always be as carbon-intensive as they have traditionally been, which means that having an abundant affordable society and having a society where prosperity walks lightly on the Earth are two things that can in fact go together.

2.Free Trade in Green Goods

Recommendation: The President, through the U.S. Trade Representative's Office, should negotiate an Environmental Goods Agreement that will reduce tariffs on green goods like wind turbines and solar panels. This agreement should take the form of a sectoral plurilateral akin to the successful expansion of the Information Technology Agreement in 2016.

Solar panels are twice as expensive in the United States as abroad, mostly because we impose significant tariffs, i.e. import taxes, on them. This not only makes electricity generation more expensive than it needs to be, it costs Americans jobs. Most solar jobs are not in production (which is highly automated) but rather in installation and maintenance (which is much harder to automate); in 2022, there were more than five jobs in solar installation and maintenance for every one job in solar panel production.

We should help lower costs for American electricity consumers, create jobs for American workers, and reduce emissions reductions by extending the solar panel tariff exemption in place for Cambodia, Malaysia, Thailand, and Vietnam until June 2024.

The United States can also promote trade liberalization in green goods and reduce costs for consumers by completing a deal on an Environmental Goods Agreement (EGA). Negotiations on an EGA started in 2014 and made progress through 2015. By the end of 2015, participating countries had mostly agreed to a list of approximately 350-375 goods that would qualify as green goods for tariff reductions. This list includes goods like solar panels, wind turbines, water heaters, heat pumps, bicycles, and other items that help reduce greenhouse gas emissions. Unfortunately, an EGA could not be completed during the Obama administration and has stalled since then despite the fact that the President has broad authority to complete such an agreement without congressional approval.

3. Make It Easier to Mine Critical Minerals

Recommendation: Congress should restore the Bureau of Mines and should pass the Global Strategy for Securing Critical Minerals Act of 2024.

The United States, under the Biden/Harris administration, produces more oil than any country ever. They get it. To be an economic powerhouse and to bring down cost-of-living, we have to be willing to pull resources from the ground if that is what our economy needs. What's true for oil is also true for critical minerals.

The abundant green energy future we want relies on minerals like lithium, cobalt, terbium, niobium, among others. Those minerals have to come from somewhere. The good news is that we already have a lot of those minerals here in America. There's been a massive new lithium discovery in California, a huge find of neodymium and praseodymium oxides and terbium in Wyoming. The world's second largest deposit of copper is in Minnesota, there's a large thorium deposit in New Mexico, and there are more rare earth elements in Texas.

As recently as 1990 we were the largest producer of critical minerals in the world. Now we're not. When we collectively choose to disallow mining those critical minerals here, that means they get mined elsewhere, often either in China where they bolster the power of our chief geopolitical rival or sub-Saharan Africa where labor rights and environmental protection are essentially nonexistent.

As Kite and Key Media explains, "unless we want to abandon all of our sophisticated technology, our dreams of a cleaner energy future, or even our ability to protect our military, we have no choice but to depend on the people we send into mines. They could be laborers working under the thumb of the Chinese Communist Party and children pressed into servitude in the Congo, or they can be Americans working high-tech mines in places like Texas, Alaska, and Idaho."



Some lawmakers in Congress are working to ensure that we can take advantage of these resources. The "Global Strategy for Securing Critical Minerals Act of 2024", a bipartisan bill co-sponsored by Senators Warner (D-VA), Rubio (R-FL), Hickenlooper (D-CO), Coons (D-DE), King (I-ME), and Kelly (D-AZ)), aims to promote access to critical minerals. The legislation supports U.S. firms' critical mineral projects abroad, support of those projects through the U.S. International Development Finance Corporation, and in greater cooperation and information sharing with allies with regards to critical minerals.

This is an excellent start. Some of the NEPA reforms we discussed in the Building section might be leveraged here as well. NEPA reviews have held up a copper mine in Arizona that could satisfy a quarter of U.S. demand as well as a major lithium mine in Nevada. The United States has the second longest mine development time from first discovery to first production in the world. Canada and Australia, two of our peer countries, open mines far faster than we do while still protecting their environments.

Another avenue of reform could be to restore the Bureau of Mines. The Bureau of Mines was closed in 1996 due to budget cuts. Bringing it back could consolidate permitting, fund innovation in mineral collection that enhances environmental protection and lowers costs, and help us compete with China.

E. Transportation

1. Procurement

Recommendation: State and local governments can do their public infrastructure procurement more efficiently by building smaller stations for rail, use more cut-and-cover construction methods and tolerate the above-ground disruption, and use standardized designs wherever possible.

The United States has one of the highest per mile costs in the world for constructing rapid rail transit, even though states and localities specifically avoid tunneling because we are so bad at building tunnels at a reasonable budget. according to research from the Transit Costs Project at the NYU Marron Institute and the Eno Center for Transportation. Spain builds rapid rail transit for a fifth of what the United States does. For tunnel projects, the United States spends more per mile than anywhere else in the world, and ten times as much as Norway.

The 2nd Avenue Subway extension in New York City cost \$2.6 billion per mile; Copenhagen, Madrid, and Paris recently completed projects for \$323 million, \$320 million, and \$160 million per mile. Austin, Atlanta, New York City, and Philadelphia have all been forced to delay, scale back, or cancel important infrastructure projects due to exorbitant costs. Nor is this limited to rail transit. The same factors that make rail more expensive to build also drive up highway construction costs.

Why does this happen? The core problem driving costs in procurement is that special interest groups and government officials seek to accomplish a wishlist of goals with one infrastructure project rather than focusing exclusively on building the infrastructure to be high-quality and cost-effective. Ezra Klein famously dubbed this "Everything Bagel Liberalism."

Environmental goals, special favors for labor unions, protectionist 'make more stuff here' mandates, job creation side quests, extra efforts not to cause short-term disruption, fees paid to consultants, and more contribute to inefficient spending. While some of these goals may be individually laudable, together they make high-quality infrastructure prohibitively expensive.

There are a depressing number of semi-famous examples of this. There is La Sombrita, a bus stop shade post in Los Angeles that provides near-zero shade or light but still managed to cost \$200,000. There's the toilet that

San Francisco planned to build for \$1.7 million before public backlash. There's the Washington Mall Carousel that closed in 2023 for maintenance but won't be operational again until 2026. And Boston's "Big Dig," completed a decade late with cost overruns amounting to 190% of its original pricetag. The list could go on and on.

There are certain things state and local governments can do to make infrastructure spending more efficient. They can build smaller stations for rail infrastructure since it is the stations that often comprise a disproportionate share of the spending. They can use more cut-and-cover construction methods and tolerate the above-ground disruption. They can take a page from the French playbook on nuclear energy and standardize designs wherever possible. The permitting reforms discussed earlier would help too.

