The National Black Caucus of State Legislators (NBCSL) is the nation's premier organization representing and serving the interests of African American State legislators.[1] *With more than 700 members representing more than 60 million Americans, NBCSL serves as a national network, advocate and catalyst for public policy innovation, information exchange, and joint action on critical issues affecting African Americans and other marginalized communities. Through research, education, and advocacy, NBCSL strengthens its members and helps ensure their strong, effective and influential voice on Capitol Hill. NBCSL's primary mission is to develop, conduct and promote educational, research and training programs designed to enhance the effectiveness of its members as they consider legislation and issues of public policy which impact, either directly or indirectly upon "the general welfare" of African American constituents within their respective jurisdictions.*[2]

In 2014, NBCSL issued a White Paper entitled *The Need to Develop & Implement Equitable Energy Policies.*[3] In that paper NBCSL recognized that this nation's electric sector deserved special attention given its impact on essential services and that accordingly, it was important that minority policymakers and policymaking bodies continue to work to assure universal, affordable and reliable access to energy service.[4] Further, that as a result of the advent of innovative technologies, the opportunities for communities were great as long as policies adhered to the principle of fairness and did not benefit some at the expense of all.[5] To this end,

[1] For more information, please visit http://www.nbcsl.org.
[2] Over the years, NBCSL has adopted a number of policy resolutions drawing attention to these types of issues and put forward workable ideas for solving them. These resolutions can be found at http://www.mbcsl.org/public-policy/resolutions.html.
[3] The National Black Caucus of State Legislators, Committee on Energy, Transportation and Environment, *The Need to Develop & Implement Equitable Energy Policies* (2014) ("NBCSL White Paper").
[4] NBCSL White Paper at 1.
[5] *Id.*

NBCSL recommended that policymakers follow the following five principles to guide their efforts:

1. Ensure that utility policies reflect core notions of equity and social justice.
2. Avoid regressive cost allocation in distributed generation programs.
3. New utility frameworks should strive to distribute the benefits and costs of innovative new utility services more evenly.
4. Study these issues in more detail and inform new policies with data.
5. Assure robust consumer protections.

Given the ongoing concern that electric infrastructure be deployed in a manner that benefits and not harms low-income, fixed-income and minority communities and affords then widespread access to innovative services, the NBCSL White Paper was followed up with two NBCSL resolutions. In Resolution ETE-18-21 "*A Resolution Encouraging Grid Modernization*" NBCSL recognized that investments in local infrastructure were making America's cities technologically innovative for the purpose of creating a better quality of life for citizens, providing for the health, safety, and welfare of all our communities; and particularly, fixed income, low-income, under-served and minority communities. NBCSL noted that "smart cities" had the potential to bridge economic and social barriers through technology and innovation and provide much needed benefits to all citizens including better health, cleaner air, and increased employment opportunities. Moreover, a modernized electric grid was part of a holistic approach to creating and maintaining smart city infrastructure and ensuring all customers have access to safe, reliable, and affordable energy options.

However, the Resolution also recognized the regulatory challenges being faced by stakeholders as they began to address the crucial questions of who will bear the costs of creating

and maintaining smart cities and, in particular, the costs to fixed-income and other vulnerable classes of customers, and how to ensure that smart cities benefited all customers as these stakeholders managed city ambitions, utility investments, and regulatory policy. NBCSL resolved to work with policymakers on the local, state, and federal level to develop policies that would facilitate and accelerate the development of smart cities and ensure all communities benefit from its technologies. We affirmed our support for the creation and maintenance of smart cities, with an intentional focus of providing for the most under-served and vulnerable communities. Finally, the Resolution acknowledged the crucial role played by energy companies in investing and maintaining a modernized grid that ensured reliability, safety and affordability for all customers and that a modernized grid used innovative technology that enhanced smart city connectivity while generating economic opportunities.

