

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's own motion to consider alternative-fueled vehicle tariffs, infrastructure and policies to support California's greenhouse gas emissions reduction goals.

Rulemaking 09-08-009
(Filed February 8, 2010)

**COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL
AND FRIENDS OF THE EARTH ON
PROPOSED DECISION ON JURISDICTIONAL ISSUES**

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I. INTRODUCTION

In accordance with Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Natural Resources Defense Council (“NRDC”) and Friends of the Earth (“FoE”) submit these reply comments on the *Proposed Decision of Commissioner Ryan on Jurisdiction of the Commission Over the Sale of Electricity at Retail to the Public for the Sole Use as a Motor Fuel* (“Proposed Decision” or “PD”). We commend the Commission for addressing important issues in this proceeding in a timely manner. NRDC and FoE have stated our unequivocal support for development of a robust market for plug-in electric vehicles (“PEVs”). We also remain resolute that the policies developed in California to promote this market must maintain the Commission’s ability to meet its statutory obligation to ensure grid safety and reliability and maximize environmental benefits.

In summary, NRDC and FoE’s comments on the Proposed Decision include the following:

- We disagree with the Proposed Decision’s legal analysis. However, if the Commission adopts the Proposed Decision’s legal analysis, we recommend a number of clarifications on policy issues that will strengthen the decision.
- We recommend clarifying the Proposed Decision to explicitly acknowledge the Commission’s statutory obligations to assure compliance with the State’s various environmental performance requirements and to promote environmentally beneficial outcomes.

- We recommend clarifying the Proposed Decision to explicitly acknowledge the Commission’s obligation to ensure the safety and reliability of the electricity grid, and to note that electric vehicle charging must be properly managed to avoid risks that could undermine the Commission’s ability to meet that obligation.
- NRDC and FoE recommend that the Commission explicitly state that this decision in no way disclaims jurisdiction over any entity acting as a load-serving entity, including electric vehicle service providers that procure wholesale power.
- We also point out the fact that the Commission will have to rely on alternative sources of authority in a targeted manner, as well as rules governing interconnection and the customer relationship between load-serving entities and charging service providers, in order accomplish the objectives identified for Phase Two of this proceeding.

II. NRDC AND FoE DISAGREE WITH THE PROPOSED DECISION’S LEGAL ANALYSIS

In our legal brief, NRDC and FoE provided an interpretation of the law that found the Commission has jurisdiction over electric vehicle service providers. NRDC and FoE recommended that the Commission exercise “light handed” regulation focused on achieving commonly held objectives and the Commission’s statutory obligations. In this section, we provide comments on specific flaws in the Proposed Decision’s legal analysis. Should the Commission adopt the Proposed Decision’s legal analysis, the following sections we recommend a number of clarifications that will strengthen the decision.

A. The Proposed Decision’s Statutory Interpretation Largely Ignores the Normal and Technical Meanings of the Word “Power”

In prior comments, NRDC and FoE stated that charging electric vehicles falls within the normal meaning of the word “power.”¹ The Proposed Decision strains the normal use of language in order to find that at no point during the charging or driving of an electric vehicle is “power” involved. The Proposed Decision states that charging a battery is “more akin to moving electricity from place to place; that the act of charging does not ‘power’ anything. Only later in time when the vehicle is engaged does the battery’s stored electricity fuel the car. Moreover, even at that later time we find the electricity is ‘fuel’ not ‘power’...” (PD at p. 17). This description both strains the normal use of language and reflects a misconception of the physics involved. “Moving electricity” is a technically inaccurate description of battery charging, which is the conversion of electric energy into chemical potential energy, not the simple conduction of electric energy. Power is the rate at which energy is converted (in this case, from electric to chemical energy during the charging of the vehicle, and from chemical energy to electric energy during driving).² In sum, both the charging of a battery and driving of an electric vehicle fall within the technical and colloquial meanings of the word power, which is an extremely broad term. Webster's unabridged dictionary contains no less than 32 definitions of power, including three colloquial definitions that appear a much less contrived way to describe the charging and/or driving of electric vehicle: 1) “to supply with electricity or other means of power;” 2) “conducting electricity;” and 3) “operated or driven by a motor or electricity.”³

¹ NRDC and FoE, *Brief of the Natural Resources Defense Council and Friends of the Earth on Jurisdictional Issues*, February 8, 2010, p. 4. NRDC and FoE, *Reply Brief of the Natural Resources Defense Council and Friends of the Earth on Jurisdictional Issues*, March 1, 2010, p. 7-8.