As important as any policy change though, there needs to be a culture change and viewpoint shift at all levels of government where officials stop viewing infrastructure as a way to create jobs and spend money and do a variety of other tasks and instead focus exclusively on delivering value for taxpayers.

2) Airline Cabotage

Recommendation: Congress should amend the Airline Deregulation Act of 1978 and U.S. Code Title 49, Subtitle VII, Section 41703 to allow international airlines cabotage in the United States.

The U.S. government bars foreign airlines from serving the domestic market. That blocks competition for U.S. firms and so leaves the consumer with fewer options and higher prices. The EU has much more liberal cabotage rules and so they have more competition between airlines and consequently lower prices for comparable routes. Today, the European air market has legacy carriers like Lufthansa and has a number of excellent low-cost carriers like Ryanair.

Previous iterations of airline liberalization like the Airline Deregulation Act of 1978 and the Open Skies Agreement of 2007 have been shown to have had significant benefits for consumers. We should expect cabotage to be no different. Researchers estimate that the entry of a single European airline into the American market would save consumers about \$1.6 billion per year and could improve service through fewer bag fees and/or greater leg room. Economists also estimate that relaxing cabotage restrictions would lead to more routes and more jobs in the American airline sector.

3) E-Bikes and Bike Lanes

Recommendation: Local governments should create more bike lanes. These lanes should, where possible, be fully separated from car traffic.

Bicycles are a relatively inexpensive way to get around and bicycle infrastructure is relatively cheap to implement, especially in comparison to something like high-speed rail. As long as the political will is there to take space away from driving and especially from parking, bicycle infrastructure is a cost-effective way to help people reduce their car usage, which ultimately saves them money, and improves road safety for cyclists.

Better bicycle infrastructure could be especially beneficial as electric bikes become more widespread. Four times as many electric bikes were sold in 2022 as 2019. As in other markets, the top-of-the-line e-bikes are expensive, but base models now sell for under \$1,000. The cost of electricity is very small, between \$30-50 per year. The combination of high-quality bike infrastructure and e-bikes could revolutionize urban transportation and make it so that many more households do not need to own a car if the do not want to. That would be a big cost-of-living help to them.

Success Story: Carmel, Indiana

Carmel, Indiana is an Indianapolis suburb so perhaps not the place one might expect to have great bike infrastructure. But it does. Its has 190 miles of off-street bike paths with 20 more miles on the way. Research on Carmel's bike infrastructure highlights its positive economic impact. Carmel's mayor James Brainard says that "there is no conservative or liberal way to provide good city services. The cost of building roads is a huge amount of money, and if we find our people want to use bicycles to get from one place to another, it is up to us to build the infrastructure economically that allows people to do that."

4) Facilitating Work-From-Home

Recommendation: States should use location of the worker rather than 'convenience of the employer' for tax treatment of remote work, should begin tax withholding at 10 days, and should work to reduce the extent to which occupational licensing creates friction for remote workers, ideally moving toward universal licensing recognition.

One of the main reasons that many people like to work-from-home is that it allows them to commute less. The more people can work from home the less they need to spend on gas and so facilitating work-from-home would be a smart way to lower Americans' cost of living as it pertains to transportation. There are two main ways that policymakers can directly help with that.

The first is tax treatment. Some states tax based on where the worker is while others tax based on the 'convenience of the employer.' States also differ on how long a worker must be in-state to have taxes withheld and many require tax withholding after just one day of work in-state. To remedy this, states that are currently 'convenience of the employer' should switch to location of the worker and states should wait until a worker has been remote in-state for 10 days.

The second is occupational licensing. If a worker is qualified and licensed in State A, State B will often not recognize that license. This makes it a lot harder for people working from home to digitally provide their services across state lines. A big way in which states can help facilitate work-from-home is to enter into more licensing reciprocity agreements with other states up to, ideally, universal license recognition. This policy improvement could also help alleviate service shortages in certain professions and thus reduce costs for consumers as well.

F. Summary

| What Can the Federal Government Do? | What Can State and Local Governments Do: |
|---|--|
| Reform NEPA Repeal The Jones Act Reform some of the ways the NRC regulates Invoke the Defense Production Act to allow for more advanced refrigerants Amend the National Interstate and Defense Highways Act of 1956, the Federal Power Act and the Energy Policy Act of 2005 to give FERC the ability to designate more high-capacity electricity transmission lines, particularly along interstate highways. Streamline the application and approval procedures for the Industrial Demonstrations Program. Negotiate an Environmental Goods Trade Agreement Restore the Bureau of Mines Allow International Airlines Cabotage in the United States | Reform state-level "baby NEPAs" Reform Procurement Add Bike Lanes Facilitate Work-From-Home |

IV. HEALTHCARE

The Problem

More than half of the American public considers the affordability of health care to be a very big problem. After inflation generally and housing in particular, Americans say that healthcare costs are their biggest financial problem, even above taxes and gas prices. 64% of middle-income respondents and 69% of lower-income respondents say they are very or moderately worried about not being able to pay medical costs in the event of a serious illness or accident. Even for people who have no trouble paying their bills each month, unexpected medical bills are the number one thing they worry about not being able to afford.

Since 2000, medical care inflation has outpaced overall inflation.

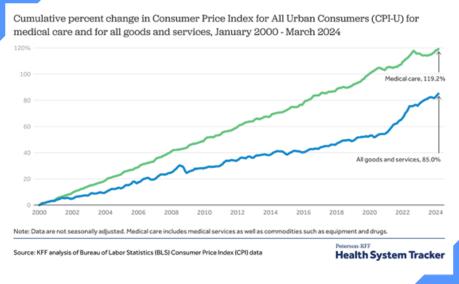


Image Credit: Petersen-KFF.



The United States spends significantly more on healthcare than our peer countries.

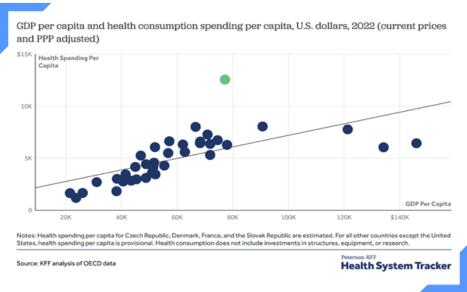


Image Credit: Petersen-KFF.

There are some nuances here to note. Medical services have seen more inflation than medical goods over the last 20 years. Within services, hospital services are up 7.2% over the last year, more than double the inflation for medical services overall (3.1%). Within goods, it is actually nonprescription drugs that have seen more inflation than prescription medication in the last year (5.9% versus 2.4%).

