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The Honorable Rick Perry
Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

June 5, 2017

Dear Secretary Perry,

The Southern Environmental Law Center, Appalachian Citizens' Law Center, Clean Air Carolina, Energy Alabama, Environment Georgia, Gasp, Georgia Solar Energy Association, Green Interfaith Network, The Greenlink Group, green | spaces, MountainTrue, NC Conservation Network, NC Council of Churches, NC Interfaith Power & Light, NC WARN, Rappahannock League for Environmental Protection, Rockbridge Area Conservation Council, Tennessee Interfaith Power & Light, the Turner Environmental Law Clinic at Emory Law School, Virginia Chapter of the Sierra Club, and Virginia League of Conservation Voters are writing this letter to provide our perspective to inform the 60-day inquiry currently being undertaken by the Department of Energy concerning the reliability of our nation's electricity grid.

Many Southerners are now reaping the benefits of affordable, reliable renewable energy resources that are diversifying our grid and producing clean, fossil fuel-free power. Solar investments in the South are making our grid stronger, our electric bills cheaper and our communities healthier for all. Shortsighted policy changes that fail to acknowledge clean energy's benefits could undermine this growing energy sector and make renewable energy harder to access for millions of Southerners. We urge your staff to give fair and full consideration to these benefits in conducting its inquiry.

On April 14, 2017, you asked your Chief of Staff to conduct a 60-day inquiry into the reliability of the grid. Your memo puts significant emphasis on "baseload" energy resources, specifically citing coal, natural gas, nuclear, and hydroelectric. It raises the concern that regulatory burdens on "baseload" power and subsidies on other forms of energy may create problems for maintaining the reliability of the grid.

The reliability of our electric grid is of paramount importance, and the Department plays a critical role in maintaining grid reliability. Unfortunately, however, your memo presents a one-sided perspective that fixates on perceived threats to traditional energy resources and ignores the benefits Americans are receiving from our nation’s clean energy resources. We call on the Department of Energy to engage in a transparent, fact-based analysis of these issues – one that allows for robust participation by interested stakeholders, including opportunities for the public to weigh in on any draft and final reports.

As part of this analysis, we urge your staff to consider the following:

Local, Renewable Resources like Solar Strengthen the Grid and Enhance National Security

Military bases are going solar across the South – including large solar farms being developed on bases in Georgia,¹ Alabama² and North Carolina.³ This is because investments in distributed resources, instead of large, central-station fossil plants, can reduce the impact of cyber-attacks, physical attacks and natural disasters, and can provide “islanding” capabilities during grid outages.⁴ According to former CIA Director James Woolsey, a more decentralized grid made up of distributed energy resources like solar actually enhances our national security, because it prevents a single grid failure “from cascading into a catastrophe.”⁵

For these very reasons, the U.S. military already has an aggressive renewable energy plan in place: 25 percent of the military’s energy production will come from renewables by 2025.⁶ The Department of Energy’s report should give full consideration to the ways that dispersed energy generators make the grid less vulnerable to attacks and fuel shortages than traditional large, centralized and fuel-based power plants.

¹ *Georgia Power planning solar projects at military bases* (May 6, 2014), available at http://www.bizjournals.com/atlanta/blog/capitol_vision/2014/05/georgia-power-planning-solar-projects-at-military.html.

² *Solar set to shine with Alabama Power military projects* (Oct. 25, 2016), available at <http://alabamane.wscenter.com/2016/10/25/solar-set-to-shine-with-alabama-power-military-projects/>.

³ *Duke Energy to build solar power facility at North Carolina military camp* (Jan. 26, 2015), available at <http://www.power-eng.com/articles/2015/01/duke-energy-to-build-solar-power-facility-at-north-carolina-military-camp0.html?cmpid=enl-poe-weekly-january-27-2015>.

⁴ *Enlisting the Sun: Powering the U.S. Military with Solar Energy* (May 17, 2013), available at <http://www.seia.org/research-resources/enlisting-sun-powering-us-military-solar-energy-2013>.

⁵ Hoover Institution Press, *Conversations about Energy: How the Experts See America’s Energy Choices* (2010), available at <https://books.google.com/books?id=tdSoAAAAQBAJ&lpg=PP21&ots=tkp2le0FzW&dq=distributed%20energy%20is%20more%20secure&pg=PP22%20-%20v=onepage&q=distributed%20energy%20is%20more%20secure&f=false#v=snippet&q=distributed%20energy%20is%20more%20secure&f=false>.

⁶ *Solar power to reduce national security risks in the U.S. power grid* (May 10, 2017), available at <http://www.homelandsecuritynewswire.com/dr20170510-solar-power-to-reduce-national-security-risks-in-the-u-s-power-grid>.