² “Moving electricity” would seem a more normal way to describe the function provided by transmission or distribution lines, commonly referred to as “power lines,” not “electricity-moving lines.”

³ Random House, Webster’s Unabridged Dictionary 1516 (2d ed. 2001).

The Proposed Decision relies on the Public Utilities Code § 217's specification of "heat" and "light" as jurisdictional uses in order to conclude that "or power" is not "all encompassing." (PD at p. 15) The phrase "or power," however, is more likely intended as a catchall to capture uses of electricity other than for "light" or "heat;" a catchall which the legislature wisely inserted in order to confer jurisdiction over new, different, or unanticipated applications. The Proposed Decision attempts to bolster its cramped reading of the phrase "or power" by stating in Finding of Fact 9 that: "Section 217 was enacted in 1915 and last amended in 1937 and it is, therefore, inconceivable that the Legislature would have foreseen the role of the modern vehicle in today's economy and the ability of that vehicle to be charged in the manner in which it is today and in the future will be." (PD at p. 29) It should be noted that the first American electric vehicle was produced in 1891, and that in 1900, 28% of all cars produced in the US were electric.⁴ The dominance of gasoline cars later in the 20th Century did not render a resurgence of electric vehicles "inconceivable."

B. In Concluding Electric Vehicle Charging Should be Governed by D. 90-07-018, the Proposed Decision Fails to Recognize Differences between Electricity and Compressed Natural Gas that Could Impact the Stability of the Electrical Grid

The Proposed Decision relies heavily on D. 91-07-018, which dealt with compressed natural gas ("CNG"). As NRDC and FoE have stated in previous comments, CNG and electricity have fundamentally different physical properties that result in disparate impacts.⁵ The Proposed Decision does not address these factual distinctions and the greater risk that electric vehicle charging poses to the electric grid compared to that posed by natural gas fueling on the natural gas distribution system.

⁴ Carl Sulzberger, "Electric Vehicles in the Early Years of the Automobile," IEEE Power Engineering Society, <http://www.ieee.org/organizations/pes/public/2004/may/peshistory.html>.

⁵ NRDC and FoE, *Brief of the Natural Resources Defense Council and Friends of the Earth on Jurisdictional Issues*, February 8, 2010, pp. 8-9.

III. THE PROPOSED DECISION SHOULD BE STRENGTHENED TO ASSURE STATUTORY OBLIGATIONS ARE MET AND THE ELECTRIC VEHICLE LOAD IS MANAGED TO MINIMIZE NEGATIVE GRID IMPACTS AND MAXIMIZE ENVIRONMENTAL BENEFITS

The Proposed Decision only obliquely acknowledges that the Commission’s policy obligations are broad and extend beyond the immediate jurisdictional question of whether third-party providers of electric vehicle services should be considered “utilities” under the Public Utilities Code. (PD at p. 22) Should the Commission adopt the Proposed Decision’s legal analysis, the Commission’s findings and conclusions on these matters should be strengthened and stated directly, as described below, in order to assure that the promise of the electrification of the transportation sector is realized and its pitfalls avoided.

A. The Commission Has Statutory Obligations to Meet Various Environmental Performance Requirements that are Linked to the Electrification of the Transportation Sector

The Commission has directed significant time and resources for many years to reducing the environmental impact of the state’s electricity consumption. For example, the Commission is committed to ensuring that the investor-owned utilities are making progress toward providing 20% of their electricity from renewable resources pursuant to the Renewable Portfolio Standard. The Commission pioneered development of the nation’s first greenhouse gas emissions performance standard for long-term electric sector investments, codified in Senate Bill 1368 (Perata, 2006). And even before the passage of Assembly Bill 32, the Global Warming Solutions Act, in 2006, the Commission had been developing broad based regulatory mechanisms to reduce greenhouse gas emissions.