Subsequently, in Resolution ETE 19-04 "*A Resolution on Grid Modernization Storage*" NBCSL recognized that energy storage, smarter energy infrastructure, and grid modernization enabled greater customer choice, improved the efficiency, reliability, and resiliency of the energy grid, and facilitated the integration of more clean energy and distributed energy resources, while maintaining reliability and affordability. Furthermore, that investments by electric companies to build and operate smart energy technologies, systems and infrastructure support communities for the purpose of creating a better quality of life for citizens and contribute to maintaining the reliability of the electric grid and improved operations by electric companies were for the benefit of all consumers.

In the Resolve Clauses of Resolution ETE 19-04 NBCSL:

1. Urged local elected officials to collaborate with regulators, policymakers and stakeholders to develop policies that remove barriers to smart energy infrastructure

deployment in order to realize the full economic, environmental, and societal benefits of these resources.

2. Stated support for a competitive market, where electric companies, businesses, governments, and other stakeholders were able to participate in the owning, leasing, operating, or maintenance of smart energy infrastructure.

3. Recognized the crucial role played by electric companies that integrate technology onto the electric grid in deploying smart energy infrastructure.

4. Supported electric company investments in smart energy infrastructure to help ensure all citizens have access to, and may take part in the benefits of, a smart electric grid, as well as spur innovation and technology deployment.

5. Recognized that although building energy storage and other smarter energy infrastructure would evolve over time and that additional principles might emerge, endorsed the following foundational principles for the purpose of educating its members and identifying issues of interest to local policymakers, states, the federal government and others:

    a. smart energy infrastructure investments provide benefits to customers, and

    b. electric companies should be able to invest in smart energy infrastructure and have a clear path for cost recovery in support of efforts to maximize the opportunities and benefits smart energy infrastructure may provide society.

Adherence to the above-referenced principles has become even more important today because as a consequence of continuing technological advancements, grid modernization with its accompanying deployment of Smart City services and infrastructure are proceeding at a rapid pace. Billions of dollars being invested by electric utilities in order to modernize this nation's power grid with the result that consumers are increasingly using electricity, in lieu of other energy sources, to power devices which they use on a daily basis. This phenomenon is known as electrification.[6]

Electrification has great potential to benefit minority and under-served communities given the positive impact the increased use of clean electric energy technologies can have

[6] Donald Cravins, Jr. and Gavin H. Logan, *The Digital Revolution: Electrification & Smart Communities—The Benefits and the Barriers* at 1 (National Urban League 2018) ("NUL Paper").

on the quality of air, life and health in urban and rural communities as well as the fact that the deployment and use of these technologies will create jobs and entrepreneurial opportunities in new areas of enterprise, and spur community economic growth and development. In fact, new technologies designed to facilitate the deployment of electric vehicle ("EV") infrastructure and the growth of smart communities has already begun to show special promise in terms of the positive environmental impact of using these cleaner energy mass transit and other vehicles as well as the new jobs and entrepreneurial opportunities that are being created.

However, it cannot be readily assumed that these beneficial outcomes will occur simply as a matter of course. In fact as a nation we face a dilemma. On one hand, low-income, fixed-income and minority communities are well-served by clean energy policies since they are more likely to be negatively impacted by environmental pollution and the effects of climate change. On the other hand, this outcome presumes that these communities will be able to access clean energy services and technologies and receive the benefit thereof. Instead new clean energy policies may "create a new rift in America: one class that employs increasingly sophisticated gadgets to manage its energy use, save money, and gain an attendant sense of participation in collective problem-solving; and a second class that cannot afford such technologies and pays mounting electricity bulls caused by the need to decarbonize the grid."[7]

Just and equitable energy policies will be needed to ensure that low and fixed income and minority communities are neither harmed nor ignored, and further that all consumers

[7] Shelley Welton, *Clean Electrification*, 88 University of Colorado Law Review 571, 576 (2017).

