



July 26, 2012

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Written *Ex Parte* Presentation in WT Docket No. 07-293

Dear Ms. Dortch,

San Diego Gas & Electric Company (SDG&E) has reviewed with interest the *ex parte* notice filed by AT&T Inc. (AT&T) and Sirius XM Radio Inc. (Sirius XM) on June 15, 2012.¹ SDG&E applauds the efforts of AT&T and Sirius XM to resolve their private dispute concerning the coexistence of their respective services in the 2.3 GHz band. SDG&E strongly objects, however, to the proposal by AT&T and Sirius XM that the Commission should adopt the terms and conditions of their private coordination agreement and the proposals set forth in the *AT&T Sirius XM Joint Submission* as the new set of WCS technical rules applicable to the entire WCS industry.² Radically changing the WCS technical rules based merely upon a coordination agreement between two of the many WCS licensees would be arbitrary and capricious agency action. There is no need for such drastic changes to the WCS technical rules under which SDG&E and other WCS licensees have been operating since May 2010.³ Moreover, even if there were such a need, the *AT&T Sirius XM Joint Submission* raises novel technical and legal issues that would require the Commission to initiate a new rulemaking proceeding in which all interested parties could properly consider the issues in the context of a fully developed record.

SDG&E acquired two WCS licenses (one C block license and one D block license) from WCS License Subsidiary, LLC, an indirect, wholly owned subsidiary of NextWave Wireless,

¹ AT&T Inc. and Sirius XM Radio Inc. *ex parte* letter dated June 15, 2012 (the “*AT&T Sirius XM Joint Submission*”).

² *See id.* at 2 (“AT&T and Sirius XM jointly urge the Commission to adopt, *in toto*, the following recommendations to modify the WCS technical rules . . .”).

³ *See Amendment of Part 27 of the Commission’s Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band; Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order and Second Report and Order, 25 FCC Rcd 11710 (2010) (the “*Report and Order*”).

Inc. (NextWave), in December 2010. As explained in the Public Interest statement accompanying the FCC assignment application for its WCS licenses,⁴ SDG&E is using the two WCS licenses to fulfill network requirements associated with a Smart Grid grant by the U.S. Department of Energy under the American Recovery and Reinvestment Act of 2009 (ARRA). Indeed, SDG&E and NextWave met with Commission staff prior to filing the Assignment Application to brief them on the transaction and explain SDG&E's intent to use the WCS licenses for the SDG&E Smart Grid project. SDG&E and NextWave further noted during their meeting with FCC staff that the SDG&E Smart Grid project will meet one of the top goals of the FCC as laid out in the National Broadband Plan, namely, "[t]o ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption."⁵ The Commission's staff warmly welcomed SDG&E's proposed Smart Grid project during the initial meeting and subsequently granted the Assignment Application.

During the intervening two years, SDG&E has undertaken great efforts and expended significant resources to timely build its Smart Grid system in San Diego County. This build-out fully complies with the Commission's rules as set forth in the 2010 *Report and Order*. The SDG&E Smart Grid project is designed to provide secure broadband connectivity to a wide range of fixed stations throughout SDG&E's electrical service territory that support a variety of location-intelligent operating status and condition monitoring applications, such as AMI backhaul, smart transformers, PV charging stations, renewable resource communications, SCADA and photovoltaic measurements. Once fully deployed, SDG&E anticipates that the network will ultimately support thousands of fixed stations throughout SDG&E's service area. SDG&E is also planning a future upgrade of its WiMAX network to LTE when equipment for the U.S. 2.3 GHz market is available. As a result of these efforts, SDG&E has become a recognized leader in the Smart Grid movement, and it is well known that SDG&E is utilizing WCS C and D block licenses for the build-out.⁶

In light of SDG&E's significant effort and expense to build a Smart Grid system and its leadership role in the Smart Grid movement using WCS spectrum, SDG&E was surprised to first learn of the AT&T Sirius XM coordination agreement in the June 15 *AT&T Sirius XM Joint Submission*.⁷ SDG&E has now carefully reviewed the *AT&T Sirius XM Joint Submission* and

⁴ ULS File No. 0004432002 (the "Assignment Application").

⁵ *Connecting America: The National Broadband Plan* 11 (2010).

⁶ *See, e.g.*, The California Energy Commission, *Energy Commission Awards \$1.5 Million for Smart Grid Research Projects* (Mar. 14, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-03-14_cec_awards_one_point_five_million_nr.html.

⁷ Neither AT&T nor Sirius XM contacted SDG&E prior to June 15, 2012 regarding their coordination agreement and the desire for their private agreement to form the basis for new WCS rules to govern the entire band.

objects to many of the proposals contained therein. Set forth below is the text of certain proposed rule changes as described by AT&T and Sirius XM with commentary from SDG&E below each proposal.

