Solar As a Solution: COVID-19 State Response Memo

State-Level Policies to Lower Energy Bills, Create Jobs, and Build Just, Resilient & Healthy Communities

Executive Summary

While the economic shockwaves of the COVID-19 pandemic continue to grow, millions of our neighbors are facing deep financial hardship and are making painful choices about which bills to pay. As this crisis goes on, more and more households will struggle to afford monthly expenses, including residential energy bill debts, which may accumulate to over $11 billion across the states.

State-level clean energy policies can address both the immediate relief needs of families struggling to pay their bills and help build a new clean energy economy that addresses the pre-existing conditions of energy affordability, dirty energy pollution, energy insecurity and environmental injustice.

When we start to recover from this pandemic, we must also address how clean energy can play a critical role in building stronger, more resilient communities. In this memo, we lay out clean energy policies that can uplift vulnerable communities who are disproportionately impacted by air pollution and who bear the brunt of the COVID-19 crisis. States are uniquely positioned to use the power of just and accessible clean energy policies to ensure that communities are prepared to confront the next disaster. Enacting smart clean energy policies now, in conjunction with immediate energy burden relief, is a smart way to help people respond to the current crisis and build a path to recovery that prioritizes lives and livelihoods.

The clean energy workforce is a key economic driver and job creator, and helped the U.S. economy emerge from the 2008 economic downturn. State investment in clean energy will not only put the nation's 250,000 solar workers back to work, but will drive additional demand and create new jobs to reduce economy-wide unemployment.

The solar industry is facing real hardship, with 55% of companies surveyed reporting lay-offs or cutbacks. Due to the COVID-19 pandemic, the industry is reporting an expected 38% decline.

These losses would negate 5 years of solar industry growth, pushing the workforce back to a level not seen since 2014. The policies Vote Solar suggests will not only help rebuild the solar industry, but will create new pathways into this promising clean energy sector.

Vote Solar has developed a menu of state-level policy recommendations to (1) relieve customers' utility debts due to the COVID-19 pandemic & reduce energy burdens going forward; (2) rebuild better: policies for 100% clean energy and energy resilience; (3) promote energy justice; (4) create new pathways into the clean energy workforce. Policy recommendations include no-cost steps and investment opportunities, and span immediate to long term time horizons.

As we go to work in states across the country to advocate for an equitable clean recovery, Vote Solar will seek feedback and guidance from our partners on this menu of policy options. We know that our partners in each state and community, and particularly our partners in environmental justice communities, communities of color, and other under-resourced communities, will bring their own perspectives and priorities to the table. We look forward to working with them to restart the economy, address energy affordability and tackle the climate crisis together.

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PROVIDE UTILITY BILL RELIEF AND ENERGY BURDEN REDUCTION

Millions of families and businesses are facing deep financial hardship and are struggling to afford monthly expenses. During this unprecedented crisis, utilities should not be allowed to shut-off residential customers' services in the event of non-payment. What's more, states should act now to address growing utility debt. Assuming 20% of ratepayers cannot pay their utility bills over four months of the pandemic, nationwide residential energy bill debts would accumulate to almost $11 billion.

To design the programs in an equitable fashion, states and utilities should convene a wide range of stakeholder groups that include representation from environmental justice, low-income, and community organizations representing people of color.
Immediate action (1-4 months)

- **Institute state-wide moratorium on utility shut-offs.** Authorizing a moratorium of electricity, water, gas and broadband service shut-offs is a critical first step to protecting families during this pandemic. Disconnection suspension periods should last through the duration of the economic shut-down orders, with a six month grace period, waiving all late fees. States can take action through executive orders, emergency legislation, or a utility commission order.

- **Streamline the Low-Income Home Energy Assistance Program (LIHEAP) application processes and extend the application period.** Automatically grant all current applications for LIHEAP and extend the application period for the duration of the COVID-19 health crisis.