are given the opportunity to access grid services and infrastructure.[8] Consequently, in order to ensure that as the NBCSL White paper stated "utility policies reflect core notions of equity and social justice" and that the resultant "frameworks . . . strive to distribute the benefits and costs of innovative new utility services more evenly"[9] these policies must seek to guarantee that:

- new smart energy infrastructure (including smart cities and EV infrastructure) is deployed on a widespread basis throughout all communities;
- innovative energy services are accessible to all;
- energy costs are distributed fairly and rates are just and reasonable;
- neither regulatory nor legislative barriers prohibit electric companies from deploying, owning and maintaining all EV charging infrastructure (including EV charging stations or ports (Electric Vehicle Supply Equipment or "EVSEs") and the companies have a clear path for cost recovery; and
- programs and policies are adopted which provide incentives for low income consumers and support for localities in order to encourage the universal deployment of EV infrastructure and the use of EV transit and other vehicles.

The Benefits of Electrification—Smart Cities and Smart Transportation

[8] *See e.g.* Benjamin K. Sovacool & Michael H. Dworkin, *Global Energy Justice: Problems, Principles, and Practices* at 5-6 (2014) ("an energy-just world . . . [is] one that equitably shares both the benefits and burdens involved in the production and consumption of energy services, as well as one that is fair in how it treats people and communities in energy decision-making.")
[9] NBCSL White Paper at 6.

A. Smart Cities

As noted previously, in the NBCSL White Paper NBCSL enthusiastically embraced the promise of cleaner and more affordable energy.[10] Furthermore, in Resolution ETE 18-21 NBCSL recognized that a modernized grid was essential to the creation and maintenance of smart city infrastructure and that once in operation smart cities had the potential to bridge economic and social barriers through technology and innovation and provide much needed benefits to all citizens including better health, cleaner air and increased employment opportunities.[11] They also have the additional benefit of assisting in grid management.

Smart cities are proliferating throughout all parts of this country and the world. It has been estimated that the smart city concept has the potential to boost the economic development of global cities by over 5% and deliver at least $20 trillion in additional economic benefits by 2026.[12] Smart cities include smart transportation, smart and/or energy efficient buildings, microgrids, and cloud-based platforms controlling street and traffic lighting, monitoring, data collection *etc*.[13] Examples of smart city efforts in the United States include:

- Baltimore where the Baltimore Gas and Electric Company ("BGE") is partnering with the City and others to convert all streetlights to energy saving LEDs, to support efforts to install 6,000 new pedestrian street lights throughout the city, and to install EV charging stations.

[10] NBCSL White Paper at 2.
[11] Resolution 18-21 at 1.
[12] *Smart cities to deliver over $20 trillion in additional economic benefits.* https://www.smart-energy.com/industry-sectors/business-finance-regulation/smart-cities-to-deliver-over-20-trillion-in-additional-economic-benefits/ (last visited 5/29/2019).
[13] NUL Paper at 4.

- Chicago where ComEd is piloting the implementation of off-grid street lights powered by wind turbines, solar panels, and batteries and the Chicago Transit Authority is planning to add 30-40 electric buses to its fleet.

- Kansas City where Kansas City Power & Light which has installed approximately 900 EV charging stations.

- Louisville where 15 electric buses are operating.[14]

- Columbus where, as the country's tenth most active logistics hub, it is initiating a project to improve freight transportation to reduce traffic congestion and vehicle emissions.

- Dallas which has launched a project which includes: smart parking, smart irrigation, smart water systems, interactive digital kiosks, and an open source data platform.

- San Francisco which has implemented a project named "Sfpark" which uses wireless sensors to create smarter parking management through demand-responsive pricing, adjust prices in real time based on space availability, notifies app users, and has already helped reduce traffic miles and greenhouse gas emissions by 30 percent in the areas where it was launched.[15]

B. Smart Transportation

[14] *See* NUL Paper at 5-6.
[15] Kyle Funk, Niki Deninger, *Five Examples of Smart cities in the U.S.* (August 20, 2018) https://bipartisanpolicy.org/blog/five-innovative-examples-of-smart-cities-in-the-u-s/ (last visited 5/29/2019).

