

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**Consumer Protection and Enforcement Division
Transportation Licensing and Analysis Branch**

**RESOLUTION TL-19137
June 2, 2022**

RESOLUTION

**RESOLUTION APPROVING CRUISE LLC'S APPLICATION FOR PHASE I
DRIVERLESS AUTONOMOUS VEHICLE PASSENGER SERVICE DEPLOYMENT
PROGRAM**

SUMMARY

This Resolution approves Cruise LLC's (Cruise) application for a permit to participate in the Phase I Driverless Autonomous Vehicle (AV) Passenger Service Deployment (Driverless Deployment) program. With this permit, Cruise may offer passenger service in its autonomous vehicles without a safety driver present on select streets in San Francisco from the hours of 10 p.m. to 6 a.m., among other conditions specified in its Operational Design Domain. Cruise is authorized to collect fares for these rides.

Cruise has satisfied the requirements of Decision 20-11-046 (as modified by Decision 21-05-017), including the submission of a reasonable Passenger Safety Plan describing the strategies it has in place for protecting passenger safety in driverless rides. Cruise's Passenger Safety Plan is appropriate for its current service, which is limited to overnight hours and does not include San Francisco's dense downtown core, among other conditions. However, the Resolution clarifies that any changes to the hours, geography, roadway type, speed range, or weather conditions in which Cruise intends to operate would "materially affect" the strategies described in the Passenger Safety Plan. Accordingly, Cruise must submit an updated Passenger Safety Plan in the form of a Tier 2 advice letter prior to modifying its operations.

The Resolution also recognizes the need for continued data collection and stakeholder engagement as the AV program continues to scale and evolve. To date, passenger service operations and therefore data collection have been limited, so it is difficult to quantify the safety risks relative to safety benefits of autonomous vehicles. The Resolution directs Cruise, along with any other future participants in the Driverless Deployment program, to

prepare a report on the realization of the strategies in its Passenger Safety Plan in operations. This report will be presented to stakeholders as part of a workshop to be held by Consumer Protection and Enforcement Division staff.

Lastly, the Resolution addresses issues related to Cruise's transportation charter party carrier authorities. Cruise currently holds two separate authorities for its participation in two different AV programs; the Resolution consolidates these two authorities into a single authority that reflects Cruise's existing programs and adds its new Driverless Deployment permit. Further, the Resolution grants Cruise's request for an exemption to a provision of General Order 157-E. With this exemption, Cruise may utilize vehicles that are owned or leased by its parent company rather than directly by Cruise itself.

BACKGROUND

On November 5, 2021, Cruise LLC (Cruise) submitted an application to the California Public Utilities Commission (Commission) for a permit to participate in the Commission's Phase I Driverless Autonomous Vehicle Passenger Service Deployment program. Cruise submitted its application in the form of a Tier 3 advice letter, Cruise-0001. In alignment with the Operational Design Domain (ODD) approved by the California Department of Motor Vehicles (DMV), Cruise proposes to offer driverless passenger service using a fleet of up to 30 all-electric autonomous vehicles (AVs) on select surface streets in San Francisco, California between the hours of 10 p.m. and 6 a.m. Cruise AVs would not operate in heavy rain or fog, across any active highway-rail crossings, or in lanes with light rail transit. Cruise does not currently propose to offer shared rides between passengers from different parties.

Decision (D.)20-11-046 (as modified by D.21-05-017) (Deployment Decision) created the Commission's Phase I Autonomous Vehicle Passenger Service Deployment programs. In Deployment, carriers are authorized to collect fares for AV passenger service either with safety driver present in the vehicle for Drivered Deployment service or without one for Driverless Deployment service. Carriers also have the option to offer shared rides. This contrasts with the Commission's AV Pilot programs established by D.18-05-043, where carriers may neither charge fares nor offer shared rides, among other conditions. Currently, there are 2 participants in the Commission's Phase I Drivered Deployment program: Cruise and Waymo LLC. There are no active permits for Phase I Driverless Deployment; Cruise's proposed service would be the first of its kind in the state.

In the Deployment Decision, the Commission established four goals for its AV programs: 1.) Protect passenger safety; 2.) Expand the benefits of AV technologies to all Californians, including people with disabilities; 3.) Improve transportation options for all, particularly for disadvantaged communities and low-income communities; and 4.) Reduce greenhouse gas

emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities. The Commission will collect data throughout the Deployment program to monitor permit holders' progress toward these goals.

The Deployment Decision sets forth the requirements for participation in the Phase I Driverless Deployment program. The AV carrier must submit an application for the program in the form of a Tier 3 advice letter, which is subject to public review and disposition by the Commission through a resolution. The permit application must demonstrate compliance with General Order (GO) 157-E, which governs the Commission's Transportation Charter Party (TCP) carriers, and must include all information required by the Deployment Decision. Notable requirements include holding an active AV Deployment permit from the DMV, which authorizes the deployment of AVs on public roads in California, and submitting a Passenger Safety Plan (PSP).

In its PSP, the carrier must describe its policies and procedures to minimize risk for all passengers in its driverless vehicles. This includes, at a minimum, how the carrier will minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments (only for carriers applying to offer shared rides); respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints; and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities.

The Commission regulates AVs as TCP carriers, which are subject to the provisions of GO 157-E. Public Utilities Code sections 5383 and 5384 define the types of TCP certificates and permits the Commission may issue. Cruise currently holds two TCP authorities: an A certificate authorizing participation in the Drivered Deployment program and a P permit authorizing participation in the Driverless Pilot program. Part 1.07 of GO 157-E allows the Commission to authorize deviations from the rules and regulations set forth in GO 157-E. Part 8.01 allows the Commission to grant exemptions to the rules and regulations of GO 157-E by written request so long as the TCP carrier can demonstrate that its operations with the exemption would be functionally equivalent to a scenario where they do not have the exemption. Cruise has been granted three exemptions as part of its existing permits. For its Drivered Deployment certificate, Cruise has been granted exemptions to Part 5.03, which requires that every driver be an employee of the carrier, and to Part 4.01, which requires

that each vehicle in use under the authority be owned or leased by the carrier. Cruise also has been granted an exemption to Part 4.01 for its Driverless Pilot permit and has requested the same exemption as part of its Driverless Deployment application.

