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CLEAN Contracts: Making Clean Local Energy Accessible Now

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Introduction and summary

For many reasons, it's time to change direction in America's energy use to rely on clean renewable energy. Renewable power reverses harmful environmental trends from global warming to local air pollution that hurts human health. But clean energy has many purely economic benefits as well.

This paper looks at the one policy that has helped to bring more renewable electricity into the marketplace than any other: the Clean Local Energy Accessible Now, or CLEAN, contract, also known as a "feed-in tariff." These are national, state, or local policies that allow renewable energy project owners to sell their electricity to utilities at a predetermined, fixed price for a long period of time. We explore here how to implement CLEAN contracts in ways that create the greatest benefit for consumers, communities, and the economy as a whole.

Renewable electricity's benefits to the economy are clear. It creates more jobs than fossil fuels for every dollar invested and for every unit of energy brought on-line.[1] Clean energy reinvests more dollars locally in community-based infrastructure and it places U.S. industries on the leading edge of innovative technologies from smart grids to advanced battery storage to wind and solar generation and superefficient building materials. Renewables protect consumers from rising fossil fuel prices, stabilize energy prices across the whole economy, improve our national balance of trade, and position America on a competitive footing with Europe and China.

For these and many other reasons, renewable electricity will power the future of the American economy.

But getting clean energy projects built rapidly on a large scale—so that renewable electricity can flow easily onto the grid to supply large amounts of our energy needs—will require clear signals from federal, state, and local energy policy, and a sustained national commitment to overcome the barriers facing the adoption of these advanced technologies in today's electricity markets.

Clean energy projects require substantial new capital investments. But these investments are hampered by several factors. Today, energy markets are dominated by incumbent technologies and limited by existing business models. Many innovative technologies are ready to enter the market today but they often require changes in operations of the electricity grid or new strategies for utility companies to generate profits for shareholders.

Potential clean energy investors also face an uncertain regulatory environment in the United States, both from federal energy policy and from regulators in state and regional markets. At every turn renewable energy is held back by the absence of national policies to guarantee equal standing with traditional sources of power. As a result, the growth of clean energy technology has not kept pace with the potential of these exciting technologies to meet our nation's pressing energy needs.

A range of strategies are being employed around the world to meet this investment challenge. These range from raising the price of pollution through fees or taxes to direct public investment in clean energy infrastructure to underwriting the cost of research and development. As the United States looks to modernize its own electricity system—especially in the absence of a national climate strategy—it is critically important to understand which policies have most effectively encouraged private investors to build renewable energy projects.

The CLEAN contract is designed to overcome the specific barriers that stand in the way of businesses and consumers investing in renewable energy projects. It helps overcome upfront cost barriers to investment by making renewable energy projects more easily financeable. The contracts provide certainty on the price of electricity and uptake of that energy by utilities through long-term contracts. And they offer a clearly understood, standardized process for developing projects, which reduces red tape and cuts down on uncertainty for developers and confusion for homeowners, reducing market risk and lowering the costs of getting things built.

In short, the CLEAN contract makes it easier to run businesses, build projects, and give consumers what they want.

This paper begins with a look at how CLEAN contracts work and what their key ingredients are. It then examines how lawmakers and advocates can successfully move them forward given how the contracts are affected by federal regulation. It closes with recommendations on how to make sure the policies benefit ratepayers, workers, investors, and the U.S. economy.

The CLEAN contract is designed to overcome the specific barriers that stand in the way of businesses and consumers investing in renewable energy projects.

Lawmakers and advocates who are interested in bringing CLEAN contracts into their communities will need to take electricity regulations into account. In most cases, the Federal Energy Regulatory Commission, or FERC, has to approve a CLEAN contract because it involves a wholesale sale of power. But there are also some cases where federal regulators do not play a role.

As federal and state authorities regarding CLEAN contracts are being clarified, there are a number of ways that programs can move forward today. We recommend that state and local activists and legislators consider the following strategies for immediate action to promote these important policies:

- Implement a CLEAN program at a municipal or cooperative utility.

- Engage with the Federal Energy Regulatory Commission to clarify how they would view potential statewide CLEAN contracts.

- Encourage federal lawmakers to sponsor and vote for legislation that would amend federal law to allow states to implement CLEAN programs.

- Build a base for CLEAN supporters in a state so that state legislators can move forward as the regulatory environment becomes clearer.

We also propose the following suggestions for implementing CLEAN contracts in ways that benefit key stakeholders. We will discuss these in greater detail within this report.