The worldwide adoption of EVs is a phenomenon which cannot be ignored.[16] Over 1 million EVs have been sold in the United States.[17] That number is projected to reach 18.7 million by 2030. It has been estimated that on a global basis 120 million EVs will be on the road by 2030.[18] As a result, U.S. electric companies have received regulatory approvals from various state regulators to invest over $1.1 billion in EV charging infrastructure deployment and related programs.[19]

There are three types of charging infrastructure. Level 1 chargers are primarily used in residences while Level 2 chargers are used in homes, workplaces and the public, and Level 3 or DC Fast chargers are used for public charging.[20] The charge times vary from overnight in a household setting, to 8 hours is a workplace, to 30 minutes to 2 hours in public settings. As of May 29, 2019 there were approximately 73,000 public and private EV charging outlets available.[21]

This EV charging infrastructure is dependent upon connections to the grid and requires careful integrated planning. If carefully planned and located in public and work spaces, it can have the beneficial effects on grid management including avoiding or lessening demand peaks and reducing reliance on power plant generation.

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[16] *See e.g.* The American Association Of Blacks In Energy, *Charging Ahead with Vehicle Electrification; Understanding Developments in International and U.S. Markets—and Implications For Wider U.S. Adoption* at 1 (2018) ("AABE").
[17] Mark Kane, *1,000,000 plug-in electric cars sold in U.S.* (INSIDEEVs 2018) https://insideevs.com/news/340135/plug-in-electric-cars-sales-in-us-surpass-1-million/ (last visited 5/28/2019).
[18] McKinsey & Company, *Charging ahead: electric-vehicle infrastructure demand* 3/13 (August 2018) ("McKinsey').
[19] Institute for Innovation, *Electric Vehicle Sales Forecast and the Charging Infrastructure Required through 2030* 12 November 2018) ("Institute for Innovation").
[20] *See e.g.* AABE at 2; McKinsey at 9/13.
[21] https://afdc.energy.gov/stations/states (last visited 5/29/2019).

As the first step, the electrification of transit and school buses, and fleet, municipal and ride-share vehicles should take priority.[22] Internationally there are already 400,000 electric buses in service and by 2040 they will have 70 percent of the world market. Large commercial and municipal fleets are already evaluating opportunities to electrify their fleets.[23] Likewise we will see a rise is the use of EVs for taxis, ride-hailing and car-sharing.[24]

The increased utilization of EVs, particularly transit and fleet EVs, will have the effect of promoting cleaner air and better health, improving urban and rural transportation options, creating new jobs and service businesses, and reducing costs in the longer term. According to The Regulatory Assistance Project ("RAP") electric buses have lower greenhouse gas emissions than diesel and natural gas buses throughout the country and can therefore can save greenhouse gas emissions on a per-mile basis when charged on even the dirtiest power system mix.[25] Additionally, it is estimated that electric buses either have or will soon have a lower total cost of ownership than conventional municipal buses.[26]

The increased use of EV mass transit and fleet vehicles is a positive for low-income, fixed-income and minority communities. These communities are more likely to live near busy roads and freight hubs, where vehicles may make frequent stops and exposure to pollution from heavy traffic is greater.[27] These residents are more likely to be renters and/or live in multi-unit dwellings and not have access to residential charging stations. Moreover, inadequate transportation tends to