NOTICE

Ordering Paragraph 18 of the Deployment Decision requires the Driverless Deployment application “be in conformance with all service requirements in GO 96-B using all of the Transportation Network Company rulemakings service lists...” Cruise properly served its advice letter Cruise-0001 to the Rulemaking (R.)12-12-011 and R.19-02-012 service lists. Notice was also given by publication in the Commission’s Daily Calendar.

PROTEST AND RESPONSES

General Order 96-B provides the framework for the Commission’s advice letter process. Per General Rule 7.4.1, any person (including individuals, groups, or organizations) may protest or respond to an advice letter within 20 days of the submittal of the advice letter. Protests and responses are submitted to the Consumer Protection and Enforcement Division (CPED) and to the applicant via the service list for R.12-12-011. Protests and responses were due on November 29, 2021. General Rule 7.4.4 provides CPED staff discretion in reviewing late-submitted protests or responses. CPED staff set a two-week grace period for late-submitted protests and responses, so any submissions not received by December 13, 2021 were not considered and are therefore excluded from the discussion below. Accordingly, CPED does not consider the responses from the California Bicycle Coalition and the San Francisco Electrical Construction Industry.

Cruise’s advice letter received 1 timely protest, 1 timely response providing comments and urging further investigation before Commission approval, and 20 timely responses in support.

Protests

Disability Rights California (DRC) protested Cruise’s advice letter on the grounds that Cruise’s service fails to meet the standards set by the Americans with Disabilities Act (ADA) for nondiscrimination by Title III entities. DRC argued that Cruise must provide wheelchair-accessible vehicles (WAVs) or otherwise provide equivalent service to riders who cannot use non-WAV AVs, and that Cruise must provide auxiliary aids and services, especially for deaf or hard-of-hearing people whose primarily language is American Sign Language and for people who are deafblind. DRC further asserted that Cruise must provide antidiscrimination and disability competence training for all staff, and that Cruise’s lack of an “inaccessibility” category for customer feedback would obscure potential ADA violations.

Responses

The San Francisco Municipal Transportation Agency (SFMTA), San Francisco County Transportation Authority (SFCTA), and the Mayor's Office of Disability (collectively, San Francisco) submitted a response expressing concerns and urging the Commission to further investigate certain issues before acting on Cruise's application. In its response, San Francisco highlights instances where Cruise AVs have performed passenger pickup or drop-off operations by stopping in a travel lane ("double parking") and argues that stopping in a travel lane is noncompliant with the California Vehicle Code (Section 22502) or SF Transportation Code (Section 7.2.85), is unsafe, and elevates passenger convenience over the safety and convenience of all road users. San Francisco also expresses concerns regarding the equity and accessibility of Cruise's proposed service, noting that Cruise's proposed ODD excludes San Francisco's Equity Priority Communities and that Cruise's service, which would not initially include WAVs, appears to discriminate against wheelchair users.

Cruise's advice letter received supportive responses from stakeholders spanning local groups, elected officials, accessibility advocates, energy and electric vehicle (EV) advocates, technology industry groups, transportation advocates, and academics.

Several stakeholders highlight the environmental benefits of Cruise's all-EV fleet. The City of Sunnyvale notes that Cruise's commitment to EVs and environmental friendliness makes it a key part of the future of the transportation sector. Assemblymember Autumn Burke (representing Assembly District 62, member of the Technology and Innovation Caucus), Senator Lena Gonzalez (representing Senate District 33, Senate Majority Whip and Chair of the Senate Committee on Transportation), and Senator Dave Min (representing Senate District 37, member of the Senate Committee on Transportation) similarly highlight the environmental benefits of EVs in support of the State's greenhouse gas (GHG) reduction goals, through Cruise's use of renewable energy and through the reduction of personal internal combustion engine vehicles on California roads. The Coalition of California Utility Employees (CUE) echoes these environmental benefits and also notes that Cruise's EV fleet would create jobs associated with powering and maintaining those vehicles, attracting new workers to the State and demonstrating how transportation electrification can boost economies.

Others highlight the passenger safety benefits of Cruise AVs in reducing human-error-caused traffic injuries and fatalities, including Assemblymember Burke, Senator Gonzalez, Chamber of Progress, Streets Are For Everyone, and Professor William Riggs (University of San Francisco).

American Council of the Blind, California Council of the Blind, NorCal Spinal Cord Injury Foundation, and United Spinal Association highlight the benefits of Cruise's service in improving the independence and autonomy of people with disabilities, including people who are blind or low vision and people living with paralysis or spinal cord injuries/disorders. Cruise's AV service would support these individuals in traveling without having to rely on a sighted and/or able-bodied person.

Self-Help for the Elderly expressed its support for Cruise, noting the benefits of AVs in providing additional mobility independence for seniors and in supporting expansion of service offerings from nonprofits like meal delivery and senior escort.

The Golden Gate Restaurant Association, the Hispanic Chambers of Commerce of San Francisco, the San Francisco Chamber of Commerce, and TechNet highlighted the potential benefits of Cruise to local businesses, as Cruise AVs could connect businesses to new customers via ride-hailing or delivery and could offer dependable, zero-emissions after hours rides to workers.

SAFE states that Cruise's fleet will help reduce national dependence on oil and help make the United States a leader in 21st century technologies.

The San José Chamber of Commerce and the EV Charging Association highlight the potential benefits of Cruise AVs in assisting in future emergencies like wildfires, power shutoffs, and emerging threats from climate change, as Cruise's all-electric AVs could potentially be used as mobile battery packs. They also argue that Cruise's all-electric AV service could help reduce the impacts of pandemic-induced "carmageddon," increased car travel and decreased public transit use due to safety concerns around shared mobility.

Several parties also highlighted Cruise's Farm to Fleet initiative, in which Cruise sources renewable energy credits from family farms in the Central Valley. The San José Chamber of Commerce, EV Charging Association, and Professor William Riggs (University of San Francisco) express their support for this aspect of Cruise's operations, arguing that it helps bridge the urban-rural divide, supports more equitable electrification, and promotes a more circular economy.