- Residents
  - Pursue public consultation and outreach about CLEAN contracts.
  - Make programs accessible and efficient.
  - Promote community-owned projects.
  - Expand access to nonproperty owners.
  - Help grow small and local businesses.

- Ratepayers
  - Cap program sizes to manage total program costs.
  - Decrease incentives over time as the market matures.

- Workers
  - Incentivize the use of local workers.
  - Encourage locally made clean energy.
  - Provide worker training.
  - Promote standardized community benefits and project labor agreements.

- Investors
  - Connect pension funds, community development finance institutions, and community banks to CLEAN projects.
  - Dedicate some program funding to educating local financiers about clean energy.
  - Explore opportunities for "crowd sourcing" investment to engage smaller investors and provide new sources of capital for projects.

The CLEAN contract stands out as a perfectly crafted mechanism to make clean energy investment a smarter choice for homeowners, utilities, and developers of renewable energy projects. It can help speed our transition to a clean energy future.

CLEAN contracts: A proven success story

A CLEAN contract is a policy tool that creates a stable market for clean energy. It allows renewable energy project owners to sell their electricity to utilities at a predetermined, fixed price for a predictable and extended period of time.

CLEAN contracts—also known as "feed-in tariffs" in some areas—are far and away the most important market creator for renewable energy in the world. Globally, the U.S. Department of Energy's National Renewable Energy Lab has found that 45 percent of all wind energy and 75 percent of all solar photovoltaic, or PV, electricity capacity installed before 2008 was directly linked to this tool.[2]

Research from Deutsche Bank Climate Change Advisors has found that CLEAN contracts are successful because they provide the three market characteristics that enable wide-scale deployment of clean energy: transparency, longevity, and certainty.[3] Collectively, Deutsche Bank refers to this framework as providing "TLC" for clean energy.

The exact details of CLEAN contracts differ based on local market conditions and rules. But they all share certain key elements that provide for this transparency, longevity, and certainty, which allows rapid, predictable, and very substantial market growth for clean energy.

Germany has employed this policy on a national scale very effectively through their feed-in tariff. The German market added 17 times more solar power last year compared to California even though the underlying solar resource in California is 70 percent greater.[4] CLEAN contracts provide the clear market signals that have been lacking in U.S. clean electricity markets to date.

Domestically, this policy in Gainesville, Florida, led to a remarkable sixfold increase in solar capacity in only 18 months at an estimated cost of a mere 75 cents per ratepayer.[5] In Ontario, Canada, this policy is estimated to create 74,000 jobs by 2015.[6] This aggressive job creation comes at less than a 1 percent increase

Globally, the U.S. Department of Energy's National Renewable Energy Lab has found that 45 percent of all wind energy and 75 percent of all solar photovoltaic, or PV, electricity capacity installed before 2008 was directly linked to this tool.

in ratepayers' utility bills (less than a cup of coffee a month). Per dollar invested, a CLEAN contract also creates 12 to 15 times more jobs than nonrenewable resources such as nuclear, coal, or natural gas.

Under a CLEAN contract the price that a utility pays for electricity from a renewable resource is based on the cost of generating the clean electricity plus a reasonable return for investors. It is determined by an open policymaking process. This price is standardized for all generators using the same technology (that is, all wind power has one price and all solar power another price).

This takes the price setting out of unpredictable negotiations between utilities and investors and puts it in a transparent process within the market. Visibility on pricing and market demand allows project developers to much more efficiently build clean energy projects to meet demand.

When clean energy developers sell their power in a CLEAN contract or feed-in tariff system they're also guaranteed a fixed price for a long time, such as 20 years. This matches the long-lived nature of energy projects and it further reduces risk to investors. Properly designed CLEAN contracts offer more profitable rates for project developers that sign up in early years and the rates decline as the market matures. These incentives can help reduce the long-term costs of CLEAN programs while encouraging early action by program investors.

Finally, CLEAN contracts require utilities to hook clean energy into their grid—as long as the project meets technical requirements—creating a certain market for the power that renewables can generate and providing predictable revenues for the developers of new clean energy projects.