The Biden/Harris administration has taken several policy actions that help. As part of the Inflation Reduction Act, Medicare will now negotiate for lower prices on ten widely used prescription drugs with those lower prices taking effect in 2026. The IRA also capped annual out-pocket-prescription costs at \$2,000, made vaccines free, and set a cap on insulin prices at \$35 a month for Medicare beneficiaries, all of which take effect in 2025. These are important, positive steps in the right direction. Still, there are other reforms that could help too.

We argue that there are two main areas of reform that can increase healthcare supply and bring down healthcare costs: increasing the number of providers and promoting competition.

B. Increase the Number of Providers

1. Increasing Residencies

Recommendation: Congress should pass the Resident Physician Shortage Reduction Act of 2023.

The United States is projected to have a shortage of 124,000 doctors by 2033.

A medical residency is required to become a licensed physician. Most residencies are funded by Medicare, but in 1997, Congress capped the number of residency spots that Medicare would fund. This caused several problems. It created a bottleneck in the doctor pipeline. Even as the American population has grown and medical spending has increased as the population ages, the number of residency spots has barely budged. Thousands of medical school graduates now go unmatched with a residency every year. In other words, there are thousands of people with the intelligence and drive to make it through medical school and who could be excellent doctors who are being squeezed out of the system by this arbitrary cap.

Congress's 1997 cap also froze the geographical distribution of new doctors because residency slots stayed in the areas where they were allocated three decades ago. Because this funding has not shifted as the American population has and, because doctors tend to practice near where they did their residency, the doctor bottleneck is especially acute in the places that are growing the fastest.

Furthermore, the way the Indirect Medical Education program that funds the vast majority of residencies works disadvantages smaller facilities, rural areas, and primary care. It is unsurprising then that the doctor shortage is most acute in smaller facilities, rural areas, and primary care. The doctor shortage means higher prices, longer wait times, reduced access to care, and higher workloads for physicians in those areas.

The Resident Physician Shortage Reduction Act of 2023, sponsored by Terri Sewell (D-Alabama) and cosponsored by 160 Democrats and 22 Republicans, would allow for an additional increase of 2,000 residency spots per year above the 200 increase already allowed. The American Hospital Association supports this bill too. Furthermore, the residency funding approach right now is so broken that according to Robert Orr of the Niskanen Center, it might be possible to increase slots and reform how we fund residents in a cost-neutral way.

2. Scope of Practice for Physician Assistants (PAs) and Nurse Practitioners (NPs)

Recommendation: States should allow Nurse Practitioners and Physician Assistants to have "full practice" up to their level of education and training.

Physician Assistants (PAs) and Nurse Practitioners (NPs) receive postgraduate educations in medicine that are extensive (making them qualified to handle a variety of medical service tasks) but shorter than the medical school training and residency that physicians receive (meaning their training is cheaper).

PAs and NPs lower healthcare costs and expand access in several ways. First, they earn a smaller salary than physicians, so if there is a task that can be done equally well by a PA/NP as by a physician, the medical system saves money having the PA/NP do it. Second, by handling more routine cases, PAs/NPs free up physicians' time to handle more complicated and difficult cases. Third, PAs/NPs increase healthcare access and lower wait times, and this is especially important in underserved areas where there is a shortage of doctors.

The key question from a cost containment perspective is "scope of practice," or what tasks exactly can the PAs and NPs do. The more tasks they do, the more money we save, but there are obviously some tasks that are above their qualification level and that a physician must do for safety and efficacy reasons.

The problem is that some states have placed overly strict restrictions on the scope-of-practice for PAs and NPs such that they are not allowed to perform tasks that are clearly within their education/training level. PAs/NPs are clearly not interchangeable with physicians, but studies have found that excessive restrictions on PAs/NPs have adverse implications for costs and access, especially in primary care, where the shortage of physicians is particularly acute.

Twenty-nine states allow nurse practitioners "full practice," which means that they are allowed to evaluate and diagnose patients, order and interpret diagnostic tests, and initiate and manage treatment including prescribing medication. This full practice model is the model that the National Academy of Medicine endorses. Twenty-one other states restrict NPs ability to perform one or more of these functions. A meta-analysis found no evidence that states having more restrictions on NPs improved quality of care. This same meta-analysis found that those states have more limited access to primary care in rural areas.

3. Allowing Foreign Trained Doctors to Provide Services in the U.S.

Recommendation: States should grant provisional licenses to doctors with five years experience, who are in good standing in their home country, who have education and training substantially similar to U.S. education training and who pass the same medical exams as U.S.-trained doctors. These provisional licenses would allow them to practice under supervision for a preliminary period of time (two years for example) and then practice independently.

Expanding the number of residency spots would help in the long term, but a more immediate alleviation could come from allowing foreign-trained doctors to provide services in places and specialties that are currently experiencing shortages. For the most part, state licensure laws make it impossible for doctors trained and licensed abroad to practice in the United States. This is internationally unusual. Canada, Australia, and the European Union are happy to let qualified doctors immigrate and provide needed medical services.

There is, however, some ground for hope that this may be changing. Starting in 2025, Tennessee will be the first state to allow qualified, experienced doctors from abroad to practice in their state subject to passing the same standardized testing as U.S. medical school graduates and practicing under the supervision of a Tennessee-licensed physician for two years. Wisconsin, Florida, and Virginia have all recently passed similar reforms. So too have Arizona, Idaho, and Iowa. When asked about high-skilled immigrants increasing the number of doctors and nurses in their community, 74% of Americans consider that a positive, versus only 6% who think it would be negative.

4. Telemedicine

Recommendation: States should make it easier for out-of-state doctors to provide services in-state via telemedicine. They can do this by either creating special telemedicine licenses or simply requiring out-of-state doctors to register in-state and then giving them a waiver to practice via telemedicine. States can alternatively expand their licensing reciprocity agreements with other states.

There's enormous potential to use telemedicine to save patients money. According to one study in the Journal of the American Medical Association, for nonelderly patients with cancer, telemedicine saved between \$147 and \$186 per visit. Other studies find similar results.

Unfortunately, state-by-state licensing is currently impeding the delivery of telemedicine across state lines. Because the location of the interaction between the doctor and the patient is defined as the location of the patient, in most cases doctors cannot offer their services outside of the state in which they are licensed.

During the COVID-19 pandemic, a number of states suspended their in-state licensing requirements to allow medical professionals from other states to come to their states to provide services, but many of those exceptions have been rolled back. At least 30 states either ban or severely restrict out-of-state doctors' ability to deliver services via telemedicine.

On the other hand, some states are embracing telemedicine. Eight states have created special telemedicine licenses for doctors from out-of-state that want to deliver services via telemedicine in-state. Another eight states have made it even easier than that by simply requiring that out-of-state doctors register with or get a waiver from the state board to practice telemedicine. Maryland, Virginia, and Washington DC have a reciprocity agreement with each other, meaning that a doctor licensed in any of those states can provide telemedicine services across all three.



