

**AMERICA'S ELECTRIC INFRASTRUCTURE PROGRAM AND HOW IT CAN BE
EVEN GREENER**

Climate Change Law, Research & Writing (Spring 2024): Final Paper

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I. Introduction

In this essay I posit that the existing legal framework in the United States of America, while encouraging, still has a long way to go to promote a sustainable, climate-friendly electric transportation infrastructure. First, I will provide an overview of the current federal legislation and regulations. Second, I will provide an overview of some state level legislation and regulations. Third, I will look at aspects of the legal framework in Norway and suggest that their greener infrastructure plan should be mirrored more globally including in North America.

America relies heavily still on coal, natural gas, and oil, all of which continue to contribute to global warming heavily.¹ A movement toward a greener environmentally friendly sustainable renewable resource build infrastructure system would greatly assist in the fight against climate change. One way to do this is the promotion of the development, research, and sale of zero emission vehicles for both private individuals as well as commercial vehicles. America is slightly different than smaller countries with better abilities to move goods via railways, thus the investment into electric commercial trucks and other zero emission transport vehicles is very important. How is America promoting this investment into its future, and how can it be even better?

II. Brief Overview of Relevant Federal Statutory and Administrative Law

Initially to focus on this topic, an overview at the federal level is necessary for the electric transportation infrastructure legislation. Is there federal legislation and regulations in America for

¹Energy Information Administration, US Energy Facts, <https://www.eia.gov/energyexplained/us-energy-facts/#:~:text=Fossil%20fuels%E2%80%94petroleum%2C%20natural%20gas,primary%20energy%20production%20in%202022>.



the electric charging/ transportation infrastructure and what is it currently set forth, what are the goals and standards implemented under current federal legislation and legal framework in place?

President Joe Biden signed an executive order in December of 2021² with the desire for America to be net zero on carbon emissions by 2050, this is a lofty goal with the amount of emissions America produces. He also proposed with this executive order the country's electricity sector to become net zero by 2035. It is apparent with these goals funding for renewable sustainable resources is necessary, especially in the transportation sector. This order helped promote much of the progression of legislation nationally for America in this legislation.

One recent legislative act related to this topic is the Infrastructure Investment and Jobs Act,³ also known as the Bipartisan Infrastructure Plan. This Act helps fund clean energy and other measures to address climate change including the Electric Infrastructure in many ways. This Act funds a grant program to incentivize public accessibility to electric infrastructure. One focus in this act helps refund the FAST Act (Fixing America's Surface Transportation Act⁴) which was first introduced during the Obama Administration and was refunded through Infrastructure Investment and Jobs Act, also funds the development of public electric vehicle charging infrastructure. Private investment into electric infrastructure is also promoted by the Infrastructure Investment and Jobs Act partly through the adoption of federal, state, and local tax incentives to encourage clean energy use and other sustainable practices.

The United States Department of Transportation notes that with the passage of the Bipartisan Infrastructure plan, the Biden Administration announced the plans for all 50 states, D.C,

² Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, Off. Vol. 157 U.S.C.C.A.N. 289 (Dec. 8, 2021).

³ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

⁴ Fixing America's Surface Transportation Act, Pub. L. No. 114-94, 129 Stat. 1312 (2015).



and Puerto Rico for the Deployment of Electric Vehicle Infrastructure under the NEVI program (National Electric Vehicle Infrastructure⁵). This program will provide more than a total of \$1.5 billion to build EV (electric vehicle) chargers across approximately 75,000 miles of highway across the country. Politicians like the U.S. Transportation Secretary Pete Buttigieg has been quoted as saying this will help America lead in Automotive innovation in the 21st century⁶ at the North American International Auto Show in Detroit, Michigan. With the Transportation Sector of America being the largest source of greenhouse gas emissions⁷ transitioning America's cars to electric could benefit the environment if done correctly.

The Biden Administration has also passed the Inflation Reduction Act which will help fight inflation by investment in domestic energy production and manufacturing as well as reduce carbon emissions. Part of this act provides tax credits to those who purchase new and used electric vehicles to help incentivize the purchase of greener cars and bring down the sticker price of electric vehicles.