Further, CLEAN contracts help meet existing commitments to bring renewable energy on-line. Twenty-nine states plus the District of Columbia already have policies known as renewable energy standards in place.[7] These policies require a certain portion of a utility's electricity sales to come from clean energy sources. Research from UC Berkeley shows that CLEAN contracts can greatly accelerate the effectiveness with which states, cities, and utilities meet their commitments under a renewable energy standard.[8]

Additionally, CLEAN contracts can tie the patchwork of existing clean energy incentives in the United States into a sustainable market framework that is clearly understood and accessible to consumers. Today, we have a mix of renewable

portfolio standards, tax incentives, net metering programs, financing tools, and direct rebates (among others) that are each extremely valuable. But none of them provide the transparency, longevity, or market certainty (TLC) that come with a CLEAN contract. Many states and cities have recognized this problem and they are now considering complementing existing programs with feed-in tariffs.

Because energy is so fundamental to economic growth, CLEAN contracts should also be an important component of broader economic development strategy. CLEAN contracts can effectively help meet community-based economic development goals and reflect values of inclusion, equity, and sustainability. Contracts help ensure democratic engagement that benefits all Americans by providing a clear and standardized way to engage in clean energy project development. In this way, they increase access for residents, workers, ratepayers, and investors to the economic opportunities created by community-based energy investments.

Let's take a more detailed look at the key ingredients of CLEAN contracts.

Key ingredients in CLEAN contracts

Exact details of a CLEAN contract system will vary based on local market characteristics and program goals. Some CLEAN contracts, for example, could reward project developers who use locally made products. This variation on the details and structure of programs means that no two CLEAN programs will be exactly alike, but there are some components that every CLEAN program includes. Without these pieces a generic clean energy incentive program ceases to be a true CLEAN program.

Every CLEAN program has these elements:

- **Standard-offer contract.** Every renewable project that sells power in a CLEAN system uses the same standardized contract. This minimizes transaction costs for each project and brings transparency to the marketplace.

- **Long-term contract.** The standardized CLEAN contract covers a period of time that's similar to the expected lifetime of a clean energy project. This is typically between 15 and 25 years.

- **Fixed price for electricity.** The price a project developer receives for their electricity is fixed in a CLEAN system, which makes it much easier for investors to know whether or not a project will be profitable. In turn, project developers are able to attract financing from banks and other investors due to this long-term fixed price.

- **Cost-based rate for electricity.** The fixed price that a project receives is based on the typical cost for a clean energy project. This is the same way that rates for conventional power projects have historically been set, with an appropriate rate of return (profit) on top of costs. Projects using different technologies—wind, solar, or geothermal—have different costs and thus receive different rates.

- **Must-take and mandatory interconnection provisions.** Under a CLEAN system the local electric utility must allow clean energy projects to connect to the grid as long as the project meets basic technical guidelines. The utility must buy the project's power under terms set forth in the standardized contracts, greatly reducing market barriers to entry for new clean energy.

These basic characteristics mean that every CLEAN system provides the transparency, longevity, and certainty (TLC) that are necessary for the broad deployment of clean energy technologies.

It's important to keep in mind, however, that these contracts are affected by electricity regulations. Lawmakers and advocates interested in these programs should understand how these regulations work. We'll review these in the next section.

Understanding the ins and outs of CLEAN contracts and electricity regulation

Electricity markets are overseen by both state and federal regulators, and it's important for state or local lawmakers to know how CLEAN contracts or feed-in tariffs fit within this regulatory system.

The Federal Energy Regulatory Commission, or FERC, generally approves the prices that utilities pay for wholesale electricity, while state public utility commissions approve the rates that utilities charge consumers for retail electricity. A CLEAN contract is a wholesale power transaction, which gives FERC an oversight role.

Lawmakers can use a variety of methods to make sure that FERC will approve a feed-in tariff.[9] Most important, FERC has recently signaled that they could approve a feed-in tariff in a state with a renewable energy standard as long as the price of clean energy under the tariff is related to the cost of other clean energy projects in the same area.[10] This is not a failsafe approach, however, because some utilities have indicated that they will challenge such rulings in the courts. This unfortunately means that there is not currently a fully vetted method for a statewide CLEAN contract mechanism to get guaranteed federal approval.

But there are some cases where federal regulators do not play a role. These are primarily cases where the utility is either municipally owned or an electric cooperative (a nonprofit utility that is owned entirely by the customers it serves). Both are exempt from FERC rate regulation.

The easiest way to quickly move forward with a CLEAN contract program, therefore, is to establish it in an area served by a municipal or cooperative utility.[11] Consequently, much of the near-term implementation of CLEAN contracts will take place through local efforts. Over time, state and even national CLEAN programs are also likely to move forward as federal and state regulations are clarified.