More states should adopt the waiver and/or reciprocity approach so that the use of telemedicine and the cost savings it brings can accelerate further.

C. Promote Competition

1.Repeal Certificate-of-Need Laws

Recommendation: States that have Certificate-of-Need Laws should repeal them.

In states with Certificate-of-Need (CON) laws, would-be new medical service providers must go before a board and prove that there is a need for their service in order to acquire a 'certificate-of-need' that allows them to operate.

Employees of incumbent providers are frequently allowed, and frequently do, sit on these boards. Those incumbents are thus being given an opportunity to squelch their would-be competition. In all but six states, incumbent firms are allowed to object to the application of their nascent competitor.

CON laws typically require those boards to deny the certificate if the would-be provider is going to 'duplicate', i.e. compete with, a service already provided by an incumbent. Some CON laws also require that a new service provider obtain a transfer agreement with an existing hospital; while that makes sense in certain circumstances, it creates yet one more way that incumbents can block the establishment of a new provider in their area.

Several states have repealed their CON laws over time. Still, today 39 states have a CON law in place for at least one medical service. The extent and rigor of these laws varies. Six states have CON laws for only one medical service, but 22 states have them for 15 or more different kinds of medical services.

CON law proponents contend that they promote cross-subsidization and so improve indigent care. They argue that CON laws lower all-cause mortality by pushing greater concentration of care to large facilities. They also say that they reduce healthcare spending.

None of these arguments are supported by the evidence. To the contrary, there's no evidence they promote cross-subsidization or improve indigent care. There is no evidence they lower all-cause mortality, and there is substantial evidence that they raise healthcare spending and per service costs.

There is no telling how many would-be providers never even apply for a certificate-of-need because they know that they will never get through the process. The breadth of evidence that these laws raise costs is nevertheless staggering. CON laws are associated with:

- higher variable costs in general acute hospitals,
- higher Medicaid costs for home health services,
- higher per admission hospital expenditures,
- uninsured patients having to pay more out-of-pocket, and
- higher expenditures per resident in nursing homes.

Compared to states without CON laws, states with CON laws have less access and lower quality care:

- ▶ 30% fewer rural hospitals,
- > 20% fewer psychiatric facilities,
- Fewer hospital beds and imaging service providers,
- Longer wait times,
- Less access to care for underserved populations, and
- Higher mortality rates for heart attacks, respiratory disease, diabetes, COVID-19, and Alzheimer's.

Matthew Mitchell, who has done some of the most comprehensive research there is on CON Laws, conducted a meta-analysis of over 450 statistical tests across 128 research papers on Certificate-of-Need laws and found that CON laws undermine their own stated goals and raise health care costs.

2. Greater Antitrust Enforcement on Hospital System Mergers

Recommendation: The FTC can and should enforce antitrust laws more vigorously among hospitals. To help them do this, Congress should appropriate additional resources to the Federal Trade Commission (FTC) specifically earmarked for antitrust enforcement of hospital systems.

The hospital market in more than 90% of U.S. metro areas have HHI scores of more than 2,500, meaning they are highly concentrated. There's little to no evidence that hospital market concentration improves quality. On the other hand, consolidation can create cost savings of between 4 and 7% for out-of-market hospital acquisitions and for the target hospital (but not the acquiring hospital), which makes sense given economies of scale and the high fixed costs of hospitals. But, that same study found no statistically significant evidence of cost savings for in-market acquisitions. This too makes sense. If Hospital A acquires Hospital B that is in its same market, it has effectively reduced competition to itself and so has less incentive to capitalize on potential scale efficiencies that might have been created by the merger. Consolidation is not always bad, but its benefits are limited.

Importantly, not all mergers and acquisitions in the hospital industry are good for healthcare consumers. From 2002 to 2020, there were more than 1,000 hospital system mergers. 238 of those could have been flagged by the Federal Trade Commission using standard merger screening tools as likely to reduce competition and increase prices. The FTC only took enforcement action in just 13 of those cases. Researchers found that mergers that could have been flagged by the FTC but weren't led to price increases of 5% or more.

Hospital consolidation is particularly acute in certain geographic areas. In Indiana for example, researchers have found that not-for-profit hospitals there have three to five times the typical profit rate of not-for-profit hospitals elsewhere. Those researchers attribute that exceptional high profit rate to a lack of competition and those hospitals' ability to charge monopoly prices. The FTC can and should enforce antitrust laws more vigorously among hospitals. Given that a lack of resources appears to be one reason for their inaction, Congress can appropriate more resources to the FTC specifically earmarked for hospital system merger enforcement.

3. Allow Consumers to Have Access to Foreign Products Like Better Sunscreen

Recommendation: Congress should amend the 1938 Food, Drug, and Cosmetic Act to categorize sunscreen as a cosmetic rather than as a drug and to allow for sunscreen imports from countries with sufficiently high sunscreen standards.

In August 2023, Representative Alexandria Ocasio-Cortez drew attention to the fact that American consumers cannot get the more effective sunscreens available in South Korea, Japan, and Europe. This is because the 1938 Food, Drug, and Cosmetic Act requires the FDA to regulate sunscreen as a drug rather than a cosmetic because it makes a health claim, i.e. that it prevents sunburn and reduces cancer risk.

That adds a lot of regulatory hurdles. It is why no new sunscreen filters have been approved in the United States since 1999, even though they are approved elsewhere. It also blocks the importation of those sunscreens, and constrains competition and innovation in the American sunscreen market. In 2014 with the Sunscreen Innovation Act and in 2020 with the CARES Act, Congress prodded the FDA to be more timely in its review of sunscreen ingredients. The FDA however has remained sluggish.



A simpler approach would be to change it from regulated as a drug to being regulated as a cosmetic and to allow sunscreen imports from countries with sufficiently high standards.

D. Summary

What the Federal Government Can Do?

- Congress should pass the Resident Physician Shortage Reduction Act of 2023.
- Congress should appropriate additional resources to the Federal Trade Commission (FTC) specifically earmarked for antitrust enforcement of hospital systems.
- Congress should amend the 1938 Food, Drug, and Cosmetic Act to categorize sunscreen as a cosmetic rather than as a drug and to allow for sunscreen imports from countries with sufficiently high sunscreen standards.

What State Governments Can Do?

