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bp pulse's Response to CEC's RFI Docket 24-EVI-01 - Ideas and Considerations for Tri-State USDOT CFI

Please find attached BP Products North America Inc. (bp pulse)â€™s response to the California Energy Commission's RFI Docket No. 24-EVI-01 (Project Proposal Ideas and Considerations for California, Oregon, and Washington's Medium- and Heavy-Duty Joint Application for the U.S. Department of Transportation's Charging and Fueling Infrastructure Discretionary Grant Program). We appreciate the opportunity to share this information with you.

Additional submitted attachment is included below.

bp pulse

bp pulse's response to:

California Energy Commission's

RFI Docket No. 24-EVI-01

Ideas and Considerations for Tri-State USDOT CFI

To: California Energy Commission

Docket Unit, MS 4

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RFI RESPONSE DUE: June 10, 2024 at 5:00 p.m.

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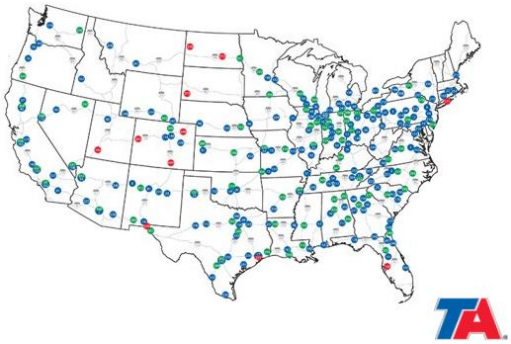
Chicago, IL 60606, USA

This RFI seeks feedback on the following questions (you need only to answer questions applicable to you or your organization):

1. Please disclose your business type and vehicle class, if applicable. Are you a driver, fleet operator, truck stop operator, installer, manufacturer, utility, public agency, or other? Are you part of a small, veteran-owned, woman-owned, or minority-owned business?

bp pulse is the global electrification and charging solution brand for bp. bp pulse US operates within the legal entity BP Products North America Inc. (interchangeably referred to herein as "bp pulse" and "bp"). bp pulse launched in 2018 with the acquisition of Chargemaster Ltd in the United Kingdom (UK). With the backing of bp's expertise in the energy sector as an integrated energy company, as well as our strong brand presence and extensive resources, bp pulse has already become a global leader in EV charging solutions. Today, bp pulse is the largest public EV charging network in the UK and continues to expand across Europe, China, Australia, and the US. Over the last 6 years, bp pulse has continued to evolve our offer and has built a global network of more than 29,000 publicly available charge points around the world, which includes hundreds of public charging locations across the globe designed to give drivers a convenient, safe, and reliable charging experience. bp aims to be a net zero company by 2050 or sooner and aims to help the world get to net zero as soon as possible.

bp pulse entered the US market in 2021 after the acquisition of Amply Power. In the US, bp pulse is investing $1B in public charging infrastructure, with the goal of deploying more than 3,000 fast and reliable charge points across the US by 2025. Today we have over 150 operational public charge points in California, Oregon, Washington, Texas, New York, and New Jersey and are developing additional public EV charging networks in other states across the US. Our legacy is rooted in developing, operating, and maintaining customer-centric solutions through our network of more than 8,000 retail fuel locations in the US. bp retail fuel locations span several brands, including: bp, Amoco, ampm, Thorntons, and TravelCenters of America (TA). bp recently completed our purchase of TravelCenters of America (TA), which adds an additional 300 strategically located travel centers along US highway systems to our portfolio of brands. Our TA locations span across 44 states and are essential refueling spots for professional drivers, destination spots for travelers taking road trips, and staples in our local communities. TA properties are located along highways and are uniquely large compared to our competitors, meaning we have the properties and the real estate needed to allow for EV and other low carbon fueling infrastructure to be built while also allowing for traditional diesel and gas lanes.



Our TA sites are strategically positioned to help alleviate range anxiety by providing a safe, reliable spot for fast charging. TA sites serve both motorists and professional drivers, so we are not just working to add EV infrastructure for motorists but also looking into alternative fueling options for fleet companies who are moving to adopt low carbon mobility solutions.