The easiest way to quickly move forward with a CLEAN contract program, therefore, is to establish it in an area served by a municipal or cooperative utility.

Possible steps to get started

Lawmakers and advocates who are interested in moving forward with CLEAN contracts should keep these regulatory issues in mind. Some may prefer moving forward in ways that will see immediate success while others may prefer ways that will produce slower progress but may ultimately be bigger successes.

Some productive possible steps include:

- Implementing a CLEAN program at a municipal or cooperative utility
- Engaging with FERC to clarify how they would view potential statewide CLEAN contracts
- Working with federal lawmakers to sponsor and vote for legislation that would amend federal law to allow states to implement CLEAN programs
- Building a base for CLEAN supporters in a state so that state legislators can move forward when the regulatory environment is clearer

Ultimately, CLEAN contracts need to work for everyone involved. The following are a range of measures to help ensure CLEAN contracts benefit key players.

Recommendations for making CLEAN contracts work for constituents

The establishment of a CLEAN contract program can be a complex process. It entails utility rate regulation and rate-setting proceedings that require rigorous research and in-depth analysis to ensure that the policies meet the specific needs of each location. But policymakers can still design specific components of CLEAN policies to make sure they are fair and community based and that those elements remain intact throughout program implementation.

The design elements below can serve as a guide for community leaders and policymakers both in crafting specific policy measures and in public education campaigns. It must be stressed, however, that regional markets and the renewable energy and job-creation needs of each community are different. Lawmakers must design CLEAN contract policy to match the needs of each location.

The below guidelines, matched to local circumstances, will help create policies that minimize program costs, protect ratepayers, create local jobs, and rapidly deploy clean energy.

Residents

Pursue public consultation and outreach

Policymakers can convene community forums to solicit community engagement in setting priorities. These forums increase community participation and ensure the program meets the community's needs. Community-based organizations and local governments should work hand in hand to increase public education about the program. Expanding awareness among community members about this opportunity for economic development is one of the best tactics for ensuring that local community groups and small businesses will benefit from CLEAN policies.

Increased awareness should be coupled with educating the community about the legal and financial issues involved in owning part of a power facility. Many investors in a community-owned project, for example, may not be able to capture the benefits of the federal investment tax credit, which would affect the return on their investment. The impact of specific incentives should be carefully analyzed and communicated.

Public education efforts to build support for smart CLEAN policies also provide an important opportunity for the education of community members on how local energy markets work, how rates are set and investment decisions are made by utility commissions, and what they can do to help improve the process. Broader public engagement on electricity rulemaking is critically needed in the United States to advance clean energy deployment and help reverse global warming.

Make programs accessible and efficient

Programs established under CLEAN contracts need to be designed simply and transparently for community members to benefit. Additionally, streamlined application processes will allow more community groups and individual residents to participate in a program and encourage distributed renewable energy generation. Further, streamlined processes will reduce program overhead costs and minimize litigation—increasing the efficiency of the project and reducing the costs to ratepayers.

Promote community-owned projects

CLEAN programs can establish a range of incentives for local project development and increased capital formation within communities. This might include "bonus payments" or higher rates in the contracts for cooperative, community-owned, and small-scale wholesale energy production to encourage investment in community-owned projects. These "social adders" or "bonus payments" have been used effectively in Ontario to provide residents with the added incentive to participate in the program, which helps democratize energy production and build local economies. These bonus payments also offer investors meaningful incentives to engage communities as partners in project development.

Projects owned by low-income consumers or operated in a low-income area by cooperatives or community groups can also be expedited in permitting or otherwise incentivized to further enhance community benefits. Such an incentive also ensures voluntary choice for businesses to participate in such a program.

Expand access to nonproperty owners

Policymakers should allow low-income consumers or other individual investors to purchase shares in renewable projects that are not located on their property. The benefits of renewable energy projects can thus be shared by local residents who do not own property or possess the resources to develop projects by themselves. Such an approach also expands the pool of capital available for new investment in projects.

Help grow small businesses

Much of the market created by feed-in tariffs will be filled by larger wholesale energy generation projects but specific carve-outs can be dedicated for smaller projects. A certain percentage of the total program could be allocated to smaller and more localized projects, which effectively stimulates local small business growth and provides entrepreneurs with an easier entry point into this emerging market.

