Before the

Federal Communications Commission

Washington, D.C. 20554

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| In the Matter of  Review of the Commission’s Rules Governing the 896-901/935-940 MHz Band | **)**  **)**  **)**  **)** | WT Docket No. 17-200 |

To: The Commission

**Reply Comments of Southern California Edison**

Southern California Edison (“SCE”), by its attorneys, hereby submits these comments in reply to comments filed with the Commission at the initial comment stage of this proceeding. The comments of other parties will be addresses thematically.

1. **The need for a broadband spectrum license**

The pressing need for a broadband spectrum license to meet the 21st Century needs of utilities emerges from the comments of SCE, the Utilities Technology Council (UTC), and PDVWireless, Inc. (PDV). This need is currently most intense for utilities with both very large service areas, large numbers of subscribers, and exposure to environmental hazards such as wildfires, hurricanes and other extreme weather conditions. All utilities are now potentially subject to threats from cyberattacks. It is the largest utilities like SCE that have the greatest immediate need for dedicated spectrum not only to manage day to day operations and monitor complex and far-flung networks, but also to implement mechanisms that can immediately detect and remediate system failures while at the same time securing the network against external threats. The burdens expected to be borne by the broadband system include low latency, handling a large volume of required sensors, and managing monitoring and control systems (which require large volumes of data) that minimize risks of catastrophic events. An undertaking on this order requires significant contiguous bandwidth, and the current narrow band, or even SMR band, licensing scheme cannot accommodate the demands that will be placed on such networks.

SCE believes that smaller utilities will very soon recognize that their own grids, networks and monitoring systems, though smaller in scale than SCE’s, are going to require similar broadband capability in order to meet the challenges of more complex network configurations, not to mention increasingly common climate change-related phenomena such as the current floods in the Midwest, heavy snowfall in the northern states, and drought conditions elsewhere. These environmental conditions are becoming the new normal in this country and they will have to be reckoned with by utilities all over the country, just as some utilities are confronting them right now.

It is important for the Commission to get out ahead of this situation rather than awaiting more disasters such as the PG&E wildfire and subsequent bankruptcy at a cost of many lives and billions of dollars. It is always easier for a government agency to take action after a disaster strikes rather than preventing it from happening in the first place, but thoughtful and prudent stewardship of the Commission’s spectrum resources must involve forward-looking, pre-emptive planning rather than after-the-fact reactive patches. The 3 x 3 MHz broadband license proposed in this proceeding represents a miniscule portion of the country’s spectrum resources. It can and should be dedicated to preserving the safety and reliability of critical industries on which the livelihood of this nation depends.

1. **Protecting the rights of incumbent licensees**

Numerous commenters who hold licenses in the part of the 900 MHz band at issue here (the “900 MHz Band”) expressed concern that their operations must be protected from any new interference resulting the relocation process involved in the proposed new band plan. The premise of the entire relocation mechanism proposed by the Commission – and supported by SCE – is that incumbents who are relocated either voluntarily or involuntarily should be left with facilities comparable to those that they have in their current frequency configuration, absent their agreement to the contrary. Section 90.699 of the rules specifies how comparability of facilities is to be measured for 800 MHz relocations and there is no reason why that model could not be used for 900 MHz relocations as well. The rules for this service should also contain additional useful guides for relocation found in Section 101.75, which places a common sense 2% cap on the non-hardware costs (such as FCC fees, engineering and legal fees) which are reimbursable as part of relocation.

The Commission should also make it clear that as long as comparability of facilities is achieved, a 900 MHz incumbent may be moved to a non-900 MHz Band spectrum location in the event that no such spectrum is available for this purpose.

1. **Eligibility for Broadband License**

The NPRM tentatively adopted PDV’s suggestion that eligibility for the broadband license should be limited to holders of the entire SMR allocation in this band. That criterion would limit the eligibility to a single party – not surprisingly, PDV. Those parties who expressed a view on the subject were universally opposed to that approach. Apart from the obvious appearance of highly preferential treatment to one company, several commenters, including SCE, objected to directing the broadband license to a non-utility whose only incentive would be to monetize the sale or lease of the spectrum without adding any value of its own to the process. Moreover, PDV would have no obligation, and has made no commitment, to put the spectrum to use for the important purposes (e.g., service to utilities) which it has emphasized in its filings with the FCC. SCE therefore suggested that eligibility should be expanded to include all 900 MHz Band incumbents. Other commenters such as Hawaiian Telephone Companies suggested that any regulated utility that owns and operates critical infrastructure in a given market should be eligible to apply for the 900 MHz Band broadband license even if it does not currently hold any B/ILT or SMR spectrum in that band. This effectively narrows the group of eligible entities to those who have demonstrated the most current need for dedicated spectrum of this type and also offers entrée to utilities who have relied on other spectrum resources to date but now recognize the need for broadband capacity. Outside the context of an incentive auction, no commenter suggested eligibility should be open to parties who are not either utilities or incumbents in the band. And, significantly, the wireless carrier