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Powering Industries of the Future

Why the Technology Industry Should Demand Clean Energy Policies in the United States

BSR
The Business of a Better World

About This Report

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This paper makes the case that information and communications technology (ICT) companies should advocate strongly for U.S. policies at all levels—federal, state, regional, and utility levels—that will facilitate the clean energy system needed to power the industries of the future and foster global economic growth. This comes at a critical time given the uncertain future of federal energy policy under the new U.S. presidential administration.

SCOPE

This paper was initially developed to help companies advocate in support of the U.S. Clean Power Plan (CPP)—the centerpiece of U.S. climate policy, which was held up in the court system following legal challenges after the CPP was announced in 2015. The scope subsequently changed following the election of a new U.S. president and an executive order in March 2017 that initiated the process of rolling back and possibly replacing the CPP. BSR now offers this paper as a contribution to the U.S. administration's review of the CPP and development of any new energy policy that might replace the CPP. Our desired outcome is for ICT companies to use the arguments presented here to advocate for the United States to retain the CPP or, failing this, continue to support clean energy.

METHODOLOGY

The information and data used in this paper are based on a literature review, with additional internal analysis by experts at BSR.

ACKNOWLEDGMENTS

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Executive Summary

Information and communications technology (ICT) companies stand to gain considerably from ambitious clean energy policies in the United States. When the U.S. Clean Power Plan (CPP) was announced in August of 2015, it was hailed as the strongest action the country had ever taken to combat climate change. Almost immediately, however, the CPP faced legal challenges that delayed its implementation.[1] In March of 2017, the new U.S. presidential administration issued an executive order to review and most likely roll back or replace the CPP, making the future of this policy uncertain.[2] Despite these challenges, strong U.S. climate policy is needed, and ICT companies are well-positioned to participate in the review of any new federal energy policies initiated by the White House executive order. ICT companies can also push their state, regional, and local governments and utilities to adopt policies to increase clean energy generation.

Clean energy policies have the potential to deliver many benefits. Policies outlined in the CPP, for instance, would create jobs; save consumers US$155 billion from 2020 to 2030; and reduce health hazards that contribute to thousands of premature deaths, tens of thousand of asthma attacks in children, and hundreds of thousands of missed work and school days.[3] The CPP would also aid national interest by catalyzing renewable energy resources—the most abundant, reliable, clean, and cost-competitive energy resources in the nation.[4] Furthermore, the nation's geopolitical security is advanced through clean energy, which reduces dependency on unstable foreign regimes and seizes the energy market of the future.

Many American companies voiced their support for the CPP because they understand the value it would provide to the their business, the economy, the planet, and society.[5] They also supported the policy because it aligns with their own climate goals. In the past several years, many U.S. companies have

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[1] https://www.bsr.org/en/our-insights/blog-view/after-paris-there-is-no-denying-our-clean-energy-future

[2] https://www.nytimes.com/2017/03/27/science/what-to-know-about-trumps-order-to-dismantle-the-clean-power-plan.html?_r=0

[3] https://www.whitehouse.gov/the-press-office/2015/08/03/fact-sheet-president-obama-announce-historic-carbon-pollution-standards

[4] https://www.bsr.org/en/our-insights/blog-view/clean-power-generates-american-jobs-and-business-competitiveness

[5] https://www.bsr.org/en/our-insights/blog-view/worlds-leading-companies-clean-power-plan-necessary-part-us-climate-plan

established ambitious energy-efficiency and renewable energy targets that will help the world achieve the goals set in the Paris Agreement.

Both business and public support for clean energy policy is strong, with 84 percent of the U.S. voting public[6] and 530 companies and 100 investors expressing their support[7] for the advancement of a clean energy economy. Those companies represent US$1.5 trillion in revenue, are headquartered in 44 states, and employ nearly 2 billion people. The investors manage more than US$200 trillion in assets and include major institutional investors, such as New York State Common Retirement Fund, the California State Teachers Retirement System (CalSTRS), Westpath Benefits and Investments, and Trillium Asset Management.

These companies welcome clean energy policies because they are counting on a strong, stable market to support their own investments in a thriving, clean energy economy. With federal energy policy now under review, it's imperative that U.S. companies engage in the process to comment on any new proposed national energy policy, and increase their vocal support for clean energy policies at all levels.