Ratepayers

Well-designed CLEAN policies are a highly efficient form of incentive, helping to reduce the total cost to ratepayers. This means that adding clean energy under a CLEAN system is often cheaper than adding the same amount of energy through other programs. In the near term, as markets begin to develop, these costs may at times be higher than conventional fossil energy, which means consumers could see short-term impacts on electric rates. CLEAN programs can and should be designed to minimize any such rate impacts on consumers. When paired with energy efficiency incentives to reduce overall energy consumption, total consumer bills can be held stable or reduced.

Cap program sizes

The simplest and most common way to minimize any rate impacts is to put a cap on the overall size of the CLEAN program. This has several benefits.

First, putting a limit on the number of new projects that can enter into CLEAN contracts each year makes the system more predictable. Second, limiting the number of projects that can benefit from the program in early years means that more projects will enter in later years. Because rates decline over time, limiting the number of projects that benefit in early years guarantees that more projects enter the CLEAN program at the subsequent lower rates. These two effects combine to ensure that any rate increases are small and well-managed.

A program cap, while desirable, does present some challenges that must be actively managed. The primary challenge is that a program cap creates an incentive to be the first project developer in line since only a finite number of projects will be allowed into the program. The best projects aren't necessarily the first in line, which can lead to two inefficiencies. First, developers who are awarded a place in the program can sell their spot to someone else. This is an extra cost on projects that ultimately get built. Second, even if the policy precludes selling the place in the program, some projects that were hastily submitted may not be built because the developer hasn't fully thought through their project.

The best way to address this challenge is to require fairly detailed project descriptions in the application process and a small cash deposit to reserve a space in the program. There will always be projects that aren't finalized because circumstances change. But these two techniques can ensure the maximum benefits are gained from a capped CLEAN program.

It's also important to emphasize that the rate for a program should be the minimum rate required to achieve the program's deployment goals. A massive rush to get in line for a spot in the feed-in tariff program could be a signal that the predetermined rate is higher than necessary and should be adjusted in the future. All successful CLEAN programs revisit certain elements on a regular basis to make sure the best outcomes are being achieved.

Decrease incentives over time

The rate offered for new projects should go down each year to reflect decreasing program costs. This is known as "rate degression." Rate degression is a way to incentivize immediate project development while putting downward pressure on program costs over time—saving ratepayers money. Rate degression also helps account for the decreasing costs of technology and more streamlined project development over time, providing for a more accurate accounting of costs for the duration of the program. The most successful feed-in tariff or CLEAN policies around the world have utilized rate degression.

Workers

Incentivize the use of local workers

Project developers that use a high percentage of local workers and develop partnerships with local workforce development organizations can be incentivized through the electricity contract price awarded. This can provide developers and investors with strong incentives to support local economic development. Ratepayer dollars can also benefit the communities from which they are collected.

Encourage locally made clean energy

Some areas where a feed-in tariff could be instituted also have significant clean energy manufacturing capacity. In those areas, policies could encourage project developers to use locally made renewable energy components where possible. A local-content mandate—such as the requirement that has been instituted in Ontario—would likely not work in the United States. But a feed-in tariff policy could reward projects with significant local content by providing an incentive rate or carve-out to projects that maximize local content.

Expand access to worker training

As a complementary policy, states, cities, community colleges, utilities, and unions can work together to provide worker training so that local workers will be able to install and operate clean energy projects. It is important for commu-

nity economic development that local workers are prepared to take advantage of emerging market opportunities given the large amount of jobs these policies have created. Job-creation estimates in Ontario indicate that the need for trained workers to perform installation and maintenance of these projects can soon outgrow the supply of skilled workers.

Promote standardized community benefits and project labor agreements

CLEAN policies can encourage or even require community workforce agreements with local hiring provisions for wholesale distributed generation projects (between 1 megawatt and 20 megawatts). Community workforce agreements have been effective in many parts of the country in increasing the creation of good jobs and local economic benefits while reducing the risk of delays for project developers by limiting labor disagreements that can disrupt project schedules.

Contracting in this way can help build local small businesses, increase economic development for historically disadvantaged communities, and ensure that local communities have access to new jobs created in emerging industries by making valuable apprenticeship opportunities available in the building trades. Such community benefits strategies also can ensure that high-quality work is completed on time, under budget, and performed in a publicly accountable manner.

Investors

Connect local capital to clean energy

Community banks, community development finance institutions, socially responsible investment funds, and pension funds can all be encouraged to invest in feed-in tariff projects, and they may provide an important source of early project capital.