- **Address $11B energy debt arrearage problem**. States must plan now to address the backlog of unpaid utility bill debt (arrearages) that will accumulate due to the pandemic. The inability of lower income consumers to pay utility bills during this time is exacerbated by massive unemployment and reduced wages, increase in residential usage due to stay-at-home orders, and the oncoming summer season, which sees higher electricity bills.
    a. States, the federal government, philanthropy, communities and utilities should pool resources and influence to address this $11 billion problem.
    b. State regulators should create balanced cost recovery and regulatory accounting mechanisms to defer COVID-19-related expenses for utilities and consumers to buy time for households facing COVID-19-caused arrearages, while more permanent affordability programs are developed and implemented.
    c. Public Utility Commissions (Commissions) and utilities should create **Clean Relief for Energy Debt (CRED)** arrearage management plans that 1) decrease customers' debts; 2) reduce long term energy burden; and 3) create value for the grid.
    d. In exchange for debt relief, customers could sign up for enhanced energy savings programs that also benefit the grid, such as energy efficiency, renewable energy technologies, demand response, and other demand-side management measures. As an example, a utility forgives a portion of a customer's debt in exchange for their participation in a demand-side management program that lowers the customer's bills, but also adds flexibility to the grid and creates a new value stream for the utility. Customers could enroll in flexible payment terms, partial debt forgiveness through arrearage management plans, and percentage of income payment plans. To design the programs in an equitable fashion, states and utilities should convene a wide range of stakeholder groups that include

representation from environmental justice, low-income and community organizations representing people of color.

Short term actions (3-6 months)

- **Utility bill payment plans.**
    a. Require utilities to offer percentage-of-income payment plans to qualifying customers. (See examples in Ohio or Virginia.)
    b. Offer affordable, temporary flat-rate or "life-line" payment options, with protections for overpayment.

- **Inclusive financing programs.** Facilitate inclusive financing options for clean energy improvements, particularly for low- and moderate-income households, such as on-bill financing, or Pay As You Save programs (Many states and utilities have implemented these programs, including in GA, HI, IL, KY, ME, MN, NC, RI and SC.). See Vote Solar's Inclusive Solar Finance Framework for more policy ideas.

Medium to long term (6 -18 months)

- **Measure the scope of the energy burden problem with full data transparency.** Commissions should identify, gather and analyze data relating to energy burden and arrearages to determine the scope of the problem, and assess energy assistance program effectiveness and gaps. Require public reporting on the number of accounts and amounts in arrears, and the number of disconnections. Also collect and publish data on participation in and outcomes of energy assistance programs including payment assistance, discounts and payment plans, weatherization and clean energy programs. Begin to collect and analyze more data that will be useful in crafting equitable and effective energy affordability programs, such as age of housing stock, income distribution and other metrics to track program efficacy.

- **Evaluate energy burden reduction programs**. Commissions should develop protocols for evaluating utilities on how well they address affordability and reduce energy burden for low-income customers, in addition to existing regulatory standards. Performance-based incentives, minimum standards or penalties should be applied.

REBUILD BETTER: 100% CLEAN ENERGY & ENERGY RESILIENCE

As states look to build back better, now is the time to commit to a just, 100% clean electricity future. Transitioning to a 100% clean energy future and deploying clean energy projects such as

solar, energy efficiency, demand response and other demand-side management solutions will not only put people to work quickly, but will better prepare us to address future crises. With record low renewable energy costs, investing in a clean energy future also means alleviating energy affordability challenges, as these clean technologies are cost-effective and result in savings for customers and utilities alike. In addition, clean energy projects will make our communities more resilient. Investing in solar + storage and microgrid technologies enable the power to stay on during outages and natural disasters without the air pollution or fuel supply risks presented by diesel back-up generators. See more research on energy resilience in the context of natural disasters here. As a first step, states can remove barriers to clean energy projects and can direct federal funds to deploy clean energy projects. The next step is a series of policies needed to move the state towards a 100% just and clean energy future.

Immediate actions (1-4 months)

- **Allow online solar permitting**. Local governments should move in-person permit application processes online to allow solar companies to get back to work in a socially-distant manner. Moving permitting to an online automated system will reduce the overall system cost for consumers as well. We suggest that states join the National Energy Renewable Labs' collaborative effort called "SolarAPP (Solar Automated Permit Processing)" that will:
    - Provide a flexible, web-based PV-permitting tool for standard residential systems at no cost to local governments.
    - Enable standardization of instant permitting processes.
    - Evaluate applications for safety and code compliance.
    - Offer opportunities to incorporate energy storage and expand to other market segments.