- Allow Nurse Practitioners and Physician Assistants to have "full practice" up to their level of education and training.
- Allow experienced international doctors to provide services under provisional licenses.
- Facilitate telemedicine.
- Repeal Certificate-of-Need laws

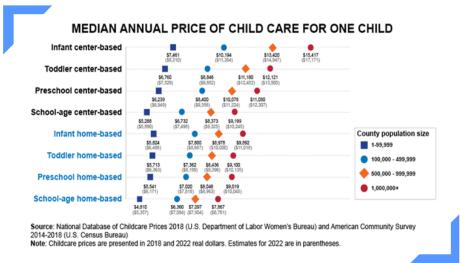


V. RAISING CHILDREN



A. The Problem

The costs of raising a child, especially when they are not yet school-age, are extremely high. By one estimate, it adds up to more than \$15,000 a year. Since 2000, childcare has roughly doubled in cost, well outpacing the increase in hourly wages. Childcare costs vary by location, age of the child, and whether it is center-based or home-based, but it is safe to say that it is expensive across the board.





Most people want children. Only 8% of people between 30–49 and only 16% of those 18–29 say that they do not want children at all.

Americans' Parental Status or Position on Having Children, by Age 65+ 18-29 30-49 50-64 % % % % Have children 21 Do not have children but still want to* NA NA Did not have children, wish they had^ NA 5 6 11 Do not want children at all 5 16 8 7 June 1-22 and July 3-27, 2023 Those with no opinion are not shown. *Based on respondents aged 18 to 40 ^Based on respondents aged 41 and older GALLUP

Image Credit: Gallup.

There is also a sizable gap between how many children that women say they would like to have and how many they end up actually having. Young men and women cite childcare being too expensive as the number one reason they don't have as many children as they would like. Seventy-three percent of parenting age Americans, including 83% of Democrats and 69% of Republicans that age, say that the federal government should provide more support for families with children. Fifty-five percent of parenting age Americans report having fewer children than they would ideally like with affordability being the commonly given reason for why they aren't.

We are not just failing to help parents, we are also missing an opportunity to invest in our children. When children grow up to lead productive, ambitious, prosperous lives, that reverberates to the benefit of everyone.

The Child Care for Working Families Act, sponsored by Senator Murray (D-WA) and Representative Scott (D-VA) appropriates funding for grants to cover start-up and licensing costs to help establish new providers. Likewise, the Building Child Care for a Better Future Act, sponsored by Representatives Horsford (D-NV), Plaskett (D-VI), Bonamici (D-OR), Moore (D-WI), and Davis (D-IL) provides grants for childcare workforce development. These are smart areas to focus grants on.

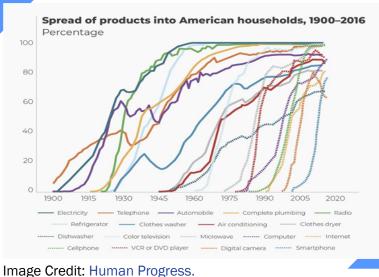
The Childcare Workforce Act, sponsored by Tim Kaine (D-VA) and Katie Britt (R-AL) creates a competitive grant program for states to supplement childcare workers' wages. Given the extent to which turnover is a major challenge in childcare, this is a smart approach. The bill also has a provision that says that 90% of funding must go to childcare worker wages and no more than 10% can go to administrative costs. That's another smart move.

The Childcare Availability and Affordability Act, also sponsored by Senators Kaine and Britt increases the tax credit for employer-provided childcare from 25% to 50% of qualified childcare expenditures, increases the maximum credit amount from \$150,000 to \$500,000, allows for jointly owned childcare facilities, and provides other benefits to small businesses. It also makes the Dependent Care Assistance Program more robust and increases the Household and Dependent Care Credit. These are excellent supply-side bills that Congress should pass immediately. Still, there are other reforms that could also help to build out greater childcare supply.

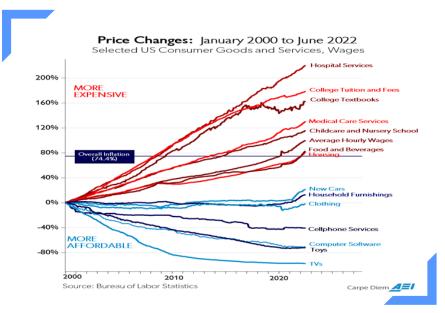
A.2. The Reverse Agatha Christie Problem

Reflecting on her earlier life just after World War I, Agatha Christie commented that at the time she couldn't imagine being so poor as to not have house servants nor so rich as to own a car. That sounds extraordinary to modern ears but at the time labor was extremely cheap whereas capital-intensive goods were expensive.

One of the most important economic facts is that **today the reverse is true.** Now goods are relatively cheap but it is people's labor that is expensive. Many items that were once luxuries are now near universal in American households.



There was a famous American Enterprise Institute (AEI) chart that also showed this dynamic. It shows that goods like TVs and toys got cheaper while services like healthcare and childcare got more expensive.



That trend is only accelerating. One of the main reasons that fast food prices are up is that it's a labor-intensive industry. You can also see it in inflation data. Over the last year, the cost of major appliances is down 6.1% but the repair of household appliances is up 18%. This fact, that labor is getting more expensive and therefore labor-intensive services are getting more expensive is the single most important factor in the rise in childcare costs.

B. Childcare

1.Small Reforms to Child-Teacher Ratio Requirements

For understandable safety reasons, state governments have rules around child-to-teacher ratios. For example, it is very common for states to mandate that infant classrooms have no more than a 4:1 ratio. In other words, one teacher cannot be looking after more than 4 infants. As the children get older, the ratios relax a bit. So, for example, in Vermont, once the children in the classroom are 2 years old, the ratio increases to 5:1. At 3 years old, it goes up to 10:1. Studies show inconclusive results about the impact of these ratios on childhood development outcomes.

There may be some wiggle room here, but it is important not to overstate the potential for relaxing these ratios. One of the most permissive states on child-teacher ratios is Idaho, and they still have the same 4:1 ratio for infants as other states and their 3–5 year old ratio is 12:1.

While a slight relaxation of those child-teacher ratios is a good first step, labor-intensity remains an understandably unavoidable component of childcare. So what other policy options do we have from bringing down childcare costs?

2. Increase the Au Pair Time Limit

Recommendation:The State Department should rescind its 2019 moratorium on growth of the au pair program. To allow au pairs to stay in the United States for up to four years, Congress should amend the J-1 visa section of the Immigration and Nationality Act and the State Department should amend 22 U.S. Code § 62.31 subsection (o)

There are about 20,000 au pairs working in the United States. In 2019, under the Trump administration, the State Department placed a moratorium on growth of the au pair program. This is a clear, direct barrier to American families being able to host au pairs. That moratorium should be rescinded. Au pairs are not allowed to work in the U.S. for more than two years, which greatly reduces the ability of au pairs who like doing the job from continuing to do it. We should increase it to four years. If someone wants to come to the United States to work in childcare and that's a benefit to the host families, that helps increase the supply of childcare services in the United States.

3. Occupational Licensing

Recommendation: States should consider how tightening occupational licensing of childcare workers can, inadvertently, constrain the supply such workers and thereby contribute to a shortage of childcare provision.

