

This document has been prepared as part of the implementation project of Legal Pathways to Deep Decarbonization (Michael B. Gerrard and John C. Dernbach, eds., Environmental Law Institute [2019]) (LPDD). For background information on the project, see <https://lpdd.org>

### **Memorandum to Accompany Model Transportation Electrification Statute**

There is a strong consensus in the scientific community that profound changes are occurring in the world's climate; that these changes are due in large measure to human activities; and that the consequences of unchecked climate change pose grave risks to the environment, human health and socioeconomic stability. See, e.g., "Climate Science Special Report, Fourth National Climate Assessment," (the "National Climate Assessment") which was released by the federal government on November 17, 2017 ("Earth's climate is now changing faster than at any time in the history of modern civilization, primarily as a result of human activities.")<sup>1</sup> The symptoms of climate change are now readily apparent: average global temperatures are increasing inexorably, sea levels are rising measurably, glaciers are retreating, arctic sea ice is disappearing, ocean waters are warming, permafrost is thawing, record droughts are occurring, wildfires are becoming more intense and storms are becoming more severe."<sup>2</sup>

The U.S. is not immune to such impacts. Recent years have seen record wildfires break out in the west, unprecedented flooding in the mid-west and devastating storms along our coasts. Over the longer term, reports published by NASA, Columbia University, and Cornell scientists in 2015<sup>3</sup> and 2016<sup>4</sup> predict that "megadroughts" (i.e., droughts of the depression-era "dust bowl" magnitude, but lasting for decades) "could become commonplace" in the southwest and U.S. plain states "if climate change goes unabated."<sup>5</sup> It is predictions such as these that have led the 2019 report of the World Economic Forum to identify the "failure of climate change mitigation and adaptation" to be one of the top risks facing society – ahead of weapons of mass destruction, cyber-attacks, terrorism and the increasing scarcity of potable water.<sup>6</sup>

The December 12, 2015 Paris Agreement aims to avoid the worst impacts of climate change by holding the increase in average global temperatures to "well below 2°C above pre-industrial levels" with efforts "to limit the temperature increase to 1.5°C above pre-industrial levels."<sup>7</sup> Achieving these goals will be a daunting task, requiring that greenhouse gas emissions

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<sup>1</sup> U.S Global Change Research Program, *Fourth National Climate Assessment*, p.34. <https://www.globalchange.gov/browse/reports/climate-science-special-report-fourth-national-climate-assessment-nca4-volume-i>

<sup>2</sup> *Id.* at 37.

<sup>3</sup> Benjamin I. Cook, Toby Ault, & Jason Smerdon, "Unprecedented 21<sup>st</sup> Century Drought Risk in the American Southwest and Central Plains States," *SCIENCE ADVANCES* (Feb. 12, 2015), <http://advances.sciencemag.org/content/1/1/e1400082>.

<sup>4</sup> Toby Ault, Justin S. Mankin, Benjamin I. Cook & Jason E. Smerdon, "Relative Impacts of Mitigation, Temperature, and Precipitation on 21<sup>st</sup>-Century Megadrought Risk in the American Southwest," *SCIENCE ADVANCES* (Oct. 5, 2016), <http://advances.sciencemag.org/content/2/10/e1600873>.

<sup>5</sup> *Id.* at 6.

<sup>6</sup> *The Global Risks Report 2019*, Part I, WORLD ECON. FORUM, <https://www.weforum.org/reports/the-global-risks-report-2019>

<sup>7</sup> *Id.* The NASA Study indicates that the risks of a megadrought occurring in the Western U.S. drop sharply – to a range from 30-60 percent in a 2°C warming scenario. See, e.g., <https://www.ecowatch.com/megadroughts-2031955357.html>.

from industrial countries like the U.S. be reduced by about 80 percent by 2050. Reductions of this magnitude will take a colossal effort by virtually all levels of government in the U.S. and all sectors of the economy.

A book published by the Environmental Law Institute, entitled *Legal Pathways to Deep Decarbonization in the United States* (Michael Gerrard & John Dernbach, Eds., ELI 2019) (“LPDD”)<sup>8</sup>, has identified more than 1000 legal strategies that can be taken to achieve dramatic greenhouse gas emission reductions in the United States. Many of those pathways are focused on shifting transportation fuel sources in the U.S. away from fossil fuels, at a level that would result in the deployment of approximately 300 million alternative fuel vehicles (“AFVs”) – particularly electric vehicles and plug-in hybrid electric vehicles (collectively, “EVs”). The goal is to shift 80%-95% of the miles driven from gasoline to lower carbon energy sources like electricity and hydrogen.”<sup>9</sup>

The importance of achieving this goal is readily apparent: in the United States the transportation sector accounts for 28% of the total energy consumed, 72% of petroleum usage and about a third of GHG emissions.<sup>10/</sup> Cars and trucks use about half the total energy consumed by the transportation sector, which also includes trains, subways, planes, ships and other water craft. States can play an important role in this effort because of the broad power they wield over the distribution and sale of electricity within their jurisdictions.