- **Expedite solar interconnection timelines.** Commissions can address interconnection bottlenecks to allow solar projects to move forward in a more timely manner, getting solar companies back to work saving customers money. As an example, systems under a certain size could skip the pre-approval process, as is the case in Pacific Gas & Electric, Southern California Edison, and Orlando Utilities Commission service territories. In these areas, approval is sought and obtained post-installation, which allows customers to install distributed energy resources in a matter of days instead of months or years. (See specific recommendations for Hawaii.)

- **Allow waivers and extensions for clean energy projects under development.** States should give guidance to their Commissions to allow for waivers or extensions to project completion, permit and related procurement deadlines so that clean energy projects in development may retain eligibility for state-level incentives. Delays due to product delivery, business closure and shelter-in-place orders, sick workers and other measures beyond the solar industry's control should not derail solar projects already in the works.

Short term actions (3-6 months)

- **Low-or-no-interest loans for clean energy upgrades.** If the state already has a green bank or financing programs in place, authorize low-or-no-interest loans or additional incentives for residential energy upgrades, including energy efficiency, solar and storage solutions. See example from Connecticut. Affordable energy upgrades can also be achieved through loan-loss reserve funds or interest-rate buydowns. Any loan program for vulnerable families must minimize their risk, maximize consumer protections and should only be used for upgrades that will produce tangible economic benefits from day one.

Medium to long term actions (6 -18 months)

- **100% Clean Energy Goal.** Set bold clean energy goals to move the state to 100% clean energy by 2050 and 50% renewable by 2030. Enact explicit targets for local clean energy resources such as solar and storage. Strong local clean energy targets are economically and technically achievable.

- **Create or expand revolving loan funds**. States can effectively invest in clean energy infrastructure through revolving loan funds, or green banks, which allow limited funds to do more and go further. (Examples already exist in many states including CO, CT, DC, DE, HI, MI, NY, RI.) Low-cost financing facilitates the rapid deployment of clean energy, and is particularly needed as private lenders increase scrutiny and pull back from new projects. See primer on green banks here. Some state programs, such as in Delaware, are self-funded through bonds and require no taxpayer funding.

- **Increase resilience at critical facilities, ensuring equity in deploying resources.** Federal and state funding should target updating the energy infrastructure of critical facilities, especially in disadvantaged communities. Priority buildings include hospitals, police and fire stations, elder care facilities, public housing, among others, as they are the bedrock of public safety. Deploying resilient clean energy options (for example, solar paired with storage) will enable these facilities to remain fully operational during future disasters. This is particularly true for states facing hurricanes, wildfires, floods, mudslides and other natural disasters, and critically needed in under-served and environmental justice communities. See more about inequalities of resilience funding and deployment here.

    - **Make emergency shelters resilient**. Equipping emergency shelters with solar paired with storage provides critical energy access to medically vulnerable populations during power outages.

    - **Make schools resilient.** Public schools are more than just learning environments for students; they are designated emergency shelters in times of

natural disasters. (See examples in Florida.) Also, we suggest two additional policies to make schools more resilient:

i. Remove fossil fuels, install heat pumps for heating and cooling.
ii. Increase funding for wraparound services to make school year-round resilience hubs for their communities, including providing disaster relief services.

- **Facilitate a "solarize campaign" at critical facilities.** A bulk purchase program of solar paired with storage systems for groups of critical facilities (for example, public schools or public housing). This approach does not require state funding, but centralizes the administrative burden of the solar transaction with state or utility staff, and reduces the price point for all participants. (New York solarized one third of its school districts through their K-Solar program, a partnership between the governor's office and NY Power Authority.)

- **Pair Solar with Storage.** Add storage and, where necessary, improved inverters to facilities that already have solar systems for rapid and cost-effective deployment.