In August of 2022 the Biden Administration also passed the CHIPS and Science Act.⁸ America invented the semiconductor, but today America relies heavily on foreign markets⁹ for

⁵ To learn more about NEVI, see:

The Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58 (Nov. 15, 2021) makes the most transformative investment in EV charging in United States (U.S.) history that will put us on a path to a nationwide network of 500,000 EV chargers by 2030 that ensures a convenient, affordable, reliable, and equitable charging experience for all users.

<https://www.fhwa.dot.gov/environment/nevi/> . For additional information, see <https://afdc.energy.gov/laws/12744>.

⁶ Pete Buttigieg, Secretary of Transportation, Speech at the North American International Auto Show, Twitter (Apr. 21, 2024), video, <https://twitter.com/SecretaryPete/status/1571188734543990786?lang=en>.

⁷ Statista, GHG emissions breakdown by sector in the United States, <https://www.statista.com/statistics/1200954/ghg-emissions-breakdown-by-sector-us/>

⁸ H.R. 4346, 117th Cong. (2022), <https://www.congress.gov/bill/117th-congress/house-bill/4346>

⁹ White House, Fact Sheet: Chips and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/>



semiconductors which are a large factor in the price of an automobile as well as all other types of electronics. This act helps fund research and development of semiconductors in America in order to once again lower the sticker price on cars and lower emissions on imports of these necessary electronic parts.

The transportation sector is the largest sector of greenhouse gas pollution in America, it still is a massive issue and should be addressed as quickly as possible. The United States of America is also not the most progressive country when it comes to fighting climate change in 2024, with both of these things being true, the climate change fight in the transportation sector in America is underfunded in relation to how big of an issue climate change is.

The carrot and stick method is commonly used by legislation across the world to help by using rewards and penalties to incentivize certain behavior. Parts of this method can be seen to be implemented for the electric infrastructure such as the grants and tax credits through the CHIPS and Science Act as well as the Bipartisan Infrastructure Bill. These incentives are the rewards known as the carrot, the penalties have not yet been written into legislation at the federal level though some progressive states like California have taken this step.

It can be stated then that there is legislation moving through the pipework's of the United States national legislation and regulation system. Some legislation such as the Infrastructure Investment and Jobs Act has passed through both the House and Congress and has begun to fund and research more into the electric charging/transportation infrastructure, but more can be done. Tracking climate change impact is often a long-term process in order to gather accurate data. It would be very difficult to measure the effect of legislation so far in America based on CO2 or methane emissions, though it should be importantly noted that even with the dire consequences of climate change, any benefit to a cleaner, more sustainable country, especially one as impactful as



the United States of America, should be promoted and celebrated. Additionally, though it would be hard to track by contribution over a timeline to climate effects, the beneficial impact of passing national legislation can be quantified by state passed legislation following or even surpassing the national goals.

III. Brief Overview of Relevant State Statutory and Administrative Law

This next section discusses whether state statutory and administrative law promote a friendly green energy framework. It becomes apparent that some states have a more progressive legal framework while others are dragging behind the federal legal framework.

A research report done in June 2023 by the American Council for an Energy-Efficient Economy (ACEEE)¹⁰ rates each state against each other to determine which states are moving toward electrification at the greatest rates. ACEEE is a nonprofit research organization that helps develop plans and policies for reducing energy waste and fighting combat change. In this research report titled “2023 Transportation Electrification Scorecard”, factors in each state’s infrastructure planning and goal setting, incentives for EV development, Transportation system efficiency, electricity grid optimization, and transportation electrification outcomes in order to rank the states in a general order. ACEEE used a weighted approach on these areas and gave the most points for incentives for EV development because based on policy impact and feedback from experts on this subject, this area would have the greatest impact on electrification development.

¹³ American Council for an Energy-Efficient Economy (ACEEE), 2023 Transportation Electrification Scorecard, (2023) <https://www.aceee.org/sites/default/files/pdfs/T2301.pdf>



Various “policy areas” were measured in the 2023 Electrification Scorecard such as “planning and goal setting”, “incentives for EV deployment”, “transportation system efficiency”, “electricity grid optimization”, and “outcomes”.