Cruise's Reply

Cruise replied to the protest and responses on December 6, 2021. In its reply, Cruise asserts that it meets the Commission's requirements for a Driverless Deployment permit and that the issues raised by DRC and San Francisco do not provide a basis for denial of or placement of limitations on Cruise's proposed service.

Cruise argues that several of the issues raised by San Francisco are outside of the jurisdiction of the Commission and are therefore beyond the scope of this application process. This includes the technical ability of Cruise vehicles to recognize lawful on-street parking spaces and to respond to traffic control officers and emergency vehicles, which is within the jurisdiction of the DMV, and the enforcement of state and local traffic regulations, which is within the authority of San Francisco.

Cruise rebuts San Francisco's assertion that in-lane pickup and drop-off operations are illegal, citing language in CVC section 22502(b)(1) that allows commercial vehicles to stop or park more than 18 inches from a curb when "reasonably necessary" for the loading and unloading of passengers. Cruise asserts its vehicles are commercial vehicles under the California Vehicle Code.

Cruise disputes the accessibility issues raised by DRC (which argues that Cruise must provide WAVs to comply with the ADA) and San Francisco (which argues that Cruise's plans are not aligned with the Commission's accessibility goals and would not avoid discrimination against people who use wheelchairs). Cruise argues that the Commission did not mandate WAV service as a condition for a Driverless Deployment permit and that the Commission elected not to specifically define "accessibility" when setting goals for the AV Deployment program. Cruise further argues that ADA regulations do not require private entities to purchase accessible vehicles.

In response to San Francisco's concerns regarding the equitable provision of service given Cruise's initial ODD, Cruise notes that the Commission did not set any specific equity targets nor require any specific service area. Cruise further notes that its planned future ODD would encompass all of San Francisco.

The discussion below includes our analysis of the protest, responses, and reply.

DISCUSSION

The Commission has a broad mandate to promote safety in its regulation of passenger carriers, including AVs. The Passenger Charter-party Carriers Act directs the Commission to regulate certain types of passenger transportation service in the state. Per the Act, the "use of the public highways for the transportation of passengers for compensation is a business affected with a public interest. It is the purpose of this chapter [...] to promote carrier and public safety through its safety enforcement regulations."¹ In the AV program, the Commission has underscored this safety mandate by establishing "Protect passenger safety" as one of the four goals of the Phase I AV Deployment Program. Our evaluation of Cruise's application for a Driverless Deployment permit considers Cruise's compliance

¹ Public Utilities Code Section 5352(a)

with the specific requirements of the Deployment Decision informed by the broader context of our duty to promote public safety.

Standard of Review

We discuss our review of Cruise's application in greater detail below. CPED has assessed the completeness of Cruise's application relative to the requirements of the Deployment Decision. CPED has also evaluated the content of Cruise's PSP, both for its completeness relative to the minimum requirements set forth in the Deployment Decision as well as the reasonableness of the strategies described in protecting passenger safety in the context of the proposed service.

Completeness of Cruise's Application

CPED first reviewed Cruise's application for completeness relative to the requirements of the Deployment Decision. Ordering Paragraphs 7-11 of the Deployment Decision set forth the requirements for participation in the Driverless Deployment program. Key requirements for the application process include:

- Holding and complying with all standard terms and conditions of the Commission's TCP permit, which are governed by General Order 157-E.
- Holding an active AV Deployment permit issued by the DMV.
- An attestation that at least one of the carrier's vehicles that is representative of the vehicle and technology characterizing the fleet has been in operation on California roads for at least 30 days following receipt of the DMV AV Deployment permit. This attestation must also include a statement and map of the carrier's ODD as approved by the DMV.
- A plan for how the carrier will provide notice to the passenger that they are receiving driverless AV passenger service and how the passenger will affirmatively consent to or decline the service.
- A Passenger Safety Plan that describes the carrier's policies and procedures to minimize risk for all passengers in their driverless vehicles, which we discuss in further detail below.
- Submission of the application in the form of a Tier 3 advice letter.

We have determined that Cruise's application is complete relative to the minimum requirements of the Deployment Decision.

Equity Goals and Cruise's Service Area

As part of our assessment of Cruise's application, we evaluated San Francisco's assertion that Cruise's service would exclude San Francisco's designated Equity Priority

Communities and would therefore not support the Commission's goal to "improve transportation options for all, particularly disadvantaged and low-income communities."²

The Deployment Decision established four goals for the Commission's AV programs; 1.) Protect passenger safety; 2.) Expand the benefits of AV technologies to all Californians, including people with disabilities; 3.) Improve transportation options for all, particularly for disadvantaged communities and low-income communities; and 4.) Reduce greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities. However, the Commission declined to prescribe specific targets for achieving these goals and did not condition participation in the AV Deployment programs upon meeting any specific thresholds related to these goals. Nothing in the Deployment Decision requires Cruise to serve specific geographic areas at this time.

The Commission will continue to monitor the equity and environmental and social justice implications of AV Deployment through carriers' required quarterly data reporting, workshop(s), and stakeholder engagement as warranted.

Evaluating the Passenger Safety Plan

The Passenger Safety Plan plays a critical role in our evaluation of the safety implications of Cruise's proposed service. As described in the Deployment Decision, "[r]equiring applicants to provide a detailed Passenger Safety Plan tailored to their technology and business model, and making that plan available for public review and comment, will enable parties to lend their expertise, ensure transparency in decision-making, and establish a public document against which the applicant's actions will be compared."³ The PSP must detail, at minimum, how the carrier will:⁴

- Minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle
- Minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments
- Respond to unsafe scenarios outside and within the vehicle, such as hostile individuals
- Educate and orient passengers about the technology, experience, and safety procedures
- Ensure customers can safely identify, enter, and exit the AV they requested;

² San Francisco Comments on Cruise Application for Driverless Deployment Permit – Tier 3 Advice Letter (San Francisco Response) at 9

³ D.20-11-046 as modified by D.21-05-017 (Deployment Decision) at 35-36

⁴ Deployment Decision, Ordering Paragraph 8

- Enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response
- Collect, respond to, and retain any passenger comments and complaints
- Ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities

Cruise's PSP is complete as it addresses each of the minimum requirements above. The technology, policies, and procedures Cruise describes are generally reasonable for its service as proposed. However, Cruise's strategies to protect public safety may be insufficient if its deployment scale and scope change. As such, certain modifications to Cruise's ODD approved by the DMV may trigger additional review as discussed further below.