America's Electric Grid Can Integrate Large Amounts of Resources like Wind and Solar – Much More than we currently have on the Grid

DOE's national laboratories and other independent entities have exhaustively analyzed the impact of solar and wind power on grid reliability. Here are some of their results:

- A utility-commissioned report conducted by DOE's Pacific Northwest National Lab (PNNL) in 2014 found that Duke Energy's Carolinas system could accommodate solar up to 20 percent of peak load, and would see a decrease in its total system production costs (20% was the highest penetration that PNNL investigated).⁷ At the time that this study was conducted, the Duke Energy Carolinas system had not yet reached even a 2 percent penetration of solar power.
- A 2012 report by the DOE's National Renewable Energy Lab (NREL) found that renewable energy can reliably meet up to 80 percent of U.S. electric demand in 2050 with modest improvements to the flexibility of the grid.⁸ In contrast to the Department's rushed 60-day inquiry, it took researchers over two years to conduct this technical analysis.⁹
- An independent study by GE found that the PJM system can operate with up to 30 percent of its energy provided by wind and solar power.¹⁰ No insurmountable operating issues were uncovered during this exhaustive study, and every scenario resulted in lower energy prices.

Moreover, as we add more renewable energy to the grid, resources that can *increase* system flexibility are what will be needed to ensure reliability, rather than traditional "baseload" power plants. NREL notes that this flexibility can come from "a portfolio of supply- and demand-side options, including flexible conventional generation, grid storage, new transmission, more responsive loads, and changes in power system operations."¹¹

We ask that the Department of Energy incorporate these experts' thorough, well-researched analyses into its report.

⁷ *Duke Energy Photovoltaic Integration Study: Carolinas Service Areas* (Mar. 2014), available at http://www.pnnl.gov/main/publications/external/technical_reports/PNNL-23226.pdf.

⁸ *Renewable Electricity Futures Study* (last accessed May 26, 2017), available at http://www.nrel.gov/analysis/re_futures/.

⁹ Letter from Senator Charles E. Grassley to Department of Energy Secretary Rick Perry (May 17, 2017), available at <https://www.grassley.senate.gov/sites/default/files/constituents/electricity%20grid%20letter.pdf>.

¹⁰ *PJM Renewable Integration Study* (Mar. 31, 2014), available at <http://www.pjm.com/~media/committees-groups/subcommittees/irs/postings/pris-executive-summary.ashx>.

¹¹ *Id.* at note 8.

Baseload Power Plants are Becoming Less Economic due to Market Forces, not Subsidies for Clean Energy

While your April 14th memo implies that baseload resources are being threatened by policies that support clean energy, the reality is that the worsening economics of coal and nuclear plants are largely due to low natural gas prices.¹² Last year, EIA reported that natural gas prices were the lowest they've been in 20 years, and that natural gas is now the leading source of electric generation in the United States.¹³ In Secretary Perry's home state of Texas, natural gas displaces, on average, more than twice as much coal as renewable resources.¹⁴

Moreover, while the memo appears to focus on incentives that are available to renewable energy resources, the fact is that all energy resources benefit from favorable policies – but fossil fuels are the biggest winners. Since 1947, 86 percent of all energy subsidies have gone to fossil sources and nuclear power.¹⁵

Fossil fuels receive a wide array of subsidies from taxpayers, many of which are hidden from public view because of their longevity and obscure nature. Fossil fuel owners may immediately deduct the full value of certain costs; they enjoy accelerated depreciation and shorter cost recovery periods, and can claim deductions in excess of their investment.¹⁶ These companies are allowed to treat royalty payments as foreign taxes paid, applying the foreign tax credit to offset U.S. income taxes. They receive special rates, tax credits, and exclusions, as well as subsidies for complying with environmental laws and, for investors, a special exemption from the corporate tax. Some of these subsidies have been in place for over 100 years.^{17, 18}

In comparison, renewable energy resources receive tax benefits in the form of accelerated depreciation and tax credits. While these are highly visible, their structure creates high transaction costs and is frequently subject to market uncertainty due to sunset provisions.¹⁹ Additionally, these tax credits are relatively recent additions to the tax code, and are a fraction of

¹² *How super low natural gas prices are reshaping how we get our power* (Oct. 28, 2015), available at https://www.washingtonpost.com/news/energy-environment/wp/2015/10/28/how-super-low-natural-gas-prices-are-reshaping-how-we-get-our-power/?utm_term=.15ceecb4cec9; see also *The Natural Gas War on Coal*, Kleinman Center for Energy Policy at University of Pennsylvania (Oct. 13, 2016), available at <http://kleinmanenergy.upenn.edu/blog/2016/10/13/natural-gas-war-coal>.

¹³ Letter from Senators to Department of Energy Secretary Rick Perry (May 1, 2017), available at https://www.energy.senate.gov/public/index.cfm/files/serve?File_id=0F5A1080-FE2B-4979-922B-90330AF3BB60.

¹⁴ *Are solar and wind really killing coal, nuclear and grid reliability?* (May 11, 2017), available at <https://theconversation.com/are-solar-and-wind-really-killing-coal-nuclear-and-grid-reliability-76741>.

¹⁵ *Id.*

¹⁶ Roberts, Tracey M., *Picking Winners and Losers: A Structural Examination of Tax Subsidies to the Energy Industry*, Columbia Journal of Environmental Law, Vol. 41, No. 1, 63-137 (Winter 2016), at 134-135.