- Section 1. Prohibit Mobile and Portable Transmitters in the WCS C and D Blocks

SDG&E acquired its C and D block spectrum licenses in reliance upon the FCC's designation of a portion of the C and D block spectrum for mobile operations in the 2010 *Report and Order*.⁸ Although SDG&E is not building a cellular network for a traditional mobile handheld service, the SDG&E Smart Grid project does utilize certain nomadic operations for wireless data downloads that are consistent with the FCC designation for mobile operations in portions of the C and D blocks in the band.⁹ AT&T and Sirius XM note that there is potential for interference between mobile and portable operations in the C and D blocks and Sirius XM operations.¹⁰ SDG&E has been in discussions with Sirius XM regarding any potential for interference between Sirius XM's service and the SDG&E Smart Grid deployment. SDG&E stands ready to address legitimate, demonstrable interference issues and at present is awaiting a response from Sirius XM to SDG&E's request for more information. Just as AT&T and Sirius XM have reached a private agreement concerning mitigation of interference between their respective services, SDG&E stands ready to do the same with Sirius XM if necessary. However, SDG&E will not ask the Commission to transform a private agreement between SDG&E and Sirius XM into new WCS rules for the entire industry.

- Section 5. No Ground-Level Power Flux Density Limit is Required for Base Stations Using FDD Technology: Instead, a Ground Power Limit Should Be Adopted

AT&T and Sirius XM implicitly acknowledge in the *AT&T Sirius XM Joint Submission* that their request for a ground power limit is a new concept not found in the record of the Commission's WCS docket.¹¹ They point out that Sirius XM has proposed establishing ground-level power flux density limits for satellite terrestrial repeaters and WCS base stations to protect each service's receivers against overload interference since 2006.¹² But Sirius XM's ground-level power flux density limits are very different from the newly

⁸ See *Report and Order*, Appendix B.

⁹ SDG&E utility trucks will be equipped with a retractable antenna that can receive wireless data downloads when raised to a certain minimum height. The trucks will not be capable of transmitting or receiving over WCS spectrum while in motion.

¹⁰ *AT&T Sirius XM Joint Submission* at 3.

¹¹ *Id.* at 6. As such, the Commission cannot adopt the proposal without first placing it on public notice in a new rulemaking proceeding.

¹² *Id.* at 5.

proposed ground power limits. The Commission carefully considered and rejected Sirius XM's proposed ground-level power flux density limits and instead concluded that out-of-band emission (OOBE) limits were the appropriate vehicle to protect Sirius XM receivers from WCS base stations.¹³ SDG&E has spent the past two years designing and building its Smart Grid system to comply with the FCC's OOBE limits. Even if the Commission could adopt the entirely new AT&T and Sirius XM ground power limit (which it cannot without first conducting a new rulemaking proceeding), the specification has no technical meaning as currently drafted because it does not establish the antenna gain and receiver bandwidth to be used. Based on SDG&E's preliminary field tests, the -55 dBm target is far too restrictive (assuming 0 dB gain into a receiver with a bandwidth of 5 MHz) and would cripple SDG&E's Smart Grid deployment. In any event, the Commission would need to call for comment in a new rulemaking proceeding and develop a full record before it could make a reasoned decision on what an appropriate ground power limit should be.

- Section 6. Permit Use of Outdoor Antennas in Certain Circumstances By Fixed Customer Premises Equipment ("CPE") Stations Operating with 2 Watts per 5 MHz or Less Average EIRP and the Stepped Emission Mask

AT&T and Sirius XM propose that installation of fixed CPE be prohibited within 20 meters from a roadway unless the WCS licensee can demonstrate compliance with the new ground power level thresholds proposed by AT&T and Sirius XM.¹⁴ Many distribution power lines in San Diego County run along roadways within 20 meters of the road surface. SDG&E has designed and constructed its Smart Grid network to include fixed end points along these distribution power lines. The Commission does not define CPE in the 2010 *Report and Order*. To the extent that CPE can be understood to include fixed end points in a Smart Grid system, SDG&E objects to this proposed new rule by AT&T and Sirius XM. AT&T and Sirius XM have provided no reasonable basis for the Commission even to begin to analyze why 20 meters rather than 200 meters or 2,000 meters is the appropriate distance. At present, the only basis for AT&T and Sirius XM requesting this new rule is a single sentence in the *AT&T Sirius XM Joint Submission*: "Sirius XM remains concerned that increased OOBE levels from fixed CPE with outdoor antennas and the new stepped mask could have the potential for harmful interference in urban and suburban areas."¹⁵ A theoretical concern about the potential for harmful interference by a single 2.3 GHz licensee hardly provides a reasonable basis for Commission action to adopt new rules for the entire WCS industry. In short, the proposed new prohibition on CPE within 20 meters of roadways raises many important questions that must be addressed in a new rulemaking proceeding.