California showed up in every single policy area as a leader in every single area measured. Washington was also a leader in planning and goal setting by implementing California’s standards for ACCII¹¹ and ACT¹² Acts respectively. Both states also require comprehensive transportation electrification planning by their utilities. New York and Washington were policy leaders in incentives for EV deployment by in part offering a wide range of incentives for EV’s and for the EV charging infrastructure. Additionally, each state invested considerably in charging infrastructure for low income, economically distressed areas. They also have low or no taxes as incentives for electric vehicles. Maryland and DC were leaders in transportation system efficiency by requiring the purchase of zero-emission transit buses by a certain designated date and providing financial support for zero-emission transit and school buses. New York, Colorado, and Hawaii were leaders in electricity grid optimization by setting targets to reduce the emissions of their power grids and setting specific plans for integrating EV’s into the grid. Vermont along with California of course were leaders in the outcomes area because they both have strong per capita EV charging infrastructure deployment and light and heavy duty EV registration.¹³

In total a state could in theory score a total score of 100, 36 of those points coming from incentives, 23 points coming from outcomes, 17 points from efficiency, 15 points for infrastructure planning and goal setting, and 9 points for electric grid optimization. Any state which achieved

¹¹ House Bill H.R. 1435, 118th Cong. (2019).

¹² [2 California Environmental Law & Land Use Practice § 42.61 \(2024\)](#), Lexis, (April 30,2024)

¹³ American Council for an Energy-Efficient Economy (ACEEE), 2023 Transportation Electrification Scorecard, (2023) <https://www.aceee.org/sites/default/files/pdfs/T2301.pdf>



any less than 15% of the points available was not scored against the other states, but the research still analyzed what steps some of those states have taken to move in this direction. The state which ranked the highest on the scorecard was California with a total score of 88, the state with the lowest ranked score was Iowa with a score of 15.

The Transportation Electrification Scorecard also listed out some recommendations for the states lagging behind the most. This is important at the national level for America for the Electric Transportation Infrastructure. For those states that are struggling to move in this direction ACEEE recommends comprehensive planning that includes a well-defined coordinated strategy to build out electrified transportation, specific goals for EV sales and the EV infrastructure construction, these plans should go beyond just emissions standards planning and plan for improved system efficiency, and addressing different modes of green transportation. Other recommendations also include leveraging existing funding that is available to each state such as the recently passed IJA and the federal Low or No emissions program to support EV charging infrastructure deployment while evaluating other options for funding. Additionally, when investing in EV infrastructure, keep equity at the front of mind. New York, California, and Washington have shown the importance of funding being provided for those in poverty. Track spending and electrification transportation program impacts to ensure benefits for those in need such as public transportation funding. It is important to engage with as much of the community as possible to incorporate all viewpoints. If the community's views and needs are heard and taken into account the transition toward an electrification of the transportation system will be smoother for both the community and the transportation systems. In addition, the community will have a greater interest in personally investing in the electrification at home such as purchasing an EV for themselves.



The ACEEE Transportation Electrification Scorecard really puts into perspective how much or how little each individual state is investing into this movement toward a greener electric infrastructure and transportation network. This investment in turn helps show which states care the most about this movement and which states are doing more or less than the national standards set recently by the Inflation Reduction and goal of net zero emissions nationally. California really is leading the pack so to speak, they are at the forefront of passing legislation in order to fast track the movement into America's electric infrastructure future.

It can be shown by comparing the national movement in the investment and requirements of the electric charging/transportation infrastructure legislation that California is ahead of the national standard so far. Though California's advancements in this area should be celebrated, though many other states should follow suit and invest to promote the health and wellbeing of the citizens of their own states, to have a safer and more reliable infrastructure, and to bring more job opportunities to each individual state, still even California is not doing enough to fight climate change. More needs to be done by every state including the leader in this area of development. Internationally, there may be even more hope for a direction to follow in this climate change fight. California as mentioned is helping lead the way at the state level for electric vehicle legislation and progress in the electrification of their automobile market. One way California has continued to lead the way is passing legislation such as the Advanced Clean Cars II (ACCII) as well as the Advanced Clean Trucks Act (ACT). ACCII is a light-duty zero-emissions vehicle (ZEV) sales mandate which requires that 100% of vehicles sold in California must be zero emission vehicles by 2035. This will facilitate a greater migration from the sale of greenhouse gas emitting vehicles to electric cars and other zero emission vehicles to private individuals in a state with a massive auto sales market. Additionally, California has passed the ACT this is a sales mandate requiring a



greater sale of zero emission vehicles for heavier trucks such as tractor trailers. This regulation varies by size of the vehicle but overall requires all different classes of heavy trucks to increase the migration to purchasing zero emission vehicles over greenhouse gas emitting vehicles.