2. Would you consider applying for CFI grant funding for site development if the tri-state agencies are awarded funding?

   Yes, pending review of the requirements and conditions of the award.

3. Do you already operate or are you planning to use zero-emission battery electric MDHD vehicles in the next five years? Please use a 1-5 rating scale where 1= least likely and 5= most likely. Please add additional information regarding your (planned) use of zero-emission battery electric MDHD vehicles as desired.

   If "operate" also means operating electric MDHD charging infrastructure, then yes. As a charge point operator (CPO) and turnkey charging infrastructure provider, bp pulse aims to help make the transition to EVs as easy as possible by providing safe and reliable charging stations. However, bp pulse does not own our own fleet of EVs.

4. What type of MDHD ZEV public charging do you anticipate being most important in the next three years (2024-2027) – en route or overnight charging? For what purposes do you anticipate needing public charging infrastructure – drayage, last-mile, delivery, long-haul freight, other?

   bp pulse anticipates en route charging to be most important but is considering accommodations for both en route and overnight charging. We anticipate that our MDHD charging stations can accommodate all classes of MDHD EVs. In our site designs, we allow for ample truck stacking in the event all MDHD charging bays are full. We also require truck charging bays to be pull-through (not reverse in), except in cases where overnight charging is preferred (we will likely require reverse-in parking to access those chargers for safety reasons).

   bp aims to be the truck decarbonization partner of choice to help all types of MDHD fleets on their decarbonization journey. bp pulse intends to build a cohesive network of public truck charging locations focusing on the MDHD routes across the US. We plan to have public fast truck charging locations approximately every 100 miles in locations where our customers, network, and government support are aligned. In parallel, we are also investing in depot charging so that bp can offer a wholistic digital and infrastructure solution to private fleets' charging needs.

   As a global energy provider, bp is investing in eTruck networks across Europe, China, Australia, New Zealand, and, of course, the US. Our strategy in Europe is already in action, as we currently have 23 live truck charging stations in Germany. We expect to deploy megawatt (MW) charging on our sites in 2025. Our intention is to learn from our various global MDHD pilots, including our first US domestic deployment at TA Ontario (CA), as we build our MDHD charging network across the US.

   As previously mentioned, bp pulse has a goal of deploying more than 3,000 fast and reliable charge points across the US by 2025 A significant milestone in this effort was our 2023 acquisition of the leading travel center operator, TravelCenters of America (TA). The agreement added a network of 300 travel centers strategically located on major highways across 44 US states nationwide, complimenting bp's US convenience and mobility business. In August 2024, we are breaking ground on one of the nation's first publicly accessible truck charging stations for MDHD vehicles in Ontario, CA. This pilot project, in partnership with the California Energy Commission, demonstrates bp pulse's commitment to support fleet customers adopting zero-emission trucks. We are also utilizing solar

panels and a battery energy storage system, in conjunction with microgrid controls, to provide sustainable, off-grid power to help control costs and provide backup power to enhance system reliability. This will be one of the first deployments of a MW charger system.

TA Ontario is in a prime location to serve early-adopter electric truck fleet operators – the site will have two 400kW chargers go live in Q1 2025, with an additional lane for one 1MW charger to go live mid-2025 (once the hardware becomes commercially available). Like most TA sites, TA Ontario offers several onsite amenities to support drivers including Country Pride full-service restaurant, Taco Bell, and Pizza Hut, as well as 549 truck parking spaces, 76 car parking spaces, 8 diesel fueling lanes, 10 gasoline fueling positions, TA Truck Service with 6 bays, and a mobile maintenance facility. The deployment of TA Ontario is just the beginning of TA and bp pulse's endeavors in MDHD vehicle charging. There's already a strategy in place to develop projects at 6 other California locations, while we also look at developing other corridors in the US with demand for EV truck charging.

bp pulse envisions offering comprehensive services at MDHD corridor charging sites, including:

- Fast Charging Solutions: High-speed charging options tailored for MDHD vehicles to minimize downtime and maximize efficiency.
- Site Management: Complete site management including maintenance, customer support, and real-time monitoring.
- Energy Management: Advanced energy management systems to optimize power distribution and reduce operational and utility distribution system upgrade costs.