Beyond the minimum requirements, stakeholders raised several issues that merit further discussion.

Accessibility

The Commission has adopted a goal to "expand the benefits of AV technologies to all Californians, including people with disabilities."⁵ Accordingly, the safety measures described in the PSP must be "accessible and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities."⁶ In its protest, DRC takes issue with Cruise's accessibility plans, arguing that Cruise fails to meet the ADA's standard for nondiscrimination for Title III entities. DRC argues: Cruise must provide WAVs or otherwise equivalent service for people who cannot use non-WAV AVs; Cruise must provide auxiliary aids and services, especially for deaf or hard-of-hearing people whose primary language is American Sign Language and people who are deafblind; Cruise must provide antidiscrimination and disability competence training for all staff; and that Cruise's lack of an "inaccessibility" category for customer feedback obscures potential ADA violations.

DRC's arguments, which call for the Commission to require Cruise to provide specific accessibility measures, are not within the grounds for a proper protest. Per GO 96-B Rule 7.4.2(6), a protest may not be made where it would require relitigating a prior order of the Commission. While the Deployment Decision emphasizes the importance of accessibility in the AV program, the Commission has declined to define "accessibility" to promote

⁵ Deployment Decision at 38

⁶ Deployment Decision, Ordering Paragraph 8

accessibility broadly and inclusively.⁷ No specific accessibility measures are required for participation in the Driverless Deployment program.

Cruise is not obligated to provide WAVs or additional auxiliary aids at this time, provide antidiscrimination and disability competence training for its staff, or alter its categorization of customer feedback. However, the Commission would support such measures as efforts to expand the benefits of AV technologies to all Californians.

In its PSP, Cruise described accessibility features for people who are blind/low vision or deaf/hard of hearing.⁸ Although the Commission has not required specific accessibility measures, we encourage Cruise to take into account DRC's comments as it continues to develop its service. We anticipate that accessibility strategies will continue to evolve in support of the Commission's goals as the AV Deployment programs scale up from their initial offerings. The Commission will continue to collect data as the AV program evolves and encourages continued engagement from stakeholders in the disability and accessibility community.

Passenger Pickup and Drop-off

Passenger pickup and drop-off is a critical nexus of many of the safety and accessibility issues applicable to AV operations. Pickup and drop-off in a travel lane (rather than at the curb or other designated loading area, i.e., "double parking") introduces safety risks into AV operations by increasing the physical distance between safe pedestrian space and the AV, and reducing the physical barriers (e.g., the sidewalk, curb, and the AV itself) between boarding or alighting AV passengers and other road users.

In its response, San Francisco asserts that Cruise vehicles stop in the travel lane to pick up or drop off passengers⁹ and argues that these maneuvers are illegal under the California Vehicle Code (CVC) and San Francisco Transportation Code.¹⁰ San Francisco further argues that these maneuvers are unsafe and elevate the convenience of AV passengers over the safety and convenience of all road users.¹¹ In its reply, Cruise argues that its in-lane stopping maneuvers are legal, as commercial vehicles like Cruise AVs may stop or park more than 18 inches from the curb when "reasonably necessary" for passenger loading or unloading.¹² Cruise further notes that its PSP meets the Commission's requirements that

⁷ Deployment Decision at 38

⁸ Cruise Passenger Safety Plan, Section 2.3.1

⁹ San Francisco Response at 7-8

¹⁰ San Francisco Response at 5-6

¹¹ San Francisco Response at 2

¹² Cruise LLC's Reply to Protest and Comments to Cruise's Application for Driverless Deployment Permit – Tier 3 Advice Letter (Cruise Reply) at 5-6. See also CVC Section 22502(b)(1)

carriers have policies and procedures in place to ensure passengers can safely identify, enter, and exit the AV.¹³

Cruise has addressed the PSP's requirements regarding pickup and drop-off operations, and we recognize the value of Cruise's inclusion of certain model strategies like automatic reminders for passengers to watch for other vehicles and people in bikeways upon exiting.¹⁴ However, we also recognize the broader safety concerns inherent to in-lane pickup and drop-off operations. It is challenging to quantify the associated safety risk to passengers and to other road users. "Near miss" events represent a substantial risk to all parties, and research on this topic requires intensive video data processing, human observation, or a combination of both because near miss events would not be captured in traffic collision data, typically used to identify unsafe intersections or corridors. Further, data collection is difficult due to the complexity of real-life traffic scenarios often involving multiple actors, which introduces uncertainty to any post hoc analysis. Similarly challenging is capturing safety risk at a qualitative level through surveys of road users' perception of safety and levels of comfort (or discomfort) when in proximity to pickup and drop-off operations.

Given the limited scope of AV passenger service to date, we do not have empirical data on incidents involving this type of passenger safety risk or a basis for identifying an industry best practice. AVs have traveled fewer than 2 million miles in passenger service in the Commission's AV Pilot programs, and Cruise accounts for less than 1% of these miles. In service of the Commission's duty to promote passenger safety, we must rigorously evaluate potential safety risks and appropriately acknowledge any limitations to such an analysis.

Disposition of Cruise's Application

In analyzing Cruise's application, we find that its application is complete and that its PSP reasonably protects passenger safety in the context of its proposed service. Cruise's proposed ODD includes only lower-traffic, overnight hours (10 p.m. to 6 a.m.) in a limited geographic area of San Francisco that does not include any active heavy rail crossings or streets with light rail transit. Cruise vehicles will operate at limited speeds no greater than 30 miles per hour and will not operate in certain weather conditions such as heavy rain or fog. Cruise AVs will not traverse passive rail crossings or intersections where a light rail vehicle, cable car, or streetcar's direction of travel does not have a stop sign or traffic signal device to define when it is to yield. Safety risks, including those related to pickup and drop-off, are limited by the facts of Cruise's ODD and Cruise's policies and procedures described

¹³ Cruise Reply at 8

¹⁴ Cruise Passenger Safety Plan at 16

in its PSP. Accordingly, the Commission approves Cruise's application and grants it a Phase I Driverless Deployment permit.

