

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

*Order Instituting Rulemaking to Consider
Modifications to the California Advanced
Services Fund*

R. 12-10-012
(Filed March, 26, 2020)

**OPENING COMMENTS OF ELECTRONIC FRONTIER FOUNDATION TO ORDER
INSTITUTING RULEMAKING TO CONSIDER MODIFICATIONS TO THE
CALIFORNIA ADVANCED SERVICES FUND**

Ernesto Falcon
Senior Legislative Counsel
Electronic Frontier Foundation
815 Eddy Street
San Francisco, CA 94109
Tel: 1-415-436-9333
E-mail: Ernesto@eff.org

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I. Introduction

In accordance with Rule 6.2 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure (“Rules”), the Electronic Frontier Foundation (EFF) submits comments to the Order Instituting Rulemaking 12-10-012 (“Rulemaking”). EFF submitted a Motion for Party Status on April 9, 2020 (Confirmation Number: 0000148242) and submits these comments in anticipation of being granted party status.

II. About EFF

The Electronic Frontier Foundation (EFF) is the leading nonprofit organization defending civil liberties in the digital world. Founded in 1990, EFF champions user privacy, free expression, and innovation through impact litigation, policy analysis, grassroots activism, and technology development. With over 30,000 dues-paying members and well over 1 million followers on social networks, we focus on promoting policies that benefit both creators and users of technology. EFF has been at the forefront of studying the future of broadband access in the high-speed market. It has conducted in-depth research, and produced both legal and technical publications on the issue. EFF’s goal regarding broadband access is the deployment of universally available, affordable, and competitive high-speed networks. EFF focuses on fiber because it is the only data-transmission medium capable of both delivering low-latency connections to homes, and speed upgrades for generations to come that far exceed alternative last mile options as well as a necessary component for ubiquitous 5G coverage.

III. COVID-19 has forced every Californian to grapple with their broadband access capacity at home, and many current broadband access connections have failed to meet the challenge for residents.

Internet usage is on the rise as Californians follow social-distancing guidelines as a means to help combat the spread of COVID-19. However, a recent story published by the New York Times indicates that increased usage has caused a degradation of network quality for users,

based on anecdotal evidence.¹ Simultaneously, networks that are completely converted over to fiber-to-the-home appear to be facing *no challenge* handling the increased traffic from social distancing.² But these anecdotal takes are a poor substitute for actual, expert, analysis by a regulatory agency using data from the broadband industry. While advocates continue to request that the Federal Communications Commission fulfill its responsibilities by collecting and reporting on network performance and outages as it would have for any other disaster, the federal agency appears content with taking the industry's word that all is well.³ California should not follow the same path. Residents deserve to know not just where broadband access has failed them during their time of need, but, more importantly, exactly *why* those connections have failed to meet the challenge.

In response to Question 1 (what can and should the Commission do in response to COVID-19?), EFF recommends the California Public Utility Commission (CPUC) require ISPs to submit network performance and outage data in order to analyze the underlying reasons detailing how and why ISPs have seemingly yielded wildly different results across the state when it comes to delivering broadband access during the pandemic. EFF's own analysis⁴ into different last-mile technologies leads us to conclude that networks that are fully fiber-to-the-home have sufficiently high capacity, where even a sudden double-digit percentage of increased usage would be relatively easy to absorb. But our analysis is based on the network technologies as an engineering matter, and does not substitute for information on what Californians are currently experiencing on the ground. Only data from the broadband industry on network performance and outages can provide Californians with a clear understanding of the status of their communications infrastructure.

¹ Cecilia Kang, Davey Alba, & Adam Satariano, *Surging Traffic is Slowing Down Our Internet*, NY TIMES (Mar. 26, 2020), available at <https://www.nytimes.com/2020/03/26/business/coronavirus-internet-traffic-speed.html>.

² Doug Dawson, *Will COVID-19 Traffic Kill the Internet?*, POTS AND PANS (Mar. 31, 2020), available at <https://potsandpansbyccg.com/2020/03/31/will-covid-19-traffic-kill-the-internet>.

³ Jonathan Sallet, *Our Networks are More Vital Than Ever. The FCC Owes Us Updates*, UNDARK (Mar. 30, 2020) available at <https://undark.org/2020/03/30/covid-19-internet>.

⁴ Bennett Cyphers, *The Case for Fiber to the Home, Today: Why Fiber is a Superior Medium for 21st Century Broadband*, ELECTRONIC FRONTIER FOUNDATION (Oct 11, 2019), https://www.eff.org/files/2019/10/15/why_fiber_is_a_superior_medium_for_21st_century_broadband.pdf.

It is important for the CPUC to understand how networks are performing, because today’s spike in Internet usage will become normalized Internet usage in just a few years. While internet usage has increased in this moment due to social distancing, these increases appear to be around 40 percent,⁵ while mobile data usage has increased by merely ten percent.⁶ These increases do not represent unprecedented new levels of broadband access usage, and should have been well within the range of expected Internet traffic increases for the next few years, as applications and services evolve. Per Cisco’s analysis, North American data consumption will reach 90 exabytes per month by 2022.⁷

Year	North America IP Based Traffic in Exabytes Per Month
2012	14.4
2018	43
2022	90

Source: Cisco Visual Predictions 2012-2017 and 2017 - 2022

The COVID-19 experience has simply accelerated this trend by a handful of years, and gives the CPUC an early window into how these networks will perform in the not-too-distant future. If there is a systemic network performance, this information is absolutely relevant to the funding decisions the CPUC makes when approving projects future under the California Advanced Services Fund (CASF). Should the data indicate that certain types of networks were incapable of handling the increased Internet usage sparked by COVID-19 social distancing policies, the agency can use that knowledge as a predictor that any new projects of similar networks approved by the CPUC will face similar levels of failure as a regular matter in the near future, potentially as soon as 2022. Backing such failed networks with government money, would be akin to funding a bridge to nowhere, and the CPUC should make efforts to avoid such outcomes. This would not only stifle the goals of underlying law seeking to connect all Californians to the

⁵ John Graham–Cumming, *COVID-19 Impacts on Internet Traffic: Seattle, Northern Italy and South Korea*, THE CLOUDFLARE BLOG (Mar. 13, 2020), available at <https://blog.cloudflare.com/covid-19-impacts-on-internet-traffic-seattle-italy-and-south-korea>.

⁶ CTIA, *Managing Our Wireless Networks Through COVID-19*, available at https://www.ctia.org/the-wireless-industry/managing_our_wireless_networks-covid-19.

⁷ *Cisco Visual Networking Index: Forecast and Trends, 2017–2022 White Paper*, Cisco (Feb. 27, 2019), <https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-741490.html>.

Internet, but would also requires taxpayers to sink more of their money into remedying this avoidable problem.

Finally, if the agency's analysis determines that certain types of network deployments were sufficiently robust to handle the spike of usage during COVID-19 lockdowns, such information would be vitally important for the agency, and for the public. Local governments seeking to self-provision broadband access in light of challenges presented by the response to COVID-19 will be able to make better forward-thinking decisions as to how to best serve their constituents. Private providers can also benefit from the knowledge, as context for their own investment decisions as they consider what kind of future network deployments will yield value over the longest period of time.

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Respectfully submitted,

By: /s/ Ernesto Falcon

Ernesto Falcon

Senior Legislative Counsel

Electronic Frontier Foundation

815 Eddy Street

San Francisco, CA 94109

Tel: 1-415-436-9333

E-mail: Ernesto@eff.org