- **Improve resilience of medically vulnerable customers.** Support distributed residential solar paired with storage solutions through financing programs such as on-bill financing, and prioritize customers with electricity-dependent medical needs and equipment, such as at-home dialysis, ventilators, oxygen concentrators and medication requiring refrigeration.

- **Support efficiency upgrades & electrification of buildings.** Provide direct incentives, beyond utility incentives, for efficiency and electrification of buildings and homes including retrofits and new construction.
  - Enable low- and middle-income residents to switch from heating fuel to highly efficient heat pumps, and from natural gas to electric appliances and heating systems.
  - Provide funding for recommissioning and building upgrades to small- and medium- sized commercial buildings. Provide funding for the installation of Energy Management Systems in commercial buildings.
  - Create incentives for high-performing new buildings and homes that meet the state's highest level of building code.

- **Increase demand-side management solutions.** States can proactively remove regulatory barriers to demand response (DR) programs that can deliver flexibility, lower system costs by outcompeting natural gas peaker plants and provide revenue to ratepayers.

    - **Unlock residential loads for DR.** Commissions should allow aggregation of small residential and commercial loads through third-parties; set lower thresholds for participation and allow for seasonal variation in commitments.

    - **Create market structures to value distributed energy resources.** Commissions should create regulatory market structures and programs that monetize the values that local clean solar, and other demand-side management technologies deliver to the grid.

    - **Improve customer data access.** Utilities should be required to develop and maintain robust data-sharing platforms in order to enable customers' participation in DR programs. Smart meters, when combined with the Green Button data-sharing standard, can enable third parties to provide a variety of demand flexibility services to end-use customers.

- **Solar Rate Design.** Establish solar friendly rate structures, and specifically ensure fair rates and compensation for solar power exports that fully reflect the benefits of this clean local energy.

- **Distribution system upgrades and grid modernization.** There are many ways that investments in the distribution system can contribute to economic recovery that also meet future needs. Approving financing for distribution transformer upgrades, additional deployment of smart meter technology, deployment of EV charging infrastructure and upgrades, grid automation (sensors and switches), beneficial electrification and undergrounding of critical at-risk circuits all provide multiple benefits as part of a COVID-19 recovery plan.

- **Address utility opposition to local clean energy by updating utility revenue models and planning practices.**
    - Eliminate the incentives utilities currently have to invest in utility-owned large power plants by establishing performance-based ratemaking. This new revenue model will align utility incentives to meet a just and equitable 100% clean energy goal that include significant amounts of customer-generated clean energy.
    - Establish a transparent and participatory distribution resource planning process that allows regulators to accurately value and plan for local clean energy. Then integrate the outputs from that planning process into the state's Integrated Resource planning process so that the two planning cycles inform each other and result in a more efficient, less costly electric grid.
    - Reform wholesale energy market rules to allow local clean energy resources to fairly compete against fossil fuel resources.

- **Energy Resilience Planning.** Develop a state-wide energy resilience plan and incorporate it into emergency management plans. See Vote Solar's Resilience Roadmap for New Jersey here. Also, aid local governments in developing energy assurance plans, and execute on those plans to deploy resilient clean energy. Plans should also study the

costs and benefits of adding solar paired with storage to all public buildings. (Examples in place in Oregon and Hawaii)

ENERGY JUSTICE

Low-income and communities of color, who are also the most pollution burdened communities, are disproportionately impacted by the COVID-19 crisis. We must prioritize frontline communities, and make sure equitable practices and energy justice prevail during and following this crisis. States can further ensure that the communities that have borne the brunt of the fossil-based energy economy for over a century are poised to benefit from forward-looking investments in clean energy.

Short term actions (3-6 months)

- **Prioritize clean energy funds for environmental justice communities.** Prioritize clean energy projects that benefit frontline environmental justice communities. Conduct outreach to ensure COVID-19-response economic stimulus funds are applied to shovel-ready projects in vulnerable communities and benefit those communities. Ensure equitable funding for these programs as compared to clean energy programs for non-low-income residents.

- **Include contracting requirements for new solar programs.** Include women and minority-owned business enterprise contracting requirements or incentives in economic stimulus funding programs, wherever permissible.