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[22] NUL Paper at 5
[23] Edison Electric Institute, EV Trends & Key Issues at 10 (June 2018) ("EV Trends & Key Issues").
[24] https://about.bnef.com/electric-vehicle-outlook/#toc-viewreport (last visited 5/28/2019).
[25] David Farnsworth, Jessica Shipley, Joni, and Jim Lazar, Beneficial Electrification of Transportation at 50 (The Regulatory Assistance Project January 2019). ("RAP").
[26] Bloomberg NEF, *E-buses to surge even faster than EVs as conventional vehicles fade* 2/7 (July 12, 2018) https://www.bloomberg.com/professional/blog/e-buses-surge-even-faster-evs-conventional-vehicles-fade/
[27] Union of Concerned Scientists, *Delivering Opportunity—How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California* at 10

be an issue and as a result, many low-income families rely on public transportation, ride-hailing car-sharing and other modes of transportation. EV transit and school buses would help decrease greenhouse gas emissions and prove more economic for localities in the long run. More general EV adoption would also help by ultimately reducing fuel expenditures for those who do drive. Likewise, EV car-hailing and ride-sharing would prove beneficial because such services could be centralized at community hubs or public buildings, and residents could have access to cheap transportation for short periods of time thereby expanding their mobility options.[28]

In addition, grid modernization in general and smart transportation in particular offer significant employment and entrepreneurial opportunities. According to the National Association of State Energy Officials ("NASEO"), investments in energy infrastructure continued to grow in 2018 with the number of construction companies reporting a majority of their revenue coming from utility investments increasing with an accompanying dramatic increase in construction jobs.[29] During the same period over three-quarters of energy sector employers reported that they had varying degrees of difficulty hiring qualified workers usually as a result of lack of training or certifications.[30]

Similarly, we are seeing an expansion of economic opportunity specifically related to the manufacturing and deployment of smart transportation vehicles. According to NASEO:

> In 2018, almost 254,000 employees worked with alternative fuels vehicles, including natural gas, hybrids, plug-in vehicles, all-electric, and fuel cell/hydrogen vehicles, and an increase of nearly 34,000 jobs . . . Hybrids, plug-in hybrids and all-electric vehicles made up over 90 percent of this number, supporting 231,000 employees . . . Over 486,000

[28] Jenifer Bosco, John Howat, and John W. Van Alst, *A Consumer Advocate's Perspective on the Future of Transportation Electrification* at 83 (Berkeley Lab, the Future of Transportation Electrification: Utility, Industry and Consumer Perspectives, August 2018).
[29] National Association of State Energy Officials, *The 2019 U.S. Energy & Employment Report*, at 7 (2019) ("NASEO")
[30] *Id.* at 5- 6.

> employees of Motor Vehicle component parts companies are now contributing to more fuel-efficient vehicles, an increase of approximately 10,000 from 2017.[31]

Some difficulty in hiring in these sectors was also reported do to the prospective employees' lack of experience, training or technical skills.

There is a need for improvement in diversity of employment in all sectors.[32] For example, 69 percent of the employees in the electric power generation sector are white and some large percentage of them are male. In contrast, only 9 percent of the employees are African American versus the national African American workforce average of 12 percent. To the extent that technical expertise is an issue, the problem could be solved through workforce training programs.

Similarly, 8 percent of the employees in the motor vehicle and Component Parts sector were African American versus the national African American employment average of 12 percent and 78 percent were white which matches the national white employment average of 78 percent.[33]

Increased utilization of EVs and the deployment of EV infrastructure, while not a cure-all, can help improve this picture. Significant economic opportunities are beginning to present themselves as businesses and individuals are needed to install EV infrastructure, provide repair and retail services, and upgrade the electricity grid, as well as implement assorted smart, clean energy upgrades to assist consumers in making energy-saving conservation decisions. These tasks can be performed by minority businesses with a track record of hiring individuals living in their

[31] *Id*. 4.
[32] The energy industry should be diverse at all levels in terms of workforce, suppliers, corporate management and Board membership. State utility commissions such as the Maryland Public Service Commission under the leadership of Commissioner Emeritus Harold Williams have sought to promote industry diversity through the use of voluntary memorandums of understanding.
[33] NASEO at 159,161.