It is widely recognized that one of the primary benefits of electrifying the transportation system is to reduce greenhouse gas emissions from motor vehicles. However, the emissions benefits of electrification will vary greatly depending on the precise manner in which it is accomplished and whether or not the additional load is met with increased reliance on fossil fuels or greater integration of renewable resources. The Commission should amend the Proposed Decision to explicitly acknowledge the linkage between alternative-fueled vehicles, renewable energy, and greenhouse gas emissions. Toward this end, NRDC and FoE recommend four additional findings of fact:

- Public Utilities Code § 399.11 directs the Commission to implement a 20% Renewable Portfolio Standard (RPS).
- Pursuant to SB 1368, the Commission requires any long-term commitments made by load-serving entities to procure power from baseload generation to meet minimum GHG performance standards.
- The Commission is committed to reducing greenhouse gas emissions from the electricity sector, as directed by Assembly Bill 32.
- The Commission has an important role to play in assuring that the electrification of the transportation sector helps and does not hinder California's efforts to achieve its stated environmental goals.

B. Electric Vehicle Charging Must Be Properly Managed to Avoid Risks to Grid Safety and Reliability and to Meet the Commission’s Statutory Obligations to Ensure Safe, Reliable Electric Service

As NRDC and FoE stated in earlier comments, Public Utilities Code Section 740.3 directs the Commission to implement policies to promote the use of electric vehicles and to do so in a way that protects the interest of utility customers (§740.3(c)), including their interest in a safe and reliable grid (§740.8).⁶ The Proposed Decision should affirmatively acknowledge that the Commission has a core mandate to assure the integrity of the electrical grid, which would be compromised by an uncoordinated deployment of electric vehicle charging infrastructure. The Commission should add the following findings of fact to address this:

- Public Utilities Code § 740.8 affirms the Commission’s obligation to ensure utility customers’ interest in “safer, more reliable, ...less costly gas or electrical service”
- Electric vehicle charging must be properly managed to avoid risks to grid safety and reliability.

The Commission also should add an additional conclusion of law to confirm the above points:

- The Commission has an obligation to ensure that the electric grid is operated in a safe, reliable manner and to comply with other legislative mandates and environmental performance requirements.

⁶ See NRDC and FoE, *Brief of the Natural Resources Defense Council and Friends of the Earth on Jurisdictional Issues*, February 8, 2010, p. 6.

IV. THE COMMISSION MUST RETAIN SUFFICIENT REGULATORY OVERSIGHT TO MEET ITS STATUTORY OBLIGATIONS AND ACHIEVE THE OBJECTIVES IDENTIFIED FOR PHASE TWO

The Proposed Decision misstates NRDC and FoE's concern about the loophole in the state's regulatory framework governing the procurement of electricity that could be created if all charging service providers are allowed to operate without direct regulation by the Commission.

On p. 22, the Proposed Decision states:

“NRDC, SMUD, SCE and others suggest that a Commission finding that electric charging service providers are not public utilities could create opportunities for these entities to circumvent these programs. This argument overlooks the fact that, before electric charging service providers can sell any electricity, the utility or other load-serving entity that sold the electricity to the charging entity has complied with these various mandates.”

This statement does not fully reflect the issue NRDC and FoE raised. Our concern was not that charging service providers that purchase electricity from load-serving entities would be able to circumvent the mandates governing the procurement of electricity. Rather, our concern was that some charging service providers may purchase electricity on the wholesale market without being subject to direct regulation by the Commission. The Commission must be clear that it maintains direct oversight of any entity acting as a load-serving entity, including electric vehicle charging service providers that procure wholesale power.