The ICT industry has a particularly strong stake in the development of a clean energy economy, and several leading tech companies publicly supported the CPP because they believe it would support economic growth; create an affordable, reliable, and safe source of power; and contribute to job creation.[8]

» Clean energy policies in the United States will help the ICT sector achieve four key benefits:**Cost savings:** Clean energy policies will bring significant energy cost savings and price stability. Renewable energy technologies such as wind and solar are central to clean energy and have low and stable marginal costs, which permits energy consumers to hedge fuel price volatility and future increases in electricity rates by structuring long-term power purchase agreements.

» **Resilience:** Many clean energy policies, such as the California Global Warming Solutions Act, incentivize distributed renewable energy.[9] This provides a more resilient energy supply for the ICT sector, especially for telecommunications companies, which can use small-scale renewable generation effectively.

» **Revenue growth:** From smart grid technology to energy efficiency through the industrial internet of things, ICT companies are at the forefront of a growing market. Clean energy policies will encourage the innovative use of ICT to create smart and sustainable energy systems of the future.

» **Climate goals:** Clean energy policies will help ICT companies achieve their greenhouse gas (GHG) emissions and renewable energy goals by reducing existing power plant emissions and incentivizing new renewables generation. Clean energy policies encourage both energy efficiency and renewable energy procurement, so companies' GHG emissions-reduction goals are addressed, regardless of method.

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[6] http://www.eesi.org/briefings/view/100616polling

[7] https://www.ceres.org/news-center/press-releases/630-companies-and-investors-tell-washington-continue-accelerating-low

[8] https://www.edf.org/sites/default/files/content/2016.04.01_major_tech_companies_amicus_brief_for_epa.pdf

[9] https://www.arb.ca.gov/cc/ab32/ab32.htm

In an uncertain market, it is essential that more companies—especially those in the ICT industry—to participate in the review of new energy regulations and express their vocal support for clean energy policies, which will encourage business growth. This paper makes the case that ICT companies should participate in the review of any new national energy policy initiated by the U.S. presidential administration's executive order, and that these companies also should advocate strongly for the swift implementation of clean energy policies among states, localities, and utilities. These policies will facilitate the clean energy systems necessary to power the technology companies of the future. This paper also provides guidance on how the ICT industry can participate in the review of federal energy policy and support clean energy policies at all levels.

Achieving Cost Savings

Clean energy policies will deliver significant energy cost savings and price stability that will provide a supportive framework for the long-term growth of America's most innovative companies.

Renewable energy technologies such as wind and solar have low and stable marginal costs, permitting energy consumers to hedge fuel price volatility and future increases in electricity rates. This is reinforced through the growth of renewable energy facilities and through the types of power purchase agreements (PPAs) that companies use to procure renewable energy. Such agreements generally set electricity prices for 10 to 20 years, giving customers cost certainty and predictability. By providing ICT companies with the opportunity to more accurately plan energy costs over the long term, clean energy policies simplify the energy market for some of its largest customers.

Policies that limit carbon pollution from power plants, which will affect fossil-fuel-fired power generation, make renewables a more competitive option. As demand for renewables goes up, so will supply. This holds true at regional levels: States and utilities are free to pursue policies that support investments in the types of renewables generation that make the most sense for a given geography, which will further support the market. In fact, because of state-level policies, wind energy is on par with or less expensive than traditional grid power. Prices for solar power also have decreased substantially. Between 2009 and 2014, there was a 70 percent reduction in solar PPA prices, driven by two factors: current solar investment tax credits and a 50 percent decline in deployment costs. That is substantial cost savings beyond existing efficiency activities.

Clean energy policies also deliver cost savings through reduced climate impacts. Climate change is already imposing a financial burden on U.S. businesses due to health costs from pollution, infrastructure damage from rising sea levels and more severe storms, and water shortages. By addressing climate change, clean energy policies will reduce the costs associated with a warming planet. For instance, when the CPP was put forth, the U.S. Environmental Protection Agency (EPA) estimated that the CPP would save US$20 billion in climate benefits, such as avoiding the most harmful drought or flooding impacts. The CPP would also provide between US$14 billion and US$34 billion in health benefits, for a total of savings of between US$26 billion and US$45 billion. While a strong federal clean energy policy is necessary, savings also can be achieved through coordinated clean energy policies at the state, regional, and utility levels. These cost savings would benefit large energy customers, their employees, and the general public.