5. From 2024-2027, what is your first priority for power level and number of charging ports for public en route charging at a station? For public overnight charging? Do you have a second or third configuration preference?

bp pulse intends to start with smaller MDHD charging stations that have the optionality to expand with growing MDHD EV adoption. For example, we begin by deploying MW charging on a distributed charging system such that one MW charger is connected to two bays. As MDHD EV adoption grows, we can then add more MW chargers to the site, so the ratio is one MW charger to one bay without disrupting the overall site. Another option is beginning with 400kW chargers and then adding in MW chargers – as mentioned above, this is the configuration we are piloting at TA Ontario (the site will have two 400kW chargers go live in Q1 2025, with an additional lane for one 1MW charger to go live mid-2025).

bp also has strategic relationships with the major truck charging hardware providers and actively works to test hardware in our technology research centers prior to deploying the equipment at scale. As an early mover in eTrucks, we believe MW truck charging at scale has a significant role to play globally. We are over halfway in a significant investment program into MW charging at our R&D center in Pangbourne (UK) – completing onboarding in 1H 2025. We believe MW charging will be a key requirement for futureproofing truck sites. bp is also piloting low carbon mobility hubs. These hubs will offer a combination of the following fuels: hydrogen, EV, LNG, RNG, CNG, HVO/renewable diesel, and traditional hyrdrocarbon fuels.

6. Please identify the percentage of pull-in or pull through parking preferred and other desired station configurations at a given site. Describe the vehicle class and vocation considered when making this recommendation if it differs from the information provided in question 1.

In our MDHD charging station designs, we allow for ample truck stacking in the event all MDHD charging bays are full. We also require truck charging bays to be pull-through (not reverse in), except in cases where overnight charging is preferred (we will likely require reverse-in parking to access those chargers for safety reasons). Safety is of the utmost importance to bp and serves as the main focus at each of our locations, including our TA sites. We take pride in returning every traveler back to the road better than they arrived and, to that end, we pay attention to safe operations on our sites. Each TA site has dedicated areas for trucks, separated from passenger vehicles. Each site has a dedicated and advertised ingress and egress point, allowing a predictable traffic pattern. Specifically for MDHD vehicles, there is only one way in and one way out of the truck fueling island. Traffic patterns are clearly laid out on the ground with speed limits clearly marked onsite. Safety on each site is reviewed by leadership and a dedicated TA safety team to ensure standardization across all our TA sites. Lot lay-out, including turning radiuses, signage, lighting, parking angles, etc. is key for avoiding safety problems, from fender benders to security events. By the end of 2024, TA will have reengineered and updated all lots based on a safety traffic management plan, to include re-striping, painting, and new signage. A lighting survey of all locations is also occurring to help identify those sites that need to be upgraded. So far, the TA safety team has assessed 50 sites and made the determination to re-light 18 locations this year.

7. What distance should separate charging stations to support zero-emission trucks along the I-5 corridor? Provide description of typical route or use-case considered when making this recommendation. Describe the vehicle class and vocation if it differs from the information provided in question 1.

We plan to have fast public truck charging locations approximately every 100 miles in locations where our customers, network, and government support are aligned.

8. What amenities are you seeking at a charging facility? Is there a desire for additional parking at a facility beyond charging stalls? Is there a desire for reservation options?

All our TA sites are open 24/7/365 and offer various amenities such as:

- Safety-centric features, including full-time staff, lighting, surveillance, etc.
- Restrooms + shower facilities
- Hot food options + grab and go meal options
- Additional truck parking spaces + passenger car parking spaces
- Mobile maintenance facility
- Roadside assistance
- Travel/convenience store

- Other nice-to-have amenities: CAT scale, driver lounge, game room, Wi-Fi, laundry room, ministry services, TRANSFLO Express scanning, Western Union, and fitness room/walking trail.
- We also intend to have an energy and load management system on all our sites to manage high demand events.
- On the digital side, we are piloting a reservation system so vehicles can reserve a charging bay in advance. This will help drive ratable demand. Also, TA already has an app for reserving truck parking spaces.

