

Date of Hearing: May 10, 2017

ASSEMBLY COMMITTEE ON COMMUNICATIONS AND CONVEYANCE

Miguel Santiago, Chair

ACR 62 (Quirk) – As Introduced April 18, 2017

**SUBJECT:** 5G wireless network technology

**SUMMARY:** Urges policymakers in federal, state, and local government to work in cooperation with one another to establish technology neutral policies and modernize and streamline the processes that will enable rapid deployment of the small cell wireless infrastructure that supports 5G wireless. Specifically, **this resolution** makes the following legislative findings:

- 1) Next generation 5G wireless network technology, along with the rapid deployment of the fiber network, promises exponential improvements in the speed, responsiveness, and scale of the online technologies and applications that exist today and those that will exist in the future.
- 2) The impact of 5G will be especially significant in the fields of public safety, government efficiency, and health care, as it will support a wide range of essential services including: improved public emergency communications services such as Next Generation 911 and text to 911; and improved tools such as real-time video monitoring, predictive analysis, and mobile and hand-held data devices and other mobile-based technologies to enhance the operations of fire, police, and emergency medical services.
- 3) Enhanced wireless networks and the fiber networks on which they rely for transmission will play a key role in an early warning system for geological disruptions like earthquakes, giving businesses, residents, and the public safety community more time to prepare for natural disasters.
- 4) 5G will facilitate the use of information and communications technology to improve the efficiency of government services, including transportation and traffic management, public safety, lighting and energy usage, and water and waste management.
- 5) Innovations in telemedicine, patient monitoring, and data collection in the health care industry using 5G technology will give health care professionals the tools to better control chronic illnesses and improve healthcare outcomes for those affected by them.
- 6) 5G will serve as an unprecedented platform for innovation and economic development with the potential to help create new industries, products, and services limited only by the imaginations of California visionaries and entrepreneurs.
- 7) 5G will play an integral role in the creation of “smart everything,” bringing unparalleled next generation technologies in Smart Communities and every industry, including health care, energy, education, transportation, manufacturing, and agriculture.

- 8) A study conducted by IHS Economics and IHS Technologies estimates that by 2035, 5G will enable \$12.3 trillion in additional global economic output, an amount equal to the total consumer spending in the United States in 2016.
- 9) California is an acknowledged world leader in technology and must position itself to share in the estimated \$200 billion annual investment in network and business application infrastructure, the 22 million new jobs, and the enhanced productivity and long-term economic growth that 5G will support.
- 10) Urges policymakers in federal, state, and local government to work in cooperation with one another to establish technology neutral policies and modernize and streamline the processes that will enable rapid deployment of the small cell wireless infrastructure that supports 5G wireless networks and that will bring the many benefits of this important new technology to communities across California.

**EXISTING LAW:**

- 1) Requires the California Public Utilities Commission (CPUC) to establish and enforce the rates, terms, and conditions for pole attachments and rearrangements, as specified, whenever a public utility and a cable television corporation or association of cable television corporations are unable to agree upon the terms, conditions, or annual compensation for pole attachments or the terms, conditions, or costs of rearrangements. (Public Utilities Code (PUC) Section 767.5)
- 2) Establishes a framework, process, fees, and procedures governing the attachment of telecommunications facilities to municipal utility poles, providing for safety and reasonable terms and conditions. (PUC Section 9510 et seq.)
- 3) Authorizes a wireless telecommunications collocation facility, as specified, to be subject to a city or county discretionary permit issued on or after January 1, 2007, as specified. (PUC Section 65850.6)
- 4) Authorizes telegraph or telephone corporations to construct lines of telegraph or telephone lines along and upon any public road or highway, along or across any of the waters or lands within the State, and may erect poles, posts, piers, or abutments for supporting the insulators, wires, and other necessary fixtures of their lines, in such manner and at such points as not to incommode the public use of the road or highway or interrupt the navigation of the waters. (PUC Section 7901)
- 5) Specifies the intent of the Legislature, that municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed, as specified. (PUC Section 7901.1)

**FISCAL EFFECT:** Unknown. This resolution is keyed non-fiscal by the Legislative Counsel.

**COMMENTS:**

- 1) **Author's Statement:** According to the author, "ACR 62 expresses our commitment to promoting technological advancements and deployment. This resolution is a way for us as

leaders to express support of the deployment of 5G technology. 5G deployment brings many benefits to our communities. These benefits include the deployment of new connectivity technology to help our cities, institutions of higher learning, the technology industry and everyday Californians. Further, 5G technology will make massive investments in our telecommunications infrastructure by adding jobs and creating more ways for our state's institutions to use the internet.”

- 2) **Background:** Small cells are low-powered radio access devices that are used to increase cellular network capacity in shorter ranges and more concentrated areas. With the continuing demand for wireless devices, the ability to satisfy subscriber performance expectations will depend on the ability of the existing infrastructure of large macrocell towers to support an increasingly demanding network. Unlike, large macrocell towers, which can be over 200 feet tall, small cells are about 40 feet tall and can be used to provide connectivity to subscribers in areas that might be difficult to reach, such as areas with coverage gaps created by buildings, tower siting difficulties, and challenging terrain. Small cells can augment an existing coverage area by reusing scarce wireless frequencies to deliver greater connectivity.
- 3) **5G Deployment:** Small cells are needed to support the deployment of fifth generation mobile technology (5G) that will provide mobile speeds of up to 100 times faster than the current network. The 5G network deployment will involve 10 to 100 times more antenna locations than the 4G or 3G network. To do so, providers of wireless telecommunications services will need to seek local approval to place additional telecommunications equipment, such as antennas and related devices, on facilities where equipment already exists.

Telecommunications companies have the right to access utility poles in the public right of way. Currently law establishes a framework, process, and procedure governing the attachment of telecommunications facilities to utility poles. The CPUC establishes and enforces rates, terms and conditions for pole attachment. Local governments may not block utility pole attachments, but can regulate the time, manner and place of pole attachments in the right of way. Local governments, however, can continue to impose conditions on other types of wireless facilities and negotiate payments for the use of other infrastructure in the right of way, such as light poles and streetlights. In such cases telecommunication companies must negotiate agreements with local governments to use city infrastructure. With the deployment of 5G, the need, and potentially costs, for telecommunications companies to access local government infrastructure will vastly increase.

This resolution urges policymakers to work in cooperation with one another to establish technology neutral policies and modernize and streamline the processes that will enable rapid deployment of the small cell wireless infrastructure that supports 5G wireless networks.

- 4) **Arguments in Support:** According to CTIA, “Small cells enhance capacity on existing 4G LTE wireless networks by efficiently using scarce spectrum and will be required for higher-frequency spectrum that 5G networks will depend on. The benefits provided by 5G are astounding. 5G networks will provide increased capacity to accommodate growing consumer demands and will connect 100 times more devices. Imagine a future where nearly everything is connected to ubiquitous wireless networks at speeds up to 100 times faster than today. Imagine communities that are smarter and more connected. Entire sectors, from public safety to transportation, will be transformed.”

5) **Related Legislation:** SB 649 (Hueso) of 2017 establishes a statewide framework for streamlining the permitting siting process of small cell wireless facilities that meet specified requirements. *Status: Pending in the Senate Committee on Appropriations.*

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

CTIA  
Verizon

**Opposition**

None on file.

**Analysis Prepared by:** Edmond Cheung / C. & C. / (916) 319-2637