Achieving Resilience

By incentivizing distributed renewable generation, clean energy policies will provide a more resilient energy supply for the ICT sector. This is especially useful to telecommunications companies, which can use small-scale renewable generation most effectively.

Already, climate change has resulted in more frequent and more severe storms, wildfires, and other natural disasters. These disasters disrupt operations, such as the collapse of telecommunications networks during Superstorm Sandy and the 2016 floods in Louisiana. There are many other examples of climate-related disasters disrupting the electricity grid and, hence, business operations, including the more frequent and severe hurricanes on the U.S. East Coast and the drought-fueled wildfires in California. "A large share of the major substations and power plants that provide electricity to more than 70 million coastal residents is already exposed to flooding from hurricanes, nor'easters, or other severe storms," according to the Union of Concerned Scientists.[10] Clean energy policies provide strong market incentives to help address these challenges and make companies and communities more resilient.

Many ICT companies protect their operations against extreme weather events by integrating renewable-energy generation capability into their operations, such as at data centers, retail stores, and base stations. By spreading energy generation to multiple points, ICT companies are able to increase climate resilience, an approach that is especially relevant for telecommunications companies given the dispersed nature of their networks. On-site renewable generation promotes resilience by diversifying the system's power supply and insulating the system from both long-term stresses (such as resource depletion, shortages, and shifts in the economy) and instantaneous, unexpected interruptions in the electricity supply when there is a grid disruption.

The clean energy economy is also less vulnerable to sustained disruption than the fossil-fuel-fired grid, since those fuels must be shipped via pipeline, train, or other freight to create electricity. This creates more vulnerability in the event a natural disaster interrupts the energy transport system.

In contrast, renewable energy can generate stable, on-site power from sources such as solar and wind when it operates from a micro grid. A micro grid can generate power both connected to and independently from the main, centralized grid. These can vary in size, providing power to several city blocks or to an individual facility or equipment that can be isolated from the main electricity system. This is important during or after a natural disaster because isolated grids can power critical infrastructure, even if the main grid is down.

Under some emissions-trading programs, companies that install renewable energy generation technology as a part of their resilience or existing business continuity plan may be eligible to enter the emissions allowance trading market and generate additional revenue. In effect, these policies provide a way for

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[10]http://www.ucsusa.org/global-warming/global-warming-impacts/lights-out-storm-surge-and-blackouts-us-east-coast-gulf-of-mexico#.VkoYCnarTIW

companies to protect critical investments and use cleaner energy through projects that will pay for themselves through cost savings and revenue generation.

Achieving Revenue Growth

ICT companies are uniquely positioned to take advantage of new technology needs arising from clean energy policies and create the smart, sustainable energy systems of the future.

Even if federal clean energy policy is delayed or rolled back, individual states have the flexibility to create effective clean energy policies. This situation creates a dynamic market with revenue growth opportunities for ICT companies that develop new products and services to help states improve the efficiency of energy generation and distribution. While federal climate policy is needed, states and local authorities can help fill that void by implementing their own emissions-trading programs or other strong climate policy options.

For example, the GeSI Smarter2030 report estimates that in the United States, 352 megatons of carbon-dioxide equivalents can be saved through smart grids such as Microsoft's eSmart Systems technology, a cloud-based, automated energy-management system that uses sensors, smart meters, and software to forecast consumption, reduce outages, and monitor assets to improve energy efficiency. This cost-effective solution uses data to optimize existing grids for energy efficiency, and it allows for predictive maintenance to reduce outages. It also provides more security because it continuously monitors all assets.[11]

ICT also can enable efficiency in transmission and use in a variety of ways. One way addresses the supply side by improving the electricity grid's ability to handle more intermittent generation from renewables and distributed generation, while improving reliability. For example, the Hawaiian Electric Company addressed overload and reliability concerns in East Oahu by installing an intelligent substation that can cut outages from several hours to a few minutes. This technology cost significantly less than traditional design methods, and it improved reliability for more than half of Oahu. It also reduced outages to mere minutes, down from two to four hours.[12] Smart grid technology will be a critical emerging market as more renewable energy generation comes online and the need for dynamic substations grows.