Although neither Colorado nor Oklahoma ranked number one in the Transportation Electrification Scorecard, they did have the greatest improvement in electrification from the previous year to 2023. It is important to note these changes since states which may be resistant to the electrification change can look to them for guidance rather than a state like California which has been on the forefront of this movement and may have greater funding.

One of the ways Colorado, Oklahoma, and other states which are leading the way in the movement toward a greener sustainable electric infrastructure is by following in the footsteps of California. Since California has the most strict legislation of any state so far for the sale and manufacturing of zero-emission vehicles most states have found the best path forward to comply with some of California's mandates. Colorado for example passed [5 CCR 1001-24¹⁴](#) which has been amended and accepted in 2023 in order to comply with California's emissions standards for light and medium duty vehicles. Oklahoma on the other hand which follows Colorado as the best improvement of electrification in 2023 has not passed regulation to follow in California's footsteps directly. Oklahoma instead so far has focused on alternative fuel options such as biofuel, passing legislation funding the research and development of alternative biofuels. Oklahoma has also passed regulation recommending state owned vehicles such as school buses should highly consider using buses with alternative fuel options such including electric.¹⁵

¹⁴ 5 Colo. Code Regs. § 1001-24 (2022).

¹⁵ Clean Fuels and Vehicle Emissions Standards State Law Survey, Lexis (April, 22, 2024).



Though Oklahoma has had some significant strides in a greener state overall, their electric infrastructure has not nearly improved through legislation like California's. Colorado is a good example of what other states should do and implement the most progressive legislation possible in order to build up the electric infrastructure. These examples of states with less green infrastructure gaining transactions in this area are promising. If legislation is not passed on a national level it is imperative for states to pass legislation on their own continuing on this progressive path of growing the electric transportation infrastructure for America.

IV. Brief Overview of Relevant Comparative Law Systems

At this point of the argument it has become clear that both at the federal and state level a lot has been achieved, but there still is more work to do to ensure a sustainable and green electric infrastructure/charging design. This section will analyze how other countries have developed their legal framework and whether the American legal system should follow suit.

The green movement is measured in many ways such as recycling, CO2 emissions per capita, sanitation of drinking and cleaning water, protecting marine ecosystems and more. The Environmental Performance Index ¹⁶developed by Yale University uses 40 performance indicators about climate change performance and environmental health to rank countries against each other to determine what countries are moving in this direction. While the Green Future Index ¹⁷developed by the Massachusetts Institute of Technology ranks nations and territories on their commitment toward a sustainable future.

¹⁶Environmental Performance Index, Environmental Performance Index Results (2022), <https://epi.yale.edu/epi-results/2022/component/epi>

¹⁷Technology Review, Massachusetts Institute of Technology (MIT),The Green Future Index 2023, <https://www.technologyreview.com/2023/04/05/1070581/the-green-future-index-2023/> (last visited April 30, 2024).



Although there are a few states in America which are leading the way in comparison to other states dragging behind in this movement toward a greener electric infrastructure, overall America is dragging its feet on this movement. Norway and its Nordic neighbors are considered world leaders in the investment of green transportation infrastructure and green infrastructure development in general. The Department of Commerce published an overview¹⁸ of some highlights done by Norway in this area. Norway has focused on almost every aspect of green investment to combat climate change. They use taxes, incentives, bans, subsidies, and more in order to have both a carrot and stick method for corporations and private individuals to go more green. Some of the areas highly related to the green transportation structure that Norway focuses funding and research on are wind energy, hydropower, batteries, hydrogen energy, and electric vehicles. Over the last century Norway has built over 330 dams in order to help produce clean energy. Norway has also called attention to hydrogen stating that hydrogen research and development is a key strategy in green shifting. By 2040 Norway is committed to achieve 30GW offshore clean energy thus putting them at the forefront of renewable energy production per capita. By the development of more generators for clean energy such as wind turbines or hydroelectric dams it is much more simple for the transportation network to work toward or entirely act with a zero emission standard. Norway is also one of the leading countries internationally in the sale of electric vehicles per capita.¹⁹ Around ninety percent of the new passenger cars sold to consumers have a fully electric drivetrain. In addition, Norway is looking at their public transportation to

¹⁸ U.S. Department of Commerce, Country Commercial Guide: Norway - Green Technologies, <https://www.trade.gov/country-commercial-guides/norway-green-technologies>