Some amount of occupational licensing for childcare workers is necessary and unavoidable. If you're going to be working with little kids, you need to be able to pass a background check and have a clean criminal record. A certain amount of regulation in this space is non-negotiable.

But many states go too far. In California, childcare workers must have 12 semester credits of postsecondary course work. In Vermont, it is a de facto requirement that childcare workers have a college degree. In Washington DC, childcare workers must have a college degree. It is not only insulting to say to high school educated people that they are not educated enough to take care of little kids, it contributes to the shortage of childcare workers workers. Additionally, licensing frequently does not carry over from state to state and so a childcare worker who moves across state lines may have to get recertified.

4. Zoning

Recommendation: States should ensure that zoning codes do not unnecessarily prevent the establishment of new childcare centers or of the provision of home-based childcare.

Childcare providers who want to build or expand a facility must often navigate a maze of zoning laws and pay expensive permit fees. In Utah, zoning laws can add hundreds of thousands of dollars to the cost of building a new childcare center; for some would-be providers this is such a prohibitive cost that they do not enter the market at all. Currently, 18 states preempt excessively strict local zoning rules on daycares that would curtail childcare services. More states should consider following their example.

C. A Better Safety Net for Kids

1. An Expanded Child Tax Credit

Recommendation: States should create an expansion to the Child Tax Credit that provides a refundable credit of \$300 per month to the parents/guardians of all children under the age of six.

Finally, if the political will is there to spend, an expanded Child Tax Credit for families with children under six could be enormously helpful. There are approximately 25 million children under 6 in the United States and so a \$300 a month refundable tax credit for them comes to about \$90 billion annually.

If they wanted to, parents could use that money to help defray some of the cost of childcare and so get back into the labor force more easily and more quickly than they otherwise could. Conversely, a refundable tax credit can also be useful to a family that wants to have one of the parents stay at home and so (helpfully) remains neutral in culture war arguments around parenting and family structure.

Success Story: The 2021 Child Tax Credit Expansion

In 2021, as part of the American Rescue Plan which was an economic policy response to the COVID-19 pandemic, the Child Tax Credit was expanded from \$2,000 to \$3,000 and to \$3,600 for children under 6. The credit was made fully refundable. This expanded CTC had an impressive array of benefits. It helped families cover essential purchases like rent, food, and utilities. It pulled more than two million children out of poverty. It lowered food insecurity by 11%. Were the CTC to be permanently expanded, researchers project that it would reduce neo-natal mortality, have health benefits for parents and children, and raise future earnings.

2. Medicare for Kids

Recommendation: Congress should create Medicare for Kids. To do that, it will need to amend Titles XVIII (Medicare) and XXI (CHIP) of the Social Security Act, the Medicare Modernization Act of 2003 (to deal with prescription drug benefits), and pertinent sections of the Affordable Care Act.

Expanding Medicare to cover every American under 18, i.e. Medicare for Kids, would bring coverage to the 3.8 million children who do not currently have health insurance. It would give parents the peace of mind knowing that their children's health needs are taken care of no matter what.

It would reduce health-insurance related job lock (thus giving parents more economic freedom and making the labor market more dynamic). And it would save families money because they would no longer need to be paying health insurance premiums for their children. Providing health care services, and thus health insurance, to children is quite cheap because most of the medical services that they need are routine, preventative, and screening measures rather than expensive surgeries and hospital stays.

The headline price tag of \$130 billion a year for Medicare for Kids may seem large but we already spend \$22 billion on CHIP (Children's Health Insurance Program) and \$95 billion on Medicaid for Children. Since the children who are currently on those programs would now be under this new program, the total net cost is probably in the neighborhood of just \$13 billion. Medicare currently spends approximately \$1 trillion annually, so spending \$13 billion to expand it to kids is a tiny drop in the bucket of overall healthcare spending by the government.

Medicare for Kids would also be a win for Democrats politically. 54% of Americans say they support Medicare for Kids while only 27% are opposed, a two-to-one ratio. Support for Medicare for Kids is +25% among Independents.

3. Universal Free School Lunches

Recommendation: To provide universal free school meals, Congress should pass the Universal School Meals Program Act of 2023 which amends the National School Lunch Act.

On top of the moral argument for not wanting poor children to be hungry, and the practical point that good meals help students pay better attention and thus do better in school, making school meals universally free removes the paperwork barriers and stigma that often lead poor children to not actually receiving free meals they are eligible for. Furthermore, if the government is going to require that students be in school, then it is the government's responsibility to feed them while they are there. It is also more efficient because once the meals are universally free, cafeterias do not have to dedicate employees to collect payments and schools do not have

to track balances and send payment reminders.

In 2019, U.S. schools provided 4.9 billion meals per year at a cost of \$21 billion. School lunch fees covered \$5.6 billion of that. That 5.6 billion is less than 1 percent of the K-12 education budget. Schools also have to spend money to collect that \$5.6 billion from children who do not qualify for free lunch.

Universal Free School Lunch is even more of a political winner for Democrats than Medicare for Kids is. 74 percent of the public, including 67 percent of Independents, support it whereas only 20 percent of the public and 23 percent of Independents oppose it. It even gets more than two-to-one support among Republicans. Democrats already have a bill ready for this. The Universal School Meals Program Act of 2023 has over 100 Democratic cosponsors. Congress Should pass it.

Success Story: Blue States Pass Universal Free School Meals

As of the end of the 2023-2024 school year, eight states have made school universally free: California, Colorado, Maine, Massachusetts, Michigan, Minnesota, New Mexico, and Vermont. Universal free school meals have significant health benefits for low-income children. School administrators also report that they have a positive impact on student behavior and attention.

4. There Should Never Again Be a Baby Formula Shortage

Recommendation: Congress should update the Infant Formula Act of 1980 to better match EU standards around DHA and added sugars, to allow for more competition in the formula market, and to require the FDA to allow imports of baby formula from the EU as well as other countries that Congress deems to have unquestionably competent regulations on baby formula. Congress should also eliminate all tariffs on formula.

In spring of 2022, a baby formula shortage presented many parents with their worst nightmare: they weren't sure how they were going to feed their babies. At its peak, ten states were more than 90% out-of-stock of formula. Families were scrambling and prices were even higher than normal, so an already big expense for new parents was even more expensive.

There were three major ingredients behind that shortage: 1) a highly concentrated market, 2) onerous labeling and ingredient rules imposed by the FDA that made it essentially impossible to import formula, even from the European Union, which has more up-to-date standards on formula than we do, and 3) tariffs that reduced the supply and increased the price of baby formula.