AVs represent tremendous potential benefits for Californians. As highlighted in the numerous support letters we received for Cruise's application, AV passenger service could reduce human-error-caused traffic collisions, provide environmental benefits in the form of zero-emissions rides, and may promote economic growth in local communities and throughout the state. These benefits are meaningful; however, we must also acknowledge the potential safety risks inherent to AV passenger service, especially as it pertains to pickup and drop-off operations. As we have discussed, these risks are difficult to quantify and analyze.

What is clear is that CPED cannot describe the *net* safety impact of AVs with the limited data and experience we have today; that is, CPED is limited in its ability to present to the Commission the magnitude and relative impact of the potential safety benefits of AVs and how they compare with the magnitude and relative impact of the potential safety risks. CPED is and will continue engaging with State, local, academic, and public stakeholders on this complex topic. As the industry grows, and more data and tools are developed, the Commission may modify the requirements of its AV program in the future to increase the net positive safety impact of this transportation technology.

Future Updates to Cruise's PSP

The Deployment Decision requires that a carrier participating in Driverless Deployment that intends to make any operational changes that would "materially affect" the approaches outlined in its PSP to submit an updated PSP to CPED as a Tier 2 advice letter.¹⁵ In the context of Cruise's service and existing PSP, any changes to the hours, geography, roadway type, speed range, or weather conditions of permitted operation would necessitate material changes to Cruise's PSP in order for the PSP to sufficiently address new risks. Passenger safety risks are materially different in complex situations like heavy rail crossings and pickup or drop-off operations in busy traffic conditions. Therefore, we will require that Cruise submit an updated PSP to CPED in the form of a Tier 2 advice letter should it wish to modify the hours, geography, roadway type, speed range, or weather conditions in which it may operate. This clarification is not intended to represent an exhaustive list of all changes that would "materially affect" the PSP. The updated PSP must be approved by CPED before Cruise may modify its operations.

Data Reporting

¹⁵ Deployment Decision, Ordering Paragraph 20

The Commission is continuously working to better understand safety risks in AV operations, including those related to pickup and drop-off, through its quarterly data reporting requirements, stakeholder engagement, and other means. The Deployment Decision directed CPED staff to create quarterly data reporting templates,¹⁶ which will include reporting on incidents and complaints based on a standard developed in collaboration with stakeholders.¹⁷ The Commission clarified reportable “incidents” to be those that “impact the safety of either the passenger in the vehicle or the public.”¹⁸

As directed by the Deployment Decision, CPED will collaborate with stakeholders to develop the categorization of incidents and complaints.¹⁹ Among other categories of incidents and complaints to be defined, staff and stakeholders should discuss the inclusion of data related to pickup and drop-off. This data would allow us to understand how frequently these incidents occur and make more detailed inquiries into safety risks as applicable.

Ongoing Dialogue

The Commission authorized staff to hold a workshop on passenger service provided by participants in the AV Deployment program.²⁰ As part of this workshop, staff will direct Cruise (and any other participants in the Driverless Deployment programs) to prepare a report and presentation updating stakeholders on how the strategies described in its PSP have been realized in operations, including pickup and drop-off, and the effectiveness of these strategies. Once the workshop has been scheduled, further instruction will be provided on how Cruise shall prepare the report and serve it to the R.12-12-011 and R.19-02-012 service lists no later than 4 weeks prior to the workshop.

The dialogue around Cruise’s application and around AV passenger service in general has been rich in content, varied in perspective, and highlights the complexity of evaluating risk for an evolving technology operating in dynamic environments. This discourse also highlights the need for continued engagement between all involved parties. With this in mind, we remind Cruise that the Commission “encourages AV Service Providers to work collaboratively with public agencies in the areas they deploy.”²¹ We encourage Cruise to maintain open and active dialogue with San Francisco, local law enforcement, and other stakeholders as appropriate throughout operation of its Driverless Deployment service.

¹⁶ Deployment Decision, Ordering Paragraph 7(m)(iii)

¹⁷ Deployment Decision at 61

¹⁸ Deployment Decision at 92

¹⁹ Deployment Decision at 61

²⁰ Deployment Decision, Ordering Paragraph 12

²¹ Deployment Decision at 22

Cruise's TCP Authority and Exemptions

Cruise currently holds two TCP authorities from the Commission: an A certificate authorizing participation in the Drivered Deployment program and a P permit authorizing participation in the Driverless Pilot program. CPED staff have determined that these authorities may be consolidated into a single permit or certificate, which will include authorization to participate in multiple Commission AV programs. Accordingly, we direct staff to update Cruise's existing P permit to reflect its participation in 3 programs: Driverless Pilot, Drivered Deployment, and now Driverless Deployment. The expiration date of this P permit will remain June 2, 2024.

In its existing authorities, Cruise has requested and been granted exemptions to certain provisions of GO 157-E. For its Drivered Deployment certificate, Cruise has been granted exemptions to Part 5.03, which requires that every driver be an employee of the carrier, and Part 4.01, which requires that each vehicle in use under the authority be owned or leased by the carrier. These exemptions are in effect for the duration of the certificate. Cruise also has been granted an exemption to Part 4.01 for its Driverless Pilot permit. Per Part 8.02, this exemption is in effect for 12 months and may be renewed once for an additional 12 months. This Driverless Pilot exemption expires on June 2, 2023. Each of these exemptions were granted because operations would remain functionally equivalent to the requirements of GO 157-E.

As part of its Driverless Deployment application, Cruise submitted a request for exemption to Part 4.01, which requires that each vehicle in use under the authority be owned or leased by the carrier. Cruise asserts that its operations under the exemption would be functionally equivalent to the requirements of GO 157-E, as the vehicles are owned by an entity with a controlling stake in Cruise and Cruise has the authority to manage or direct the use of any equipment.