Clean energy policies also can support ICT revenue growth by incentivizing integrated systems with connected meters, communications networks, and data-management systems that improve energy efficiency and grow demand-side deployment. For instance, after installing 250,000 smart meters and implementing conservation voltage-reduction solutions, Dominion Virginia reduced annual energy consumption by 3 percent. Smart metering technology provides a wireless, two-way communication path between Dominion and its customers. Once installed, homeowners and companies can monitor and more precisely control their energy use and costs. At the same time, Dominion can better detect problems on the grid and operate it more efficiently and resiliently.[13]

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[11] http://esmartsystems.com/products/

[12] https://w3.usa.siemens.com/smartgrid/us/en/webinars/leadthecharge/Documents/Heco_CaseStudy.pdf

[13] http://www.dominioncsr.com/customers/smart_meters.php

Individual facilities—especially ICT-enabled monitoring and controls systems for industrial processes—also can minimize energy use while increasing efficiency. One example of this is at the Ann Arbor Municipal Water Treatment Plant, which deployed advanced controls and monitors to track real-time energy use. By deploying a system that allows operators to view real-time power use at any treatment or pumping facility, the plant was able to cut energy use by up to 10 percent. The system is treated like a working operations guide for the operator, who must stay inside of predetermined energy setpoints unique to each treatment facility and pumping station. At any given time, operators are able to schedule and time the sequencing of certain process operations to accommodate the lowest energy rates the utility can purchase.[14]

Finally, home energy-management systems are gaining popularity and represent enormous market potential. Three recent studies found that Nest smart thermostats could reduce consumer electricity bills by about 15 percent by using less energy and scheduling the ideal time for when energy is consumed.[15] In 2013, Greentech Media estimated that the market for home energy-management systems would be a US$7 billion dollar industry in 2017[16]—a figure the market surpassed in 2015. GeSI's Smarter 2030 report suggests that with the right policy support, the U.S. market could exceed US$600 billion for smart home technologies by 2030.[17]

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[14] http://www.waterrf.org/PublicReportLibrary/4223.pdf

[15] https://www.wired.com/2015/02/new-data-shows-nest-thermostat-can-cut-heat-bill-10-percent/

[16] http://www.greentechmedia.com/articles/read/home-energy-management-systems-market-to-surpass-4-billion-in-the-us-by-201

[17] http://smarter2030.gesi.org/the-opportunity/

Achieving Climate Goals

Clean energy policies from the national level down to the utility level help ICT companies achieve their GHG emissions reduction and renewable energy goals by incentivizing new renewables generation and reducing the market for existing high-emission sources. More than 120 U.S.-based ICT companies have set climate goals,[18] and it will be significantly easier for companies to achieve these goals if policies are established to support a clean energy market.

The ICT industry is diverse, including companies in the semiconductor, consumer electronics, telecommunications, software, IT services, and internet sectors. All told, the industry's footprint amounts to approximately 0.9 gigatons of carbon-dioxide equivalent, or nearly 2 percent of global emissions.[19] Estimates of how these emissions are distributed across the industry are scarce, but in 2011, it was estimated that 59 percent of emissions were associated with the use of devices, 22 percent came from telecommunications networks, and 17 percent came from data centers. However, this profile is evolving, with device energy use declining while the energy used by data centers and telecommunications networks grows.[20]

Due to the anticipated increase in use of ICT products, the increased demand for data services, and the growth of the telecommunications network, the total climate impact of ICT is likely to grow. The advent of the internet of things and the creation of "fifth-generation" telecommunications infrastructure to support greater mobile broadband use will require significant improvements in energy efficiency.

Current corporate ICT climate goals include renewable energy procurement rates and emissions-reduction targets. In 2016, BSR's Future of Internet Power group—which includes more than 20 companies that use or provide data center services—set a goal to use 100 percent renewable energy. There are many other examples of renewable energy investments: Google has committed nearly US$2.5 billion to fund wind and solar projects.[21] Verizon has implemented a number of energy-efficiency projects, with the ultimate goal of cutting its carbon intensity in half by 2020.[22] HP Inc. has set new goals to achieve

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[18] BSR internal analysis of CDP's 2015 public investor reports.

[19] http://gesi.org/assets/js/lib/tinymce/jscripts/tiny_mce/plugins/ajaxfilemanager/uploaded/SMARTer2020-report.pdf

[20] Ibid.