Abbott, Reckitt/Mead Johnson, and Nestlé Gerber control 83% of the U.S. baby formula market. According to a Federal Trade Commission report, the FDA's rules on the content and manufacturing procedures of baby formula make it all but impossible for new providers to enter the market. That FTC report also noted that the WIC program is structured in such a way that providers sell formula to states at highly discounted rates in exchange for being the sole provider for WIC in that state. While this saves WIC money, it comes with two tradeoffs. It means that these providers have to offset their losses by increasing prices on non-WIC consumers, and it concentrates the market because only very large producers have the scale to secure these WIC contracts while also giving the producer a de facto monopoly in WIC-subsidized purchases in a given state.

EU-produced baby formula is highly demanded by some parents. EU baby formula standards have been updated regularly as the science around baby formula has advanced; American baby formula standards have not been meaningfully updated since 1980. The EU has more up-to-date standards including around DHA (a fatty acid that is crucial for infant brain development) and added sugars. And yet, because of outdated nutritional and complicated labeling requirements, it is effectively impossible to import EU-produced baby formula into the United States.

To the extent that any imports can get through, the U.S. government imposes a complicated tariff rate quota system on baby formula in which most imported formula gets taxed at 25.1%. We don't even allow much importing from our closest allies and trade partners; the renegotiated NAFTA, what became the USMCA, greatly constrained imports of baby formula from Canada.

Combined, all three of these factors choke supply, raise prices, and concentrate production. So, when a plant in Sturgis, Michigan shut down because of bacterial contamination, that took so much production offline that a massive shortage in formula resulted.

Congress responded with the Formula Act, which temporarily eliminated tariffs on baby formula and state-level WIC agencies the ability to acquire imported formula. The FDA also issued guidance that temporarily allowed some imported baby formulas onto the market. These measures have all since expired. Congress needs to address this issue with the above mentioned recommendations, or we may all be sleep-walking into another crisis shortage.

D. Helping Both Two-Earner Households & Households With One Stay-at-HomeParent

Polling shows that there is no clear consensus preference between: 1) one parent working full time and the other providing childcare, 2) both parents working part-time and both providing childcare, 3) both parents working and a family member like a grandparent providing childcare, 4) one parent works full time, one parent works part time and they also use paid childcare part time, and 5) both parents work full time and they use paid childcare full time. There is also not a clear consensus preference when respondents are given just the two options of 1) one parent working full time and the other providing childcare and 2) both parents work full time and use paid childcare.

Simply put, different American families have different preferences on how to balance work with providing childcare. Given this, it makes little sense to have childcare policy structured with only one type of family arrangement in mind. The beauty of supply-side reforms packaged with an Expanded CTC, Medicare for Kids, and Universal Free School Lunch, is that it helps the families that want to have two-earners and kids at daycare AND it helps families that want one parent to stay at home.

E. Summary

| What the Federal Government Can Do ? | What State and Local Governments Do? |
|--|--|
| Increase the au pair time limit to six years Fund an expanded Child Tax Credit of \$300 per month for children under 6. Medicare for Kids Universal Free School Lunches Reform the Infant Formula Act of 1980 to prevent another baby formula shortage | Consider small relaxations of child-teacher ratios around the margins Ensure that zoning does not inhibit the establishment of in-home or center-based childcare Avoid unnecessary occupational licensing, trim those requirements where possible. Fund Universal Free School Lunches if the federal government does not do so. |

VI. INCLUSIVE FUTURE

As we discussed with regards to hearing aids in the Introduction, technological progress benefits the many, not the few. There are a number of new technologies that, though they are relatively early in their development, are very promising in terms of helping Americans live better, more affordable lives, and where forward-looking policy can accelerate those savings.

A. Satellites Delivering Rural Broadband

Expanding broadband is crucial for making sure that rural areas can flourish in terms of education, healthcare, and jobs, and it has bipartisan support. However, a range of factors has made delivering that rural broadband very challenging. It is expensive to develop infrastructure across vast, sparsely populated areas. Given that, it is not especially profitable for businesses to try to provide these services. Regulatory challenges as well as trying to coordinate policy across local and state lines add more obstacles.

The 2021 Infrastructure Investment and Jobs Act set aside \$42 billion to address the digital divide through the Broadband Equity, Access, and Deployment (BEAD) Program. The question then is what else can we do that doesn't require new appropriations and would help accelerate the delivery of rural broadband.

One potential answer is satellite technology. Starlink and Amazon's Project Kuiper are both options for bringing broadband to underserved areas. Other firms may enter this market as well. To help expedite that, the FCC can:

1) Streamline licensing procedures for satellite operators and ground stations,

- 2) Allocate more spectrum for satellite use,
- 3) Allocate more orbital slot assignments, and

4) Ensure that all definitions and standards are technology-neutral, meaning that they do not favor terrestrial broadband over satellite broadband.

For satellites to be part of the solution, it would also help if satellite broadband providers could win some of the grants that are part of the BEAD program. Right now, they cannot because the NTIA's guidance for BEAD excludes satellite broadband from the definition of "reliable broadband service." That definition needs to be changed.

B. Health and Disability Tech

Health monitoring with wearable technology is making remote health care more effective and cheaper; it's estimated that it will save the healthcare system \$200 billion over 25 years by helping to better manage

chronic diseases. For example, Wearable ECGs are helping with cardiac monitoring and early detection of stroke risks. Doctors are starting to recommend their patients use Apple Watch to monitor all kinds of ongoing conditions.

To facilitate more remote health monitoring, Congress should instruct the Office of the National Coordinator for Health Information Technology to work with other agencies to create guidelines/recommendations for standardized data protocols aimed at promoting interoperability of remote monitoring devices and electronic health records.

Meanwhile, prosthetics are getting better too. In the United States, 185,000 amputations occur annually but only about 5% of amputees have access to prosthetics because of their high costs. Advances in materials and 3D printing are making prosthetics lighter, more customizable, more comfortable, and cheaper. And advances in Al are making prosthetics much more manipulable and more lifelike for users.

Al is helping companies like Microsoft create better voice assistants for blind people. With Al, patients with debilitating diseases like progressive supranuclear palsy (PSP) are able to train voice assistants and continue communicating well even after they've physically lost the ability to speak; Representative Jennifer Wexton (D-VA), herself a patient with PSP, recently demonstrated this miraculous new technology.

To accelerate these technologies' development, the FDA should: 1) Create a fast-track approval pathway for disability assistive technologies, 2) Allow for earlier-stage clinical trials with smaller sample sizes, and 3) create regulatory sandboxes where firms can do small-scale live testing of their innovations.

C. Autonomous Vehicles (AV)

Google started testing driverless cars as far back as 2009. Since then there have been several false dawns for AVs, and so many people may not have noticed that self-driving vehicles are getting much better. New data from Waymo, the successor to the Google Self-Driving Car Project, shows that their cars are twice as good as human drivers in avoiding crashes that require police reporting and 3.5 times better at avoiding crashes that cause injuries. Waymo is now expanding to interstate highways in Phoenix while Aurora is putting driverless trucks on interstates in Texas later this year.