The requested exemption is similar to one already granted to Cruise for its Driverless Pilot permit. No evidence has been presented to CPED that operations using vehicles owned or leased by a parent company are not functionally equivalent to operations using vehicles owned or leased directly by the carrier. Accordingly, we find it reasonable to grant Cruise's exemption request for its Driverless Deployment program.

These granted exemptions shall be included in Cruise's new P permit. All exemptions related to Cruise's Deployment participation shall be in effect for the duration of the authority. Cruise's Driverless Pilot exemption shall be in effect until June 2, 2023. As it has been renewed once, it is ineligible for renewal per the provisions of GO 157-E Part 8.02.

COMMENTS

Public Utilities Code §311(g)(1) provides that this resolution must be served on all parties and be subject to at least 30 days public review. Any comments are due within 20 days of the date of its mailing and publication on the Commission's website and in accordance with any instructions accompanying the notice. Public Utilities Code §311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

In compliance with Public Utilities Code §311(g), a notice shall be emailed on **April 29, 2022**, informing all parties on the R.12-12-011 and R.19-02-012 Service Lists of the availability of the Resolution on the Commission's website at <http://www.cpuc.ca.gov/documents/>. The 30-day review and 20-day comment period for the draft of this resolution were neither waived nor reduced. Accordingly, comments on this draft resolution may be submitted no later than 20 days from the mailing date (May 19, 2022). This draft resolution will be placed on the Commission's agenda no earlier than 30 days from today (May 30, 2022). If adopted by the Commission, the final resolution will be posted and available on the Commission's website.

CPED received 29 timely comments, 23 in support of Cruise's application and 6 expressing concerns and/or opposing Cruise's application.

Comments in support were received from Assemblymember Eloise Reyes (Majority Leader, representing Assembly District 47), Senator Josh Becker (representing Senate District 13), Hispanic Chambers of Commerce of San Francisco, American Council of the Blind, Chamber of Progress, EV Charging Association, Golden Gate Restaurant Association, NorCal Spinal Cord Injury Foundation, Self-Help for the Elderly, Telegraph Hill Neighborhood Center, Streets Are For Everyone, sf.citi, Silicon Valley Leadership Group, TechNet, United Spinal Association, William Riggs (University of San Francisco), San Francisco Chamber of Commerce, California Electric Transportation Coalition, National Federation of the Blind, EVNoire, Lighthouse for the Blind, Cruise, and the Autonomous Vehicle Industry Association. These comments generally highlighted the safety, environmental, accessibility, and economic benefits of AVs.

Additionally, 8 of these support letters (from Cruise, Chamber of Progress, Assemblymember Reyes, Silicon Valley Leadership Group, California Electric Transportation Coalition, EVNoire, and the Autonomous Vehicle Industry Association) recommended the Commission remove the requirement that Cruise file a Tier 2 advice letter updating its PSP for any change to Cruise's Operating Design Domain (ODD). Cruise

further argued that the Resolution creates a new requirement that is not in line with the Deployment Decision and does not enhance passenger safety.²²

The Commission has a broad mandate to protect passenger and public safety. Providing for staff and public review of significant operational modifications such as ODD changes is in line with this mandate. The Deployment Decision, Ordering Paragraph 20, requires a carrier that intends to change its operations in a way that would “materially affect” the approaches outlined in its PSP to submit an updated PSP by way of a Tier 2 Advice Letter.²³ This Resolution provides additional specificity for an existing requirement by clarifying that any ODD changes would materially affect the PSP and would therefore require a Tier 2 Advice Letter; no new requirement has been created. We further emphasize that ODD changes, while one example of a material change that would trigger an advice letter filing, are not the *only* operational changes that may be material, as discussed further below. In its comments, Cruise commits to collaborating with CPED staff to determine the materiality of future operational changes. Cruise also commits to providing CPED courtesy notice of all ODD expansion requests submitted to the DMV. The Commission appreciates Cruise’s commitment and encourages ongoing engagement with CPED staff.

The City of San Francisco, the City of Sacramento, the Oakland Department of Transportation (OakDOT), the Los Angeles Department of Transportation (LADOT), the San Francisco Taxi Workers Alliance (SFTWA), and Nina Beety of the California EMF Safety Coalition expressed concerns about Cruise’s proposed service.

SFTWA recommends that Cruise’s permit be denied until more data on driverless operations are available and the Commission has investigated various incidents involving AVs.²⁴ The Deployment Decision does not condition approval of a Deployment permit upon meeting certain mileage or other operational thresholds. SFTWA’s arguments therefore do not provide a basis upon which to deny Cruise’s application.

San Francisco, Sacramento, OakDOT, and LADOT recommend that the Commission require Cruise to file a Tier 2 Advice Letter if it wishes to expand its vehicle fleet beyond the 30 vehicles currently proposed. These commenters emphasize the potential impacts of scale on passenger and public safety, particularly as related to the potential for increased pickup

²² Cruise LLC’s Comments on Draft Resolution TL-19137 Approving Cruise LLC’s Application for Autonomous Vehicle Passenger Service Phase I Driverless Deployment Program at 2.

²³ Deployment Decision, Ordering Paragraph 20

²⁴ San Francisco Taxi Workers Alliance (SFTWA) Comments on Draft Resolution TL-19137, Approving Cruise LLC’s Application for Autonomous Vehicle Passenger Service Phase I Driverless Deployment Program (SFTWA Comments) at 2

and drop-off related safety issues with increasing numbers of AVs on the road.²⁵ We acknowledge the relevance of changes in the scale of AV operations to safety and other Commission goals. Such changes in scale include not just fleet size but also the frequency, number, or length of trips; customer demand; and other factors that could impact passenger and public safety. The Deployment Decision requires a Tier 2 Advice Letter for any operational change that “materially affects” the strategies outlined in the PSP, but does not require an Advice Letter filing for Cruise to add vehicles to its deployment fleet. Changes to any aspect of the scale of AV operations may be material. Cruise has committed to engaging with CPED to discuss whether a Tier 2 Advice Letter filing is necessary for intended operational changes. The Commission encourages engagement with staff generally and as Cruise considers changes to its scale of operations.