communities. Moreover, training programs will be necessary since in large part, these are jobs that will require new skills.[34]

It is Important That Smart Energy Infrastructure Be Deployed on a Widespread Basis And that Innovative Energy Services are Accessible to All

State and local regulators should act to promote the universal deployment of smart energy infrastructure and provision of smart energy services. As the electric grid is modernized and communities strive to meet clean energy goals, smart electric infrastructure and technology must be deployed on a universal basis so that new and more efficient services can be offered on a ubiquitous basis. Such smart infrastructure and technology includes but is not limited to EV infrastructure; universal and residential solar; energy storage devices; microgrids; energy efficient home appliances and structural upgrades; and smart community street lighting, monitoring and traffic control systems. Universal deployment and service is necessary in order to ensure that all communities benefit from electrification.

The widespread deployment of the smart energy infrastructure is necessary if all communities are to receive the aforementioned benefits from electrification whether referring to those to be derived from the utilization smart city platforms or those arising the utilization of clean energy technology such as smart transportation vehicles—all of which present tremendous quality of life and economic opportunities which cannot be ignored and should be accessible on a ubiquitous basis.

[34] NUL Paper at 5.

The bad news is that if sufficient EV infrastructure is not built on a widespread basis, low-income and disadvantaged communities and dwellers in multi-family units might be left behind.[35] The good news is that as the Maryland Public Service Commission has indicated, if built "the anticipated benefits associated with an expanded EV infrastructure are potentially far-reaching to EV owners and non-EV owners alike."[36] This is NBCSL's goal.

At the moment much of the focus on deploying EV infrastructure has been on serving higher-end residences since at present this is where most charging takes place and adopters of EVs are generally educated, middle-aged married men who live in single-family homes and have higher incomes than that non-EV owners.[37] However, deploying EV infrastructure sufficient to serve not only high-end residences, but also multi-family dwellings where many urban residents reside, and assorted public and workplace locations (*e.g.* schools, libraries, fire stations, community centers *etc.*) is necessary and will be expensive.[38]

Overriding the cost issue is the countervailing fact that if EV infrastructure is deployed on a widespread basis, and properly funded, operated and maintained, it can have a positive impact on low-come, fixed-income and minority communities in a relatively short period of time. Moreover, deployment can be accomplished on a graduated basis through the use of pilots and other mechanisms.

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[35] RAP at 9.
[36] Maryland Public Service Commission, Order No. 88997 at 43 (January 14, 2019).
[37] RAP at 24
[38] U.S. Depart of Energy, *Costs Associated with Non-Residential Electric Vehicle Supply Equipment* at 3 ("The cost of a single port EVSE unit ranges from $300-$1,500 for Level 1, $400-$6,500 for Level 2, and $10,000-$40,000 for DC fast charging. Installation costs vary greatly from site to site with a ballpark cost range of $0-$3,000 for Level 1, $600-$12,700 for Level 2, and $4,000-$51,000 for DC fast charging.") (2015) (DOE EV Cost Study).

One question which regulators and lawmakers must confront is whether electric companies should be permitted to own, operate, maintain EV infrastructure (including EVSEs) and recover the costs thereof? In Resolution ETE 19-04 NBCSL supported "electric company investments in smart energy infrastructure to help ensure all citizens have access to, and may take part in the benefits of, a smart electric grid, deployment" and stated that "electric companies should be able to invest in smart energy infrastructure and have a clear path for cost recovery in support of efforts to maximize the opportunities and benefits smart energy infrastructure may provide society."[39] These conclusions still hold true.

The deployment of EV infrastructure must be well-planned and widespread. Deployment must occur in low-income and high density areas, at public buildings and at locations where transit, ride-hailing and fleet vehicles can be serviced. It is unlikely that if infrastructure is not deployed in such areas prior to the time that the initial construction and placement of EV infrastructure is declared "complete," then somehow later these areas would be included in a new build on an ad hoc basis. We see this problem today in connection with the failure to lay new broadband fiber in some urban neighborhoods.