Autonomous vehicles could be helpful for cost of living in several ways. AVs are more fuel efficient because they tend to accelerate and decelerate more slowly and more smoothly than human drivers. Since they're safer than human drivers, insurance premiums will be lower. Fewer accidents also mean lower healthcare costs. Since they don't need human drivers, ride-sharing and taxis will be cheaper. They could also reduce the costs of some forms of delivery.

They can improve mobility for elderly and disabled people and so reduce the need for more specialized services while giving them more personal freedom. Autonomous vehicles, particularly combined with rideshare, could enable many people to forgo the cost of owning a car which would significantly help their cost of living.

One regulatory matter that is slowing down AV development is that the Federal Motor Vehicle Safety Standards (FMVSS) make a number of references to human body parts operating certain mechanism such as a turn signal being within reach of a driver's hand, etc. These kinds of regulations are reasonable for human-operated vehicles but create unnecessary hurdles for autonomous vehicles.



So, to facilitate the continued advancement of autonomous vehicle technology, the National Highway Transportation Safety Administration (NHTSA) should update the FMVSS such that, while they remain focused on safety, are neutral between human-driven and autonomous vehicles. Additionally, as the NHTSA is going through the rulemaking process to create FMVSS regulations on autonomous vehicle software, they should ensure that there is clarity between state and federal rules.

While AV firms and consumers wait for those new FMVSS regulations on software, state-level regulation will matter a great deal. Arizona, among other states, is a leader in AV technology in part because it does not require special permits or licenses for AV testing and in fact explicitly allow fully driverless testing and deployment. More states should adopt this approach.

D. Climate Tech

Researchers have created a new ultra-bright white paint with a very high concentration of barium sulfate that makes light scatter when it hits the surface such that it reflects back 98% of light but also doesn't cause glare. This paint can cool surfaces by up to 8 degrees during the day and 19 degrees at night and, if it is painted on a building's roof can reduce that building's need for air conditioning by up to 40%. The biggest challenge to scaling this up is the limited availability of barium sulfate, but that could be alleviated through some of the permitting reforms discussed in the Energy and Infrastructure section of the paper.

Companies are also starting to innovate in thermal storage technology. Air conditioning demand is rising as climate change continues, but also, the build out of wind and solar means that electricity is much cheaper during the middle of the day and so firms are creating ways of using that cheap, abundant energy in the day to not only run the AC but also to create ice that then gets used to cool buildings in the evening when electricity is in higher demand and has lower supply. For these technologies as in the refrigerants and heat pumps discussion in the Energy and Infrastructure section of the paper, the most important policy takeaway is that the federal government needs to work energetically to ensure that slow-to-change standards are not getting in the way of useful innovations and best practices.

Methane from livestock burps is responsible for 3.7% of all greenhouse gas emissions. But an Australian company has developed a new feed additive made from rangeland plants and red seaweed that can cut methane in cattle by 86%. This additive also helps cattle gain weight faster because they are no longer wasting food by turning it into methane, but instead turn it into extra meat, so once it comes on market it will hopefully be very popular with ranchers. That extra efficiency also makes beef production cheaper, which turns into savings for consumers. Once this new additive is commercially available, the USDA should ensure that beef from cattle given this additive does not face regulatory discrimination.

All three of these futuristic technologies are about inclusivity and affordability because each of them relates to and could reduce the costs of purchases that people further down the income ladder still want to make: electricity and beef.

E. Ozempic for All

Obesity-related illnesses cost Americans \$210 billion annually. Given the connection between socioeconomic status and obesity, a disproportionate share of those costs are borne by less privileged people. GLP-1s like Ozempic and Wegovy are very new drugs, but also extremely promising for a variety of health challenges. Studies have shown them to be very effective for weight loss and for managing diabetes. These GLP-1s seem to also help people with substance abuse problems, and a drug in this

family of medicines seems to help with Parkinson's as well. Scientists think that these drugs could be extremely useful in cardiology, endocrinology, and are investigating its effectiveness in treating Alzheimer's. So Ozempic For All could be a great way to help lower SES Americans be as thin as and have similar health care costs as more privileged people.

If these drugs prove safe and if trials continue to bolster the case for using them, it would be good for the U.S. government through the Food and Drug Administration and the Department of Health and Human Services to facilitate broad access to these wonder drugs. One initial step towards that would be to reform the Social Security Act Title XVIII and the Medicare Modernization Act of 2003, and the Medicare Improvements for Patients and Providers Act of 2008 to allow Medicare to cover drugs for weight loss.

The drugs themselves are not cheap, but competition between different GLP-1s will hopefully bring down the price, and the cost of the drugs should not be compared with nothing, but rather against the costs of other medical treatments arising from obesity that someone might need. If taking Ozempic or one of its cousins can help people live healthier lives and make fewer hospital visits, that is going to lower their healthcare spending, reduce the strain of demand on our healthcare system, and free up capacity within the healthcare system for other patients in need of care.

Conclusion: The Real Enemy is the Invisible Graveyard

A major advantage of a supply focus and a commitment to unleashing abundance is that it gets Democrats and America away from zero-sum thinking. We Americans are not each other's enemies. We are all on Team America. The enemy is instead a series of invisible graveyards.

The great enemy of the renter is not the landlord; it is the invisible graveyard of housing that a developer wanted to build but wasn't allowed to.

The great barrier to climate action and affordability going together is not the everyday person putting gas in their car to get to work; it is the invisible graveyard of green energy projects that should have been built but were stymied.

The great cause of long wait times and high costs for patients is not greedy doctors; it is the invisible graveyard of people who could have and should have been medical service providers but weren't allowed to be.

The great foil of affordable childcare is not any conceivable individual or group of Americans; it is the invisible graveyard of childcare and assistance to families that could have been provided but wasn't.

The most toxic and wrongheaded idea in America's political economy today is the belief that for one person to get richer, someone else must get poorer. Nothing could be further from the truth. When we make politics an 'us versus them' battle in which allies are exalted and enemies are laid low, we shred the notion of equality before the law for friend and opponent alike, and we do ruinous damage to the argument that all of us can rise together and that all of us can be free together.

notion of equality before the law for friend and opponent alike, and we do ruinous damage to the argument that all of us can rise together and that all of us can be free together.

When we instead take action to increase supply, every American can live where they want, work how they want, and dream whatever dreams for themselves and their children that they want, regardless of where they're from and regardless of what social class their parents occupied. That is 21st century prosperity. That is what Democrats should aim to deliver.

A DEMOCRATIC COST OF LIVING AGENDA:

A LOW-COST FRAMEWORK FOR HELPING FAMILIES BUILD ABUNDANT HOMES, CARE, AND ENERGY