¹⁹ Euronews, "In which European country did people buy the most EVs last month?", Euronews Business, <https://www.euronews.com/business/2024/02/20/in-which-european-country-did-people-buy-the-most-evs-last-month>



electrify; the fleet of ferries are seeking electrification as well as the regional airline, Wideroe, is looking to be fully electric by 2028.²⁰

One of the main reasons Norway is leading the green transportation market including in the area of their electric infrastructure is because they have been focusing on this issue longer than the United States. For example, even all the way back to 1990 Norway has had various incentives in place for purchasing electric vehicles. Back in 1990 there was no import tax for zero emission vehicles.²¹ Currently, the Norwegian Parliament has determined a national goal that all new cars sold by 2025 should be zero-emission²² (electric or hydrogen). In comparison the United States Inflation Reduction Act does not create any mandate for a move toward electric vehicles. Instead of using both the carrot and stick method as Norway has done for a few decades, America is starting with only the Tax incentives (the carrot) and no mandates or requirements to follow the incentives in place. As mentioned some states are taking the initiative like California for example, putting in place measures such as the ACCII to mandate the vehicles sold in the state be zero emission by a deadline.

Additionally, Norway has long used a tax system to charge cars which pollute more at the initial purchase of the vehicle. The system in place called the “polluter pays” principle²³ in the car tax system in Norway is calculated based on weight, CO2 and NOx emissions. Higher taxes are in place for the cars which emit more pollutants into the atmosphere which by comparison make the

²⁰ Euronews, "Zero-emissions public transport network could be a reality in Oslo by end of 2023", Euronews Green, <https://www.euronews.com/green/2022/10/14/zero-emissions-public-transport-network-could-be-a-reality-in-oslo-by-end-of-2023>

²¹ Environmental Defense Fund, "How did Norway go electric?", Vital Signs, <https://vitalsigns.edf.org/story/how-did-norway-go-electric>

²² Norwegian Electric Vehicle Association, "Norwegian EV Policy", elbil.no, <https://elbil.no/english/norwegian-ev-policy/> (last visited April 30, 2024).

²³ Norwegian Electric Vehicle Association, "Norwegian EV Policy", elbil.no, <https://elbil.no/english/norwegian-ev-policy/> (last visited April 30, 2024).



zero emission cars like electric vehicles more desirable and more in demand. When the consumer market is interested in the product then the infrastructure for the product becomes of much greater importance for the country.

Norway has also shown a focus on funding with equity in mind. Norway also showed the importance of the infrastructure to the public with the legislature establishing a “charging right” for those living in apartment buildings²⁴. Thus, apartment complexes had to comply with building codes and put in place the electric infrastructure. The public increasing the amount of zero emission cars such as the electric vehicle market created the need for the legislature to step in and create a right for the infrastructure. Other incentives which have since been adapted in order to continue to fund Norway's infrastructure was an act which created no payment necessary for tolls for zero emission vehicles, as well as no ferry tolls, and free municipal parking.

According to EuroNews Norway had the largest increase in new purchases of electric vehicles in January of 2023 per capita when the report was taken.²⁵ Germany took the largest market share of electric vehicles sold, although this can be accounted for with a much larger population. With Norway's much smaller population by comparison and still the largest increase in sales this shows the commitment by the Norwegian general public to purchase electric cars supporting the electric infrastructure.

America should look toward Norway as just one of our European neighbors who have pushed even further in the right direction than the United States have in the push for a greener electric transportation network and a zero-emission goal. Some of the goals set by California are

²⁴ Norwegian EV Policy, elbil.no, <https://elbil.no/english/norwegian-ev-policy/#:~:text=The%20Norwegian%20Parliament%20decided%20on,applies%20to%20city%20buses%E2%80%8B>

²⁵ Euronews, "In which European country did people buy the most EVs last month?", Euronews Business, <https://www.euronews.com/business/2024/02/20/in-which-european-country-did-people-buy-the-most-evs-last-month>



a good start that could be implemented on a more national scale in order to increase consumer demand of EV's and thus increase the need for a greener sustainable electric infrastructure across all of America.