[21] https://www.google.com/green/energy/investments/

[22] http://www.verizon.com/about/responsibility/sustainability

100 percent renewable electricity usage in global operations, with an interim target of 40 percent by 2020.[23]

While these goals are based on the current energy market, stronger clean energy policies will make it easier for companies to achieve these goals—and set more ambitious targets in the future. For example, California, Iowa, North Caroline, Oklahoma, Texas, and Virginia have built more new renewable energy generation than fossil-fuel-based power generation. Implementing supportive policy at the federal, state, regional, local, or utility level will accelerate these trends.[24]

Clean energy policies, such as emissions-trading programs, will build on these existing trends and grow access to renewable energy options through incentives for renewable generation in the near term. Emissions-trading programs set GHG emissions limits, issue allowances for that limit, and allow companies to buy and sell those allowances. By reducing emissions faster, companies can sell allowances to companies that pollute more. Some emissions-trading programs, such as those in New England and California, make additional allowances available for a short time to encourage the construction of zero-emitting wind or solar power projects and implementation of energy-efficiency projects.

When combined with the current growth in renewables generation, these incentives will make achieving business GHG and renewable energy goals even easier—giving companies such as those in ICT good reason to support new policies.

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[23] http://www8.hp.com/h20195/v2/GetPDF.aspx/c05154920.pdf

[24] http://www.eia.gov/todayinenergy/detail.cfm?id=25492

How ICT Can Support Clean Energy Policy

Clean energy policies will help ICT companies achieve cost savings, build resilience, pursue revenue growth, and realize their climate goals. By contributing to the review of any new federal energy policy and by publicly supporting clean energy polices at the local, state, regional, and utility levels, ICT companies will be advocating for their own self-interest.

CONTRIBUTING TO THE REVIEW OF FEDERAL ENERGY POLICY

The first and most critical opportunity for company action to support clean energy policy is to participate in the review of any new federal energy policy initiated by the 2017 White House executive order. If the goal of the U.S. presidential administration is to create an energy policy that ensures the nation's electricity is "affordable, reliable, safe, secure, and clean," then the private sector has a vested interest in contributing to the review of any proposed policy.

The ICT industry voice is essential in this. When Amazon, Google, Microsoft, and Apple jointly filed their "Tech Amici" brief in support of the CPP in 2016, those companies were the top four publicly traded businesses in the world by market capitalization.[25] In the same way those companies supported the CPP, other ICT companies can influence any new federal policy by contributing to the public review process. If the White House wishes to repeal the CPP, it is legally required to come up with another one, and any new regulation must undergo the same rulemaking system—which includes public review and comment—that was used to create the CPP.[26]

ICT companies should participate in this process by submitting their feedback and recommendations to the federal agencies and officials charged with developing this review. These agencies and officials include the Office of Management and Budget, the Vice president, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, the Chair of the Council on Environmental Quality, and the Environmental Protection Agency.[27]

The White House executive order states that "all agencies should take appropriate actions to promote clean air and clean water for the American people."[28] "Appropriate actions" require regulating carbon dioxide emissions under the Clean Air Act. If the presidential administration wishes to repeal the CPP, it must come up with an alternative to promote clean air, reduce carbon dioxide, and provide the private

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[25] https://markets.ft.com/data/dataarchive/ajax/fetchreport?reportCode=GMKT&documentKey=688_GMKT_160930

[26] https://www.nytimes.com/2017/03/27/science/what-to-know-about-trumps-order-to-dismantle-the-clean-power-plan.html?_r=0

[27] https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economi-1

[28] https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economi-1

sector with the affordable clean energy it needs to grow and create jobs. By engaging in the review of new energy policy, companies can help ensure that this happens.

SUPPORTING CLEAN ENERGY POLICES AT ALL LEVELS

In addition to contributing to the review of any new federal energy policy, there are a number of ways companies can support federal, state, regional, local, or utility-level clean energy policy: by public reporting, setting renewable energy purchasing goals, and by joining other organizations that support these policies.

By reporting publicly on activities they have already undertaken to advance clean energy policies, companies can demonstrate their support for new policies. A large number of ICT companies report their GHG emissions via CDP, and some also report on their renewable generation investments and procurement. That is a critical way to show the courts and lawmakers that the goals of business are aligned with clean energy policy. With business and policy advancing in the same direction, it will be possible to greatly scale up future clean energy markets.