Attached is a model state law that would advance one of the strategies identified in *Legal Pathways*: causing State Public Utility Commissions (“PUCs” or the “Commissions”) to encourage electric utilities to support the development of the infrastructure needed to charge a dramatically increasing number of EVs. There is real urgency to this strategy, given the fact that so many millions of AFVs will need to be serviced in the next few decades if the “deep decarbonization” effort is to succeed. Such staggering numbers, coupled with the fact that numerous automobile manufacturers have announced ambitious plans for the near-term production of EVs, make clear how important it is to get moving towards the early deployment of the necessary charging infrastructure.

There are a number of approaches that could be taken by a PUC to incentivize the development of EV charging infrastructure. They could wait for electric companies to come up with their own set of strategies without any guidance from the Commission, and address those strategies in rate cases that come before them. They also could take up the issue of EV infrastructure on their own initiative -- in the absence of any legislative mandate -- and direct electric companies to develop and submit for Commission review proposals for action aimed at the deployment of EV charging infrastructure. Neither of these approaches is optimal in light of the urgency that exists for the early deployment of EV infrastructure. Such urgency militates against leaving to the discretion of electric companies the question of whether and when to propose

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<sup>8</sup> Michael Gerrard and John Dernbach, *Legal Pathways to Deep Decarbonization in the United States* (“LPDD”)(Environmental Law Institute, 2019).

<sup>9/</sup> LPDD, Ch. 14, at 353; *see also*, Chris Gearhart, *Implications of Sustainability for United States Light-Duty Transportation Sector*, 3 MRS Energy & Sustainability 1, 7, note 6 (2016)

<sup>10/</sup> U.S. Energy Information Agency: Annual Energy Review: 2011 (2012), available at: <http://www.eia.gov/totalenergy/data/annual/>; *see also*, <http://www.eia.gov/todayinenergy/detail.php?id=29612>.

such EV infrastructure deployment initiatives; and PUCs can move at an unacceptably slow pace in the absence of a legislative mandate.

Another approach would be for the legislature to impose a direct mandate on electric companies to develop and propose strategies to encourage EV charging infrastructure deployment on a specified timetable. While this direct approach may appear to have some benefits in terms of efficiency, such benefits may prove to be illusory given the numerous stakeholders other than electric companies that would be affected by such strategies, and the complex technical issues that would need to be addressed in the development of EV charging infrastructure. We believe that PUCs – with their deep expertise in matters involving the electric system – are best suited to bring stakeholders together to discuss the ground rules for such a complicated technical effort.

With these considerations in mind, the attached model legislation focuses its mandate on the PUC in the first instance, directing it to convene all the affected stakeholders – including among others, electric companies, third-party EV charging station providers and ratepayer representatives – in a collaborative technical conference to address the role that electric companies should play in the development of EV charging infrastructure. The model legislation details several issues to be addressed at such a conference, but leaves to the Commission’s discretion whether other issues also should be addressed. The model legislation further: (i) directs the PUC, at the conclusion of the conference, to prepare and issue for stakeholder comment draft guiding principles for the preparation of electric company plans (called “transportation electrification plans”) for their participation in the deployment of EV charging infrastructure, and (ii) identifies several issues the Commission must address in those guiding principles. (It should be noted that the principles to be issued are intended solely as guidance, not mandates, because in some states binding policies may be viewed as rules subject to formal rulemaking procedures.) After considering any comments received, the PUC must issue final guiding principles. The model legislation directs electric companies to then prepare and file their transportation electrification plans in accordance with the guiding principles, which the Commission is to consider and either approve or disapprove in accordance with its customary procedures.

Thus, instead of a “one size fits all” approach that sets forth hard and fast goals and timetables for the deployment of EV infrastructure in each adopting state, the model legislation establishes a process and identifies many of the issues to be addressed in that process for the orderly and well-informed development of transportation electrification plans. We have followed this approach, recognizing that the circumstances surrounding EV charging infrastructure deployment in each of the states are both complicated and unique. We believe it is prudent to leave the details to the deep experience and discretion of the PUCs, as well as the ingenuity of the electric companies and other stakeholders. However, the model legislation includes a strict timetable for completion of the administrative process, which is aimed at completion of the proceeding within two years of its initiation. This recommended timeframe seeks to strike a balance between the need for careful consideration of the complex issues to be addressed by the PUC against the need for prompt action in electrifying the transportation system.

The model legislation also addresses two other issues. First, it makes clear that persons or companies operating EV charging stations are providing a service, not selling electricity to the public, and are not thereby subjecting themselves to PUC jurisdiction. Second, the draft legislation seeks to address the particularly urgent need to assure the early deployment of direct current “fast

chargers” along critical transportation corridors. It does so by directing the Commissioner of Transportation to identify such corridors, and requiring the electric company transportation electrification plans to give priority to the deployment of such charging stations along those corridors.