Medium to long term actions (6 -18 months)

- **Establish programs to support frontline environmental justice communities**. Consider programs that would encourage and allow communities to:
    - Own or control the clean energy systems in their communities.
    - Participate in Community Choice Aggregation programs.

- **Advance procedural justice.** Promote energy democracy by creating meaningful opportunities for frontline community participation and direction in energy decision making.
    - Work with local groups representing under-resourced communities to establish access and equity goals and associated policy roadmaps for each state, with a commitment to policies and programs that meet the guiding principles outlined in guidance documents such as the Low-Income Solar Policy Guide, the Comprehensive Building Blocks for a Regenerative and Just 100% Policy, and other guides developed by frontline organizations.

- **Advance protections against displacement.** Energy investments for vulnerable communities promise many benefits for families, but they may include unintended consequences. Improvements such as energy efficiency, solar, and storage can increase the value of homes and buildings, putting low-income residents at risk of rent hikes and displacement by landlords who seek to benefit from these upgrades. States should couple clean energy investments with measures to protect against displacement. Data collection about displacement and coordination among relevant agencies is a good starting point, as demonstrated by AB 1232 of 2019 in California.

CREATE NEW PATHWAYS INTO THE CLEAN ENERGY WORKFORCE

States are faced with the difficult task of addressing the COVID-19 crisis and finding solutions to stimulate the economy. We must prepare to transition into a post-COVID-19 society that supports our workforce and pays a living wage. The solar industry is a driver of local jobs and economic activity, and employed over 250,000 jobs across the country prior to the pandemic. The policies laid out below would help create new pathways into the clean energy industry. With more than 22 million people unemployed, low-wage workers—individuals making less than $15 per hour—are hit the hardest. These policy guidelines are aimed at helping people get trained and deployed into new clean energy jobs.

Short term actions (3-6 months)

- **Include local, people of color, women & fair chance hire provisions.** Include women and minority-owned business enterprise contracting requirements, community workforce agreements, or targeted hiring adders for projects funded with economic stimulus funding programs, wherever permissible. The NAACP's Energy Justice policy toolkit describes these policies in more detail(pgs 17-21).

- **Support apprenticeship programs**. Boost investment in registered apprenticeship programs to maximize retention of disadvantaged and underrepresented workers. Provide incentives to companies that hire a certain number of graduates from apprentice programs.

Medium-long term actions (6 -18 months)

- **Create pathways for traditional energy workers to transition to clean energy jobs.** Fund programs specifically targeting traditional, fossil fuel-based energy workers to train them to qualify for jobs in the clean energy industries. Specifically, many rural communities that depend on coal and other fossil fuel industries are being hit with three crises at the same time -- COVID, the loss of traditional energy jobs, and automation. Holistic policies can help these communities diversify their economies and compete for

quality jobs in a variety of fields. See example here.

- **Increase workforce training**. Currently, employers account for a majority of workforce training. Incentivize employers to train not just mid-level and upper management, but all levels of the workforce. Ensure programs and incentives match education and training opportunities with forecast workforce needs. Establish an Energy Conservation Corps, modeled on the New Deal's Civilian Conservation Corps.

- **Expand and fund pre-apprenticeship programs**. Pre-apprentice programs can provide a pathway for both adults and youth to develop careers. Expand programming across community colleges, and district schools. Programs for high school students may include on-the-job training with participating employers (see example from Illinois). For adult programs, include GED completion and on-the-job training. After completing programs, pre-apprentices may be awarded preference to register for apprenticeship programs.

- **Address barriers for vulnerable populations**. Modernize workforce development policies to offer wrap-around services that support training, especially for those who face barriers to employment. Addressing barriers like housing, childcare, transportation and internet access serves the most vulnerable, and widens and diversifies applicant pools.

- **Conduct a state-wide workforce assessment.** Develop data collection requirements to track the movement and growth of the clean energy industry workforce.

- **Achieve fair employment practices.** States should strive to a future wherein all jobs provide living wages and benefits, and people of all abilities and backgrounds face equal opportunities.

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