¹³ *Report and Order* at ¶ 136.

¹⁴ *AT&T Sirius XM Joint Submission* at 6.

¹⁵ *Id.*

- Section 7. Coordination Requirements

AT&T and Sirius XM propose that the Commission should require other WCS licensees to enter into a coordination agreement with Sirius XM similar to AT&T's.¹⁶ The *Report and Order* does not mandate that WCS licensees enter into coordination agreements with Sirius XM, nor did any party raise this possibility in the record of the proceeding until now. SDG&E objects to this new proposal and believes that the private negotiations between SDG&E and Sirius XM will fully address the potential for harmful interference between the two parties, if any. Given the novelty of the proposed coordination agreement requirement by AT&T and Sirius XM, the Commission would need to address any such requirement in a new rulemaking proceeding.

- Section 8. Definition of Harmful Interference to SDARS Operation

AT&T and Sirius XM propose to define harmful interference in an entirely new way, namely, by reference to their newly proposed ground power limits of -44 dBm in the A and B blocks and -55 dBm in the C and D blocks.¹⁷ The *Report and Order* does not define harmful interference by reference to any particular technical standard.¹⁸ SDG&E objects to the AT&T and Sirius XM proposal because it would have a catastrophic effect on the SDG&E Smart Grid build-out. Initial estimates by SDG&E suggest that its network coverage would be reduced by at least 70% (thereby rendering the system utterly useless) if the Commission were to adopt this new proposal. Moreover, AT&T and Sirius XM propose to define harmful interference by reference to the muting of an SDARS customer. This approach fails to place any standard for receiver performance on Sirius XM and places the entire obligation to avoid harmful interference on the WCS licensee instead. As demonstrated at the Commission's recent workshop on "Spectrum Efficiency and Receiver Performance," the Commission must hold service providers responsible for poorly designed devices that they authorize for release into the U.S. market.¹⁹ Given the novelty of the AT&T and Sirius XM proposal and the level of work that SDG&E, the other WCS licensees, and the Commission would need to conduct in order to fully understand the impact of the proposal, the only reasonable approach would be for the Commission to consider the proposal in a new rulemaking proceeding, if at all.

¹⁶ *Id.* at 7.

¹⁷ *Id.*

¹⁸ The only definition of "harmful interference" contained in the *Report and Order* is generic in nature. *See Report and Order* at ¶ 28 n.84.

¹⁹ *See Office of Engineering and Technology, Wireless Telecommunications Bureau, and Office of Strategic Planning Announce Workshop on "Spectrum Efficiency and Receiver Performance,"* Public Notice, DA 12-378 (Mar. 9. 2012).

The Commission has carefully considered the competing claims of Sirius XM and various WCS licensees concerning the potential for interference between the two services over the course of at least the past decade. In May 2010, with a complete record and the benefit of multiple real world tests conducted by Sirius XM and WCS licensees in the presence of Commission staff, the Commission released the *Report and Order*. Based upon the new technical rules adopted in the *Report and Order*, SDG&E made a commitment to build a Smart Grid network with ARRA funds using the two WCS licenses it acquired from NextWave, and it has proceeded to do so with deliberate speed and effective execution. The proposals by AT&T and Sirius XM in the *AT&T Sirius XM Joint Submission* would effectively gut the SDG&E Smart Grid network and undermine one of the most promising efforts to date to deploy a next-generation Smart Grid worthy of the goals set forth in the Commission's National Broadband Plan. This would effectively negate (or render useless) the \$22 million SDG&E has already incurred in designing and constructing the SDG&E Smart Grid network. Worse, this would leave SDG&E with no viable near-term solution for Smart Grid broadband communications, a capability needed by our business and our three million energy customers beginning in 2013. Moreover, the AT&T and Sirius XM proposals are almost entirely new (*i.e.*, not specifically addressed in the record of the WCS proceeding) and, therefore, amount to little more than late-filed petitions for reconsideration of the *Report and Order*. AT&T and Sirius XM have provided no reasonable showing or basis for the Commission to convert their private coordination agreement into a new set of technical rules for the entire WCS band. To the extent that the Commission determines that it must consider their requests, the only appropriate venue for doing so would be in the context of a new rulemaking proceeding.

Respectfully submitted,

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