NRDC and FoE support the Proposed Decision's statement that the "Commission's finding in today's decision in no way allows electricity sales to circumvent these requirements" (those governing the procurement of electricity) (p. 22). However, the Proposed Decision does not explicitly confirm that the Commission maintains direct authority over any entity acting as a load-serving entity, including vehicle charging service providers. "Finding of Fact 14" ("Our decision today is consistent with the state's other policy goals set forth in the RPS, RA, ESP and the AB 32 programs." p. 30) does not adequately address this important concern because it says nothing about the possibility that charging service providers might procure electricity on the wholesale market. The Commission should amend the Proposed Decision with the following conclusions of law:

- Some third party providers of electricity for plug-in electric vehicles may wish to purchase electricity from entities other than the investor-owned utilities. Any entity acting as a load-serving entity is subject to the same grid safety, reliability, and environmental mandates as the investor-owned utilities.
- This decision in no way disclaims jurisdiction over any entity acting as a load-serving entity, including electric vehicle service providers that procure wholesale power.

V. SHOULD THE COMMISSION ADOPT THE PROPOSED DECISION’S CONCLUSION THAT IT LACKS JURISDICTION UNDER PUBLIC UTILITIES CODE §§ 216-218, IT SHOULD RELY ON OTHER SOURCES OF AUTHORITY AND RULES IN ORDER TO ADDRESS CRITICAL ISSUES

The Proposed Decision concludes that the Commission does not have jurisdiction to regulate third party providers of electric vehicle charging services as utilities under the Public Utilities Code. If the Proposed Decision is adopted as is, the Commission may find that it is unable to uphold its statutory obligations for grid safety and reliability. Should the Commission adopt the Proposed Decision’s disavowal of general jurisdiction over third party providers of electric vehicle charging services, it will have to rely on other sources of jurisdiction and indirect regulation in order to assure that issues such as those slated for Phase Two of this proceeding are addressed.

A. If the Commission Adopts the Proposed Decision’s Finding that it Lacks Jurisdiction Under §§ 216-218, it Should Rely on the Authority Granted to it Under the California Constitution in Order to Prevent the Uncoordinated Installation of Public Charging Infrastructure

The Proposed Decision appears to endorse a voluntary notification process whereby utilities would be notified when a customer purchases a car, and recommends that the utilities develop such a process in conjunction with the automakers (“to quickly identify charging locations at the time of plug-in electric vehicle purchase” PD at. 25). NRDC and FoE join the Commission in recommending that such a process be put in place, as it could mitigate the risk of grid disturbance.

However, such a process fails to address how notification or coordination is to take place for public charging stations, the installation of which is not linked to the purchase of any particular vehicle. The importance of public charging infrastructure has been recognized as key to reducing “range anxiety.” In order for it to serve this function, the number of public charging stations must be significant and likely will include rapid charging stations, at which point the potential impact on the grid, especially locally, could be significant. If the Commission disavows its jurisdiction under §§ 216-218 over the installers or operators of such infrastructure, it is not clear that the goal of assuring a smooth deployment of electric vehicles will be achieved. As NRDC and FoE have stated in previous comments, should the Commission find it lacks jurisdiction under §§ 216-218, it should rely on other sources of jurisdiction, such as the authority granted to it under the California Constitution, in order to assure that the electrification of the transportation sector supports and does not hinder other core environmental goals.⁷ In short, a finding of a lack of general jurisdiction will necessitate reliance on other sources of jurisdiction in specific instances in order to prevent things from falling through the cracks. To this end, we recommend that the Commission adopt the following conclusion of law.

- The Commission retains all authority granted to it under the California Constitution and will exercise that authority in a targeted manner in order to assure that the integrity of the electrical grid is maintained and that core environmental goals are met.

⁷ . NRDC and FoE, *Reply Brief of the Natural Resources Defense Council and Friends of the Earth on Jurisdictional Issues*, March 1, 2010, p. 8-9.