San Francisco, Sacramento, OakDOT, and LADOT also highlight a perceived regulatory gap that prevents AVs without drivers from being issued citations for moving violations, and recommend that the Commission not allow further expansion of Cruise’s service until this perceived gap has been addressed.²⁶ We note that the California Vehicle Code and the regulation of the safety of the AV technology is within the purview of the DMV and that Cruise has a Deployment permit from the DMV in good standing. However, the Commission has a broad mandate to protect passenger and public safety. As part of this, the Commission collects data on incidents involving AVs in its program. The Deployment Decision directs CPED to formulate categories of incidents for reporting,²⁷ and collisions and law enforcement interactions—whether or not a citation was issued—will be included among the various incident reporting categories. Further, the Commission encourages engagement from local authorities to report safety incidents to CPED and the DMV, such as by sharing Incident Reports related to AVs with CPED staff. Should unsafe behavior become evident, the Commission has the authority to suspend or revoke an AV permit at any time. General Order 157-E Part 1.06 requires that all TCP carriers, including AV carriers, comply with the California Vehicle Code. Further, the Deployment Decision provides for immediate suspension of a carrier’s AV passenger service permit should the DMV suspend or revoke a carrier’s permit.²⁸ The DMV has the authority to suspend a permit at any time if it determines that a manufacturer’s vehicles are not safe for public operation.²⁹

²⁵ See, e.g., San Francisco’s Comments on the Draft Resolution Approving Cruise LLC’s Application for Autonomous Vehicle Passenger Service Phase I Driverless Deployment Program (San Francisco Comments) at 11

²⁶ See, e.g., San Francisco Comments at 5

²⁷ Deployment Decision, Ordering Paragraph 7(m)(iii)(2)

²⁸ Deployment Decision, Ordering Paragraph 13

²⁹ 13 CCR § 228.20(b)(6)

LADOT, SFTWA, and San Francisco express concerns about the accessibility of Cruise's service. LADOT³⁰ and SFTWA³¹ argue that Cruise should be required to provide wheelchair accessible vehicles (WAVs) and equivalent service for persons with disabilities. San Francisco argues that Cruise should be required to allow passengers to request WAV service via its app.³² As noted previously, the Deployment Decision does not define accessibility and does not require any specific accessibility features as a condition of permit approval. The Commission encourages Cruise to provide WAVs and otherwise equivalent service for people with disabilities and to facilitate requests for such service in a way that is intuitive and convenient for customers. As required in the Deployment Decision, CPED will collect data on WAVs and WAV requests in AV service, to be considered as part of any future regulatory changes.

San Francisco recommends that the Resolution require public posting of carrier ODDs.³³ Cruise's Driverless Deployment ODD and any subsequent updates are and will be public through the Tier 3 Advice Letter application and Tier 2 Advice Letter PSP updates. To support easier access, CPED will post Driverless Deployment ODDs on its website.

San Francisco requests clarifications on the forthcoming workshop on AV Deployment service, advocating that the workshop should include more stakeholders and cover more topics, ideally in a series of workshops rather than a single workshop.³⁴ Per the Deployment Decision, the objectives of the workshop "will include but are not limited to: the quality and quantity of data gathered to date; progress toward the Commission's goals for AV operations in passenger service; whether and how to revise the data collection requirements; whether to revise the program goals and establish targets; and whether there is need for any other changes to the AV pilot and deployment programs."³⁵ This Resolution places no limitations on the workshop topics or participants. CPED has the authority to host one or more workshops as it deems necessary.

San Francisco also requests that CPED convene a regular working group that includes Cruise and San Francisco to address pickup and drop-off data collection and review interactions between Cruise AVs and San Francisco first responders, parking officers, and other roadway workers.³⁶ CPED has the authority to convene a working group if needed,

³⁰ Comments of the Los Angeles Department of Transportation on the Resolution Approving Cruise LLC's Application for Autonomous Vehicle Passenger Service Phase I Driverless Deployment Program (LADOT Comments) at 5

³¹ SFTWA Comments at 3

³² San Francisco Comments at 17

³³ San Francisco Comments at 12

³⁴ San Francisco Comments at 14

³⁵ Deployment Decision at 74

³⁶ San Francisco Comments at 13

and one of the agenda items for the upcoming workshop will be to discuss the need for and benefit of such a working group. Staff have been, and will continue to be, actively engaging with AV stakeholders.

San Francisco further recommends that the concept of “net safety benefits” be evaluated before inclusion in the Resolution.³⁷ We have acknowledged the challenges of quantifying both the safety risks and safety benefits of AV passenger service. Finding 17 below has been updated accordingly. CPED will continue to collect data and engage with stakeholders as the AV program evolves. If the Commission considers any regulatory changes in future phases of the program, it will consider further record development on the safety risks and benefits of AV passenger service.

LADOT makes several broad recommendations for the Commission’s AV programs that go beyond the scope of this resolution. LADOT recommends that AVs should be part of the Clean Miles Standard,³⁸ that the Commission should partner with localities to establish availability and usage requirements and real-time data collection similar to systems in place for micromobility,³⁹ and that the quarterly data reporting requirements should be modified.⁴⁰ The Deployment Decision sets forth requirements for the AV program, including data reporting requirements. It does not require any specific availability or usage requirements for AVs. These broader policy topics are more appropriately addressed through the formal rulemaking process, and we encourage continued engagement from LADOT on these issues. AV policy is addressed in Rulemaking (R.)12-12-011. The Clean Miles Standard is addressed in R.21-11-014.

Lastly, Nina Beety of the California EMF Safety Coalition requests that the time for comments be extended to allow for full evaluation of Cruise’s technology and application.⁴¹ We decline to extend the time for comments. The Draft Resolution was appropriately noticed to the R.12-12-011 and R.19-02-012 service lists, and comments were due 20 days after this notice per standard procedure.⁴² Additionally, the Cruise application has been available for public review since the initial submission of Cruise’s Tier 3 advice letter in November 2021.