¹⁷ *Id.*

¹⁸ Tax Expenditures, Committee on the Budget, United States Senate (Dec. 2014), available at <https://www.gpo.gov/fdsys/pkg/CPRT-113SPRT91950/pdf/CPRT-113SPRT91950.pdf>.

¹⁹ *Id.* at note 1, citing I.R.C. §§ 45, 48, 168.

the subsidies that have gone to fossil fuel generators.²⁰ A focus solely on policies that support clean energy resources would be discriminatory and one-sided. If the Department of Energy is planning to include a review of incentives in its report, this should look at benefits to all energy resources.

Clean Energy Resources Create Jobs and Energy Independence in the South and Across the Nation

Solar and wind power, energy efficiency, energy storage, and advanced grid technologies provide benefits to the grid while also strengthening America's economy.²¹ There are more than 3 million U.S. jobs in these industries, and that number is growing. One out of every 50 new jobs added in the United States in 2016 was created by the solar industry.²² And across the South, the solar industry is creating jobs. There are now over 20,000 people working in the solar industry in Virginia, Tennessee, Georgia, the Carolinas and Alabama alone.²³ Solar farms are also providing much-needed tax revenue to rural counties across the South. For example, new solar farms are bringing \$40 million in tax revenue to rural Taylor County in Georgia – providing funds for emergency services, public schools and other critical functions.²⁴

Recognizing the benefits that clean energy provides, Republican state officials are championing their states' clean energy investments. Ambassador to the United Nations Nikki Haley, during her tenure as Governor of South Carolina, praised a landmark 2015 bill that opened up the state to more solar power. At the signing ceremony for the solar bill, she noted, "We're celebrating today because this law breaks down barriers to solar energy access, making it easier for individuals and businesses to take advantage of the projects and opportunities that can cut costs and make energy usage more efficient."²⁵

Similarly, Georgia State Rep. Mike Dudgeon (R) explained his reasons for sponsoring a bill in 2015 to allow Georgia customers to access third-party solar financing: "Our military has deemed solar mission-critical for enhancing energy security, improving energy reliability and controlling energy costs. My legislation aims to bring similar solar options to Georgia schools, businesses

²⁰ *New analysis: Wind energy less than 3 percent of all federal energy incentives* (July 19, 2016), available at <http://www.aweablog.org/14419-2/> (showing that fossil energy has received 65 percent of federal energy incentives to date, while wind energy has received only 3 percent).

²¹ Letter from Advanced Energy Economy, AWEA, SEIA to Department of Energy Secretary Rick Perry (Apr. 28, 2017), available at <http://info.aee.net/hubfs/docs/Perry%20Study%20Letter%20final.pdf>.

²² National Solar Jobs Census (last accessed May 26, 2017), available at <http://www.thesolarfoundation.org/national/>.

²³ National Solar Jobs Census, Appendix A – Solar Jobs by State 2016 (last accessed May 26, 2017), available at <http://www.thesolarfoundation.org/wp-content/uploads/2017/02/National-Solar-Jobs-Census-2016-Appendix-A.pdf>.

²⁴ *Solar Power and Local Communities* (2017), Southern Environmental Law Center, available at https://www.southernenvironment.org/uploads/words_docs/SolarLocalComm_Handout_0217_F.pdf.

²⁵ *SC Gov. Nikki Haley Signs Landmark Solar Energy Bill* (Aug. 12, 2014), available at <http://www.onealinc.com/blog/sc-gov-nikki-haley-signs-landmark-solar-energy-bill/2014/08/12/>.

and families,” Dudgeon said.²⁶ Georgia customers are saving several hundred million dollars in electricity costs because of the state’s investments in rural solar farms, under the leadership of the all-Republican Public Service Commission.²⁷

We caution the Department of Energy against taking any action that would impair states’ ability to set their own clean energy policies. Such an action would infringe on Southern states’ right to bring affordable, in-state solar power to their customers and impact millions of Southerners who are calling for more energy choices.

In conclusion, clean energy markets are opening up across the South, delivering environmental, economic and energy benefits to the people who live in our region. Special interests should not be permitted to undermine new clean energy markets in the South in order to prop up uneconomic, polluting energy resources. We call on the Department of Energy to conduct an even-handed, thorough analysis that incorporates up-to-date analyses of the economics, market drivers, job creation and grid benefits of clean energy across America. We would welcome opportunities to respond to particular inquiries that you may have, and hope that the Department of Energy will continue its legacy of driving smart, innovative American energy investments.

Sincerely,



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²⁶ *Georgia Power plan would install solar arrays on 3 Army bases* (May 16, 2014), available at <https://www.eenews.net/stories/1059999687>.

²⁷ *Georgia Power Company's Application for Certification of the 2015 and 2016 Advanced Solar Initiative Prime Power Purchase Agreements and Request for Approval of the 2015 Advanced Solar Initiative Power Purchase Agreements*, Georgia Public Service Commission Docket No. 38877, Hearing Transcript (Dec. 2, 2014), at 50.

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