B. If the Commission Adopts the Proposed Decision’s Finding that it Lacks Jurisdiction Under §§ 216-218, it Will Also Have to Rely on Rules Governing Interconnection and Utility Customer Relationships in Order to Address Many of the Phase Two Issues

There are a number of important issues to be covered in Phase Two, including “time variant pricing,” “metering requirements,” and “smart charging programs/policies to manage the impacts on the grid” (PD at p. 26) that will be more difficult to affect without direct regulatory authority. If those installing and operating charging stations are not subject to direct regulation, it is not clear that time variant prices will be passed on to the end user, nor is it clear that meters will be installed that are capable of tracking individual usage in the workplace, commercial, multi-dwelling, or public context. There is also no guarantee that “smart charging programs” or other policies meant to “manage the impacts on the grid” will reach the end users.

Responsible charging service providers could play an important role in assuring the successful integration of electric vehicles into the grid. However, the Proposed Decision opens up the possibility that entrants into this market that are not as responsible as others could negatively impact the grid. If the Commission adopts the Proposed Decision without modifying its conclusions on the extent of regulatory jurisdiction, this will increase the importance of rules governing interconnection and the relationship between load-serving entities and their customers. In such a framework, Rules 18 and 19 will likely have to be modified or supplemented with separate rules and associated tariffs specific to the electric vehicle market, and rules governing interconnection agreements will likely have to be modified and more broadly applied. The Proposed Decision should be altered in order to make clear that the Commission is not abandoning duties core to its mission, but that it will rely on other sources of authority and rules. Specifically, the following finding of fact should be inserted:

- In order to assure the integrity of the electrical grid and core environmental mandates, rules governing interconnection and the relationship between load-serving entities and third party providers of electric vehicle charging services must be modified in Phase Two of this proceeding.

VI. CONCLUSION

NRDC and FoE commend the Commission for addressing some of these critical issues and anticipate continuing to be an active party in this important proceeding. If the Commission adopts the legal analysis in the Proposed Decision, it should strengthen the decision to assure it is meeting its statutory obligations and is managing electric load to minimize negative grid impacts and maximize environmental benefits. The Commission must retain sufficient regulatory oversight to meet its statutory obligations and achieve the objective identified for Phase Two. (See Attachment A)

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For NATURAL RESOURCES DEFENSE
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ATTACHMENT A
ADDITIONAL FINDINGS OF FACT AND CONCLUSIONS OF LAW

Findings of Fact

- Public Utilities Code § 399.11 directs the Commission to implement a 20% Renewable Portfolio Standard (RPS).
- Pursuant to SB 1368, the Commission requires any long-term commitments made by load-serving entities to procure power from baseload generation to meet minimum GHG performance standards.
- The Commission is committed to reducing greenhouse gas emissions from the electricity sector, as directed by Assembly Bill 32.
- The Commission has an important role to play in assuring that the electrification of the transportation sector helps and does not hinder California’s efforts to achieve its stated environmental goals.
- Public Utilities Code § 740.8 affirms the Commission’s obligation to ensure utility customers’ interest in “safer, more reliable, ...less costly gas or electrical service”
- Electric vehicle charging must be properly managed to avoid risks to grid safety and reliability.
- In order to assure the integrity of the electrical grid and core environmental mandates, rules governing interconnection and the relationship between load-serving entities and third party providers of electric vehicle charging services must be modified in Phase Two of this proceeding.

Conclusions of Law

- The Commission has an obligation to ensure that the electric grid is operated in a safe, reliable manner and to comply with other legislative mandates and environmental performance requirements.
- Some third party providers of electricity for plug-in electric vehicles may wish to purchase electricity from entities other than the investor-owned utilities. Any entity acting as a load-serving entity is subject to the same grid safety, reliability, and environmental mandates as the investor-owned utilities.
- This decision in no way disclaims jurisdiction over any entity acting as a load-serving entity, including electric vehicle service providers that procure wholesale power.
- The Commission retains all authority granted to it under the California Constitution and will exercise that authority in a targeted manner in order to assure that the integrity of the electrical grid is maintained and that core environmental goals are met.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the “**COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL AND FRIENDS OF THE EARTH ON PROPOSED DECISION ON JURISDICTIONAL ISSUES**” in the **matter of R. 09-08-009** to all known parties of record in this proceeding by delivering a copy via email or by mailing a copy properly addressed with first class postage prepaid.

Executed on June 10, 2010 at San Francisco, California.



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