America can additionally look to Norway and other European countries who have had more progress in the field of clean energy for the move toward a net zero carbon infrastructure/ transportation plan. Though much of the automobile market is focusing on the electric charging infrastructure, there are other options such as the hydrogen market that is also available for investment and is ripe for opportunity. As stated Norway has invested heavily in this field as well and plans to be one of the leaders in the next decade for clean hydrogen production. The clean electric charging/transportation network research and funding should go hand in hand with the hydrogen research and funding. The more sources of clean energy we have to move into this next generation of clean energy the better off humanity is.

Although Norway is ahead of the United States of America in the clean energy transition including in the transportation/charging infrastructure. America is beginning to invest in the hydrogen sector as well for alternatives to clean energy. The Department of Energy has a webpage dedicated to the United States of America's progression and research and development into clean hydrogen.²⁶ The Department of Energy says the U.S. National Clean Hydrogen Strategy and Roadmap²⁷ tracks the various opportunities for clean hydrogen to contribute to the National net-zero goals. The data gathered shows how the hydrogen "production, transport, storage, and use in the United States today and presents a strategic framework for achieving

²⁶ U.S. Department of Energy, "Clean Hydrogen Strategy and Roadmap", available at:

<https://www.hydrogen.energy.gov/library/roadmaps-vision/clean-hydrogen-strategy-roadmap>.

²⁷ U.S. Department of Energy, U.S. National Clean Hydrogen Strategy Roadmap, available at:

https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/us-national-clean-hydrogen-strategy-roadmap.pdf?sfvrsn=c425b44f_5.



large-scale production and use of clean hydrogen, examining scenarios for 2030, 2040, and 2050.”²⁸ Many of the benefits that are presented on the U.S. National Clean Hydrogen Strategy and Roadmap for a transition into a greater reliance on clean hydrogen energy would be true of the investment into the transportation/charging electric infrastructure in America. Some of those such benefits are the obvious benefits in emissions reductions and supporting the general goal of decarbonizing the energy sector, the investments would create quality jobs to support the energy transition, and importantly the sooner we invest in change such as these, the cheaper it is in the long run. The more time is wasted by not having enough action in climate change, the more damage emissions will continue to do, the more it will cost to fix all of the results of a heating planet, and the more emissions mess up the Earth, the more Earth there will be in need of repair.

The United States of America is massive, the scale of their carbon output is massive, and the impact moving toward a clean energy market would also be massive. With this scale in mind it is not surprising that America is not transitioning overnight, but the faster the transition is done the better. Since Norway has invested in this transition heavily and focused on this transition they have had the opportunity that America is just now getting on the verge of for progress. It takes more time and effort to move a boulder than a pebble, but it is not impossible to do with hard work. America is like a boulder in this transition and with more investment and focus in this transition like Norway has done for decades, the United States of America can make this clean energy transition too for their charging/transportation sector.

²⁸ ²⁸ U.S. Department of Energy, "Clean Hydrogen Strategy and Roadmap" available at: <https://www.hydrogen.energy.gov/library/roadmaps-vision/clean-hydrogen-strategy-roadmap-> First paragraph on homepage



V. *Conclusion*

America is slightly different than smaller countries with better abilities to move goods via railways, thus the investment into electric commercial trucks and other zero emission transport vehicles is very important for the United States. As shown in this paper, the existing legal framework, while encouraging, still has a long way to go to promote a sustainable, climate-friendly electric infrastructure and transportation network in America. The overview of the current federal legislation and regulations in America shows the potential and current shortfalls. Though the goals of net zero emissions promote the right idea and move America in the right direction, executive orders are not binding on their own. The Inflation Reduction Act and the CHIPS and Science Act both fund this sector well and will be shown in due time with research over decades the effects on climate change. However, America still must do more to fight climate change and build a better green electric infrastructure and transportation system faster to fight off climate change.

Certain state level legislation and regulation is surpassing the national movement while others are dragging behind and have the opportunity to improve. Those that lag behind so far have the advantage of looking to successful paths other states have taken to advance themselves in this path to promote a green infrastructure and transportation network. If greater success at the national level of America is futile in the current time, state level change at the minimum should follow in the footsteps of our European neighbors. As climate change increases globally we must accept any and all local climate change solutions such as those for the electric infrastructure as quickly as possible. Though individual steps cannot alone fix climate change, every step does help. European countries in general can be a good guide to the United States of America in order to have a successful transition. The legal framework of Norway shows a promising movement in the right



direction and suggests that more needs to be done for a sustainable climate-friendly electric charging/transportation infrastructure in America and across the whole world.