Lack of public awareness about clean energy investment opportunities can be a very real barrier to investment, even in instances where there are no legal or policy barriers to local investors' participation in a CLEAN program. States therefore should devote some level of funding to outreach efforts to connect local financiers with project developers. Ontario has done particularly well at linking local projects to local financing.

CLEAN contracts are proven to create large market opportunities, so policymakers should coordinate with the small-business community to make sure local businesses have the requisite access to capital, capacity, and knowledge to expand into these markets. Policymakers should recognize these policies' substantial economic rewards and actively prepare their communities to reap these enormous potential benefits.

Policies can also take advantage of the "crowd sourcing" of local investment. Crowd sourcing, or the use of new technologies and new business models to engage the broader public in decision making and investment processes, can allow for large pools of noninstitutional investment to enter the market. This can be an effective way to raise small-scale project finance, expand public awareness, and share wealth-building opportunities. Community solar gardens such as those developed in Colorado, for example, allow individuals to own shares in solar projects not located on their property. This kind of policy can be used alongside CLEAN contracts to create opportunities for community wealth generation through renewable energy.[12]

CLEAN contracts are clearly opportunities for local economic development. Creative community investment strategies can help increase the public benefits of these investments by allowing community members to participate as investors in addition to being the beneficiaries of job creation and new project development.

Conclusion

Transitioning the U.S. economy to run on clean and renewable energy is a national challenge. It requires a keen focus on local deployment of projects. Access to capital, complexities in securing long-term stable contracts, and market barriers in electricity regulation all create hurdles to getting clean energy projects built. The CLEAN contract provides transparency, longevity, and certainty (TLC) in contracts, permitting, and finance of projects. This makes it a proven tool for accelerating adoption, innovation, and manufacturing of clean energy technologies at scale.

The more inclusive and democratic these investment policies are, the more public support such measures can generate. And the more likely it is that broader economic goals will be realized through CLEAN investments. Investors and policymakers thus have real reason to support CLEAN contracts that broaden support for new project-level investments, expand public education, and increase the certainty and predictability of the overall market. The experience of other countries suggests that the strongest clean energy markets emerge and are consolidated within a political context that provides opportunities for many citizens to engage through investment, ownership, and local job creation.

CLEAN contracts are a powerful emerging tool for speeding clean energy deployment. They offer a way to link renewable energy more firmly to economic development that meets America's long-term energy challenges. Well-crafted CLEAN contract programs can provide a much-needed tool for rebuilding our economy now, on the foundation of clean, locally generated, and renewable energy.

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John Lauer is co-founder and policy director of Groundswell (formerly The DC Project), a nonprofit committed to connecting and partnering with communities to create places of equal opportunity and environmental balance.

Groundswell bridges the power of community-based organizations, government, small business, and citizens to create local and just economic opportunity in emerging sustainability sectors. In his role as co-founder of Groundswell, John has played a pioneering role in implementing WeatherizeDC, an innovative, community-driven job-creation program in the home efficiency sector, and has delivered national leadership on equitable growth models in the energy efficiency and renewable energy markets.

Prior to co-founding Groundswell, John served as senior firefighter for the U.S. Forest Service for five years. John earned his bachelor's degree in religious studies from the University of Colorado at Boulder.

Bracken Hendricks served as an advisor to the campaign and transition team of President Barack Obama, and was an architect of clean energy portions of the American Recovery and Reinvestment Act. He also served in the Clinton administration as special assistant to the Office of Vice President Al Gore, with the Department of Commerce's National Oceanic and Atmospheric Administration, and with the President's Council on Sustainable Development.

He was founding executive director of the Apollo Alliance for good jobs and energy independence and has served as an energy and economic advisor to the AFL-CIO, Pennsylvania Governor Ed Rendell's Energy Advisory Task Force, and numerous other federal, state, and local policymakers and elected officials.

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About the Center for American Progress

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is "of the people, by the people, and for the people."

About the Energy Action Coalition

Energy Action Coalition is a coalition of 50 youth-led environmental and social justice groups working together to build the youth clean energy and climate movement.

Energy Action Coalition and its partners have united a burgeoning movement behind winning local victories and coordinating on state, regional, and national levels in the United States and Canada.

About Groundswell

Groundswell, formerly The DC Project, partners with communities to create places of equal opportunity and environmental balance, building a sustainable future shared by all.

With proven tools and strategies, the organization unlocks the power of communities to drive and shape clean economic development, moving beyond the false choice between prosperity and the health of the world we live in.

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