9. If possible, provide any general cost estimates for MDHD charging stations you have designed, built, or have experience with, including charger power levels and number of chargers installed. Please provide a range of public cost share as a percentage of total project cost that would be necessary to support more public charging stations to serve zero-emission trucks along freight corridors.

10. Use the maps under the "Corridor Segments" section below to identify locations within the National Zero-Emission Freight Corridor Strategy hubs along I-5 (identified in the map segments below) you anticipate needing EV charging in the next three years (2024-2027). You may identify sites where you plan to or would be interested in building charging stations or where you would like to see charging as a consumer. Please detail preferred locations across California, Oregon, and Washington. For each location, please provide desired site characteristics including number of chargers, power levels, type of charging desired (overnight or en route), and vehicle class and vocation if the information differs across locations or differs from the information provided in the questions above.

    bp has 3 TravelCenters of America (TA) sites that fall within 1 mile of the target AFCs outlined in this Tri-State CFI RFI (1 in OR and 2 in CA). Please note: All sites are subject to a feasibility review prior to submitting an official proposal. Below are details for each site:

    - TA Aurora: 21856 Bents Road NE, Aurora, OR 97002 on I-5, Exit 278
        - Restaurants/Food Options: Popeyes and in-store grab and go meal options
        - Number of Truck Parking Spaces: 275
        - Number of Diesel Fueling Lanes: 8
        - Number of Gasoline Fueling Positions: 12 (passenger cars)
        - Number of TA Truck Service Bays: 2 shop bays / 1 shop pit
        - Safety-Centric Features: Full-time staff, lighting, surveillance, etc.
        - Other Onsite Amenities: Site is open 24/7/365 and offers restrooms + shower facilities, mobile maintenance facility, roadside assistance, travel store, Amazon lockers, CAT scale, driver lounge, game room, Wi-Fi, laundry room, ministry services, TRANSFLO Express scanning, Western Union, and STAYFIT bean bag toss and fitness room.

- TA Corning: 3524 S Highway 99 W, Corning, CA 96021on I-5, Exit 630
    - Restaurants/Food Options: Arby's, Subway, and in-store grab and go meal options
    - Number of Truck Parking Spaces: 254
    - Number of Diesel Fueling Lanes: 14
    - Number of Gasoline Fueling Positions: 16 (passenger cars)
    - Number of TA Truck Service Bays: 4 shop bays / 2 shop pits
    - Safety-Centric Features: Full-time staff, lighting, surveillance, etc.
    - Other Onsite Amenities: Site is open 24/7/365 and offers restrooms + shower facilities, mobile maintenance facility, roadside assistance, travel store, ATM, CAT scale, check cashing services, driver lounge, game room, Wi-Fi, laundry room, ministry services, pet area, TRANSFLO Express scanning, Western Union, and STAYFIT bean bag toss.
- TA Petro Corning: 2151 South Avenue, Corning, CA 96021on I-5, Exit 630
    - Restaurants/Food Options: Iron Skillet Restaurant and in-store grab and go meal options
    - Number of Truck Parking Spaces: 120
    - Number of Diesel Fueling Lanes: 12
    - Number of Gasoline Fueling Positions: 6 (passenger cars)
    - Number of TA Truck Service Bays: 6 shop bays / 4 shop pits
    - Safety-Centric Features: Full-time staff, lighting, surveillance, etc.
    - Other Onsite Amenities: Site is open 24/7/365 and offers restrooms + shower facilities, mobile maintenance facility, roadside assistance, travel store, ATM, CAT scale, check cashing services, driver lounge, game room, Wi-Fi, laundry room, pet area, TRANSFLO Express scanning, Western Union, and STAYFIT bean bag toss.

As previously mentioned, we expect to deploy megawatt (MW) charging on our MDHD charging sites by 2025. Our intention is to learn from our various global MDHD pilots, including our first domestic deployment at TA Ontario (CA), as we build our MDHD charging network across the US.

11. If you represent a utility, please use the maps under the "Corridor Segments" section below to identify locations within the National Zero-Emission Freight Corridor Strategy hubs along I-5 (identified in the map segments below) where there may be capacity for 5 megawatts or more of power in the next five years. This information may be considered in the development for future Requests for Proposals.