In addition to reporting, ICT companies can set goals individually and collaboratively to purchase more renewable energy for themselves and for key actors such as data centers and telecommunications companies. As described earlier, 124 U.S. ICT companies already disclose climate goals via CDP. Some are ambitious, like Google's investment commitment. Others reflect a company's position in the market, like Verizon's intensity target. These targets send a powerful message that the market is moving toward a clean energy future—and policies can help get companies there faster.

Perhaps the most effective way for companies to advance clean energy policies is by joining together to voice their collective support for these policies. Many ICT companies already take part in coalitions of major energy users that include peer businesses, telecommunications networks, and service providers. These groups are advocating for renewable options from utilities. Platforms such as the Renewable Energy Buyers Alliance work to influence policy by demonstrating the business demand for renewable energy through clear messaging and by facilitating transactions between corporate energy purchasers and renewable energy developers. Likewise, We Mean Business, Ceres, the Climate Group, the World Business Council for Sustainable Development (WBCSD), and others are sending clear market signals that renewable energy is in demand. These same groups can use their collective voice to demonstrate their support for clean energy policies from governments.

Two initiatives speak directly to lawmakers: Companies can join the Business Backs Low-Carbon USA statement coordinated by the B Team, C2ES, Ceres, the Climate Group, Environmental Defense Fund, Environmental Entrepreneurs, We Mean Business, and World Wildlife Fund (WWF).[29] Hundreds of companies and investors have signed the statement calling for continued low-carbon policies.

Another option is to join Ceres' Business for Innovative Climate and Energy Policy (BICEP), an advocacy coalition of businesses committed to working with policymakers to pass meaningful energy and climate legislation.[30] BICEP has worked to empower its member companies and push for renewable energy policy in states like Vermont and North Carolina. Companies that want to follow best practices on policy

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[29] http://www.lowcarbonusa.org/

[30] https://www.ceres.org/bicep

engagement should review the We Mean Business "Guide for Responsible Corporate Engagement in Climate Policy."[31]

Some of these groups also facilitate private meetings with lawmakers where company leaders can offer their input on policy directly.

Whether collectively or individually, companies should work to influence policymakers at all levels. With federal energy policy under review, it's essential that the private sector contribute to the process to ensure that any new national energy policy creates a reliable, affordable source of clean energy.

At the state level, departments of energy, environment, and natural resources all can influence clean energy policy—as evidenced by the 29 states that have already implemented renewable portfolio standards requiring utilities to sell a specified percentage or amount of renewable electricity.[32]

At the regional level, companies can support programs such as the Regional Greenhouse Gas Initiative, which creates an emissions-trading program among nine Northeast and Midatlantic states. Companies can also support city programs, like Seattle's Climate Action Plan, which established a target of carbon neutrality for government operations by 2050 through actions in road transportation, land use, building energy, and waste.[33]

At the utility-level, companies should be engaging public utility commissions (PUCs) or other governing bodies that regulate utility rates and services to ensure they see the business imperatives behind clean energy policy and set rates and incentivize utilities to invest in renewable energy sources. The National Association of Public Utility Commissioners' Taskforce on Environmental Regulation and Generation has published a number of white papers and reports on the value of PUCs implementing clean energy policy.[34]

Even though the Paris Agreement on climate change has become international law, the U.S. climate commitment is vulnerable. Policies at all levels of U.S. government will provide ICT companies with a clear path to save costs, improve resilience, grow revenue, and meet climate goals. Now is the time for the ICT sector to voice its support for the clean energy economy of the future.

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[31] https://www.wemeanbusinesscoalition.org/take-action/responsible-corporate-engagement-climate-policy

[32] http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx

[33] https://www.epa.gov/statelocalclimate/local-examples-climate-action

[34]http://members.naruc.org/4DCGI/committees/committeeroles.html?Action=naruc&naruc_Activity=CommitteeandRole&CommCode=NARUC133

About BSR

BSR is a global nonprofit organization that works with its network of more than 250 member companies and other partners to build a just and sustainable world. From its offices in Asia, Europe, and North America, BSR develops sustainable business strategies and solutions through consulting, research, and cross-sector collaboration. Visit www.bsr.org for more information about BSR's 25 years of leadership in sustainability.

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