Consequently, given the scale of resources that will be required, and the need to ensure universal service, full participation by electric companies in the initial deployment, operation and maintenance of all EV infrastructure is the only way to guarantee that its deployment will be widespread and service offerings universal.[40] In a typical situation, the electric company would

[39] Resolution ETE 19-04 at1.

[40] Transportation Electrification Accord ("Under appropriate rules, it is in the public interest to allow investor-owned and publicly-owned utilities to participate in and facilitate the deployment of electric vehicle supply equipment (EVSE) and/or supporting infrastructure for residential and commercial applications in their service territories to accomplish state and local policy goals. The distribution grid is incorporating new grid-edge features such as advanced demand response and distributed energy storage. In that broader context, utilities are well positioned to ensure that installed EVSE, whether owned by utilities or other parties, maximizes the public benefits

develop the "make-ready" structure (*e.g*. providing service connection upgrades and power lines), installing the EVSE, and offering incentives or other rebates to help cusomers defray the costs. Only electric companies have the resources to invest in EV infrastructure in all areas including the more difficult or underserved areas thereby ensuring access to low income communities, multi-unit dwellings and public spaces.[41] Similarly only they have the resources and expertise to manage the education and outreach programs that will be required if all communities are to benefit.

This will require that the costs of building a public EV infrastructure network be borne by utility ratepayers. However, principles of energy justice mandate that in order to justify imposing the recovery of these costs on ratepayers, all communities have access to the EV infrastructure, rates must be just and reasonable, and costs must be properly allocated so as to avoid the phenomenon of less wealthy and older late adopter EV or non-EV users subsidizing wealthier and younger early adopters.[42]

A second question which regulators and lawmakers must face is under what terms and conditions should EV infrastructure should be deployed. Many state utility commissions are requiring electric companies to conduct pilots so that information can be gathered prior to full deployment. As a general rule, these pilots run for varying periods of time and offer different rates and levels of service to different types of customers. They cover passenger cars, transit and commercial vehicles. Some permit the offering of incentives. The expenditures of the electric companies are carefully monitored and controlled in all of the pilots. The commissions are also

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of these innovations, through appropriate integration of these technologies in order to maximize electrical system benefits for all classes of customers.") (2018).

[41] RAP at 25.

[42] *See supra* note 7; *see also* Bosco *et. al.*at 75

addressing the issue of how to ensure prompt recovery of costs so as to keep rates lower in the long term. This is the proper way to proceed.

For example, in California, Southern California Edison, as part of its pilot project, will provide charging infrastructure to support customers investing in medium- and heavy-duty electric vehicles of all types (including trucks and buses), with a budget cap of $356 million and implement new time-of-use electric rates to encourage charging when the grid is underutilized. For its part San Diego Gas & Electric will provide upfront rebates and installation services for up to 60,000 customers to install charging stations at home with meters that will allow customers to use dynamic rates designed to encourage charging when renewable energy is abundant and electricity prices are the lowest.[43] The Maryland Public Service Commission has approved the offering of multi-unit dwelling and multi-family specific rebate incentive offerings as well as EV time-of-use ("TOU") rates.[44] The District of Columbia Public Service Commission has approved a pilot in which Pepco will locate 10 Level 2 chargers and 2 DC Fast chargers that will be accessible for taxis and rideshare services.[45]

It is important that all stakeholders recognize that the adoption of incentives and new TOU, dynamic and other rate structures (including measures to address the problem of regulatory lag) such as those being tested in the pilot projects cited above are necessary to ensure that the benefits of smart infrastructure deployment, and not simply its costs, are shared in an equitable manner. As the American Association of Blacks in Energy noted, "[p]olicymakers, must consider how best