FINDINGS

³⁷ San Francisco Comments at 15

³⁸ LADOT Comments at 7

³⁹ LADOT Comments at 6

⁴⁰ LADOT Comments at 7

⁴¹ Comment, R.12-12-011 submitted via email by Nina Beety

⁴² Rules of Practice and Procedure, Rule 14.5

1. On November 5, 2021, Cruise LLC (Cruise) submitted advice letter Cruise-0001 applying for a permit to participate in the California Public Utilities Commission's (Commission) Phase I Driverless Autonomous Vehicle (AV) Passenger Service Deployment program.
2. Cruise's advice letter received 1 timely response denoted as a protest, 1 timely response providing comments and urging further investigation before Commission approval, and 20 timely responses in support.
3. Disability Rights California protested Cruise's advice letter on the grounds that Cruise's service fails to meet the standards set by the Americans with Disabilities Act for nondiscrimination by Title III entities. We find this not to be proper ground for a protest.
4. The San Francisco Municipal Transportation Agency, San Francisco County Transportation Authority, and the Mayor's Office of Disability submitted a response expressing concerns regarding Cruise vehicles stopping in a travel lane for passenger pickup and drop-off, the equity of Cruise's service, and potential discrimination in Cruise's service against wheelchair users.
5. Responses in support were submitted by City of Sunnyvale, Assemblymember Autumn Burke, Senator Lena Gonzalez, Senator Dave Min, Coalition of California Utility Employees, Chamber of Progress, Streets Are For Everyone, Professor William Riggs, American Council of the Blind, California Council of the Blind, NorCal Spinal Cord Injury Foundation, United Spinal Association, Golden Gate Restaurant Association, Hispanic Chambers of Commerce of San Francisco, San Francisco Chamber of Commerce, TechNet, Self-Help for the Elderly, SAFE, San Jose Chamber of Commerce, and EV Charging Association.
6. Support letters highlighted the safety, environmental, energy, and economic benefits of Cruise's proposed service.
7. Cruise's application is complete relative to the requirements of Ordering Paragraphs 7 through 11 of Decision (D.)20-11-046, as modified by D.21-05-017 (Deployment Decision).
8. The Deployment Decision does not prescribe specific targets relative to the Commission's goals for its AV programs.
9. Cruise has no specific obligation to serve certain geographic areas.
10. Cruise has submitted a Passenger Safety Plan that meets the minimum requirements of Ordering Paragraph 8 of the Deployment Decision.
11. The Deployment Decision does not define "accessibility" or require specific accessibility measures for participation in the AV Deployment program.
12. Passenger pickup and drop-off in a travel lane introduces safety risks for passengers and other road users into AV operations.

13. Cruise's Passenger Safety Plan includes policies and procedures to ensure passengers can safely identify, enter, and exit the AV.
14. Cruise's initial Operational Design Domain does not include any highway-rail crossings, and streets with light rail are excluded from AV routable streets.
15. Cruise's initial Operational Design Domain allows operations when necessary at crossings with cable cars, streetcars, or light rail vehicles that are controlled by stop signs or traffic signals. The Cruise AV will follow the control directive directed towards its direction and yield the right-of-way to crossing traffic when applicable and safe. The Cruise AV will not traverse passive crossings.
16. The Commission has a broad mandate to promote passenger safety in its regulation of passenger carriers, including AVs, per Public Utilities Code Section 5253(a).
17. The Commission will continue monitoring the safety benefits and risks of AV passenger service.
18. Cruise's Passenger Safety Plan is reasonable in the context of its proposed service.
19. Operational changes involving modified hours, geography, roadway types, speed range, or weather conditions would raise new safety considerations that would require material changes to Cruise's Passenger Safety Plan to sufficiently address, in addition to any other operational changes that would materially affect the approaches in its Passenger Safety Plan.
20. It is reasonable for Cruise, along with any other Driverless Deployment Program participants, to update stakeholders on its Driverless Deployment operations in a workshop on AV Deployment passenger service to be held by the Consumer Protection and Enforcement Division.
21. It is reasonable to consolidate Cruise's existing Transportation Charter Party carrier authorities into a single P permit that reflects participation in multiple AV programs.
22. No evidence has been presented that operations using vehicles owned or leased by a carrier's parent company are functionally different than operations using vehicles owned or leased by the carrier.

THEREFORE, IT IS ORDERED THAT:

1. Cruise LLC's application for a Phase I Driverless Autonomous Vehicle Passenger Service Deployment permit is approved. The Consumer Protection and Enforcement Division shall issue Cruise LLC's permit.
2. Cruise LLC's permit shall be a P permit that reflects its participation in the Driverless Pilot, Drivered Deployment, and Driverless Deployment programs. This consolidated permit supersedes and replaces all other Autonomous Vehicle Passenger Service authorities held by Cruise LLC.

3. Cruise LLC's permit shall maintain each program's exemptions to the provisions of General Order 157-E.
4. Cruise LLC's request for an exemption to Part 4.01 of General Order 157-E for its Driverless Deployment program is approved.
5. If Cruise LLC intends to expand the hours, geography, roadway types, speed range, or weather conditions of its driverless deployment operations, in addition to any other operational changes that would materially affect the approaches in its Passenger Safety Plan, it must provide the Director of the Consumer Protection and Enforcement Division with an updated Passenger Safety Plan by way of a Tier 2 Advice Letter.
6. Cruise LLC may not expand the hours, geography, roadway types, speed range, or weather conditions of its driverless deployment operations or make any other operational changes that would materially affect the approaches in its Passenger Safety Plan until this Tier 2 Advice Letter has been approved by the Consumer Protection and Enforcement Division.
7. As part of the workshop authorized in Decision 20-11-046, as modified by Decision 21-05-017, Cruise LLC, along with any other Driverless Deployment Program participants, will prepare a report and presentation updating stakeholders on how the strategies described in its Passenger Safety Plan have been realized in operations, including pickup and drop-off, and the effectiveness of these strategies. Once the workshop has been scheduled, the report shall be served on the Rulemaking 12-12-011 and Rulemaking 19-02-012 service lists no later than 4 weeks prior to the workshop.

This Resolution is effective today.

I hereby certify that this Resolution was adopted by the California Public Utilities Commission at its regular meeting on _____. The following Commissioners approved it:

Rachel Peterson
Executive Director