[43] Max Baumhefner, *CA Greenlights big Utility Effort to electrify Transport/NRDC* May 31, 2018) https://www.nrdc.org/experts/max-baumhefner/ca-greenlights-big-utility-effort-electrify-transport (last visited 5/29/2019).
[44] Maryland PSC Order No. 88997 at 58, Attachment A at 2.
[45] *Re Investigation into Modernizing the Energy Delivery System for Increased Sustainability*, Formal Case No. 1130; *Re: Potomac Electric Power Company*, Order No. 19898 at 22 (D.C. Public Service Commission April 12, 2019).

to allocate future regulatory rate structures, including an examination of the incentives necessary to ensure investment costs are not unnecessarily passed to consumers lest likely to adopt electric vehicles in the initial phases of maturation . . . Are there appropriate available incentives for utilities to avoid overall rate increases related to EV infrastructure, including grid resiliency?[46] Incentive programs should be designed so at to ensure that low income ratepayers are not subjected to unaffordable rate increases and the benefits are shared.

In addition to the incentives set forth above, to date, 24 states have adopted some type of grant or tax credit incentive program to support the deployment of EV charging infrastructure and 41 states have allocated at least some of their Volkswagen Diesel Emissions Settlement funds to EV charging infrastructure, representing more than $265 million in potential investment.[47] For example, some states offer income tax credits for 20 percent of the cost of EV charging stations up to $2,500, others offer a $1,000 rebate for the purchase and installation of Level 2 chargers and still others of a $15,000 rebate for the purchase of DC fast chargers.[48]

Conclusion

The National Black Caucus of State Legislators remains committed to developing policies that seek to use innovative technologies to advance equality, fairness and economic development in the energy space. Given the essential nature of electric service and the stakes which are involved, it is incumbent upon state policymakers, particularly those representing minority, low-

[46] AABE 2
[47] Institute for Innovation 11.
[48] DOE EV Cost Study 23.

income, and fixed income consumers to take the lead in working to assure universal, affordable and reliable access to energy service.

The growth of smart cities represents a relatively new front in this country's electrification revolution. In the past NBCSL recommended that policymakers follow 5 principles as they consider questions related to smart cities:

1. Ensure that utility policies reflect core notions of equity and social justice.
2. Avoid regressive cost allocation in distributed generation programs.
3. New utility frameworks should strive to distribute the benefits and costs of innovative new utility services more evenly.
4. Study these issues in more detail and inform new policies with data.
5. Assure robust consumer protections.

In this White Paper NBCSL addresses another benefit to be derived from the growing phenomenon of electrification—smart transportation. At some point in this century the number of EVs will surpass internal combustion energy vehicles. Nations such as China have already realized the benefits of electrification and are ahead of the U.S. in important areas such as the utilization of electric buses, if not in other areas. Minority, low-income and fixed income consumers stand to benefit from electrification as EVs begin to proliferate on our streets. These benefits include cleaner air, better health, and other quality of life improvements due to more efficient and more economic mass transportation *etc.*, as well as greater economic opportunities. However this will occur if—and only if—there is widespread deployment of EV infrastructure, EV-related rates are reasonable and costs equitably allocated. Consequently, following past practice NBCSL urges

policymakers to consider now 5 additional principles when addressing issues related to EVs and EV infrastructure:

1. New smart energy infrastructure (including smart cities and EV infrastructure) should deployed on a widespread basis throughout all communities;

2. Innovative energy services should accessible to all;

3. Energy costs should distributed fairly and rates should be just and reasonable.

4. Neither regulatory nor legislative barriers should prohibit electric companies from deploying, owning and maintaining all EV charging infrastructure (including EV charging stations or ports (Electric Vehicle Supply Equipment or "EVSEs") and the companies should have a clear path for cost recovery.

5. Programs and policies should be adopted that provide incentives for low income consumers and support for localities in order to encourage the universal deployment of EV infrastructure and the use of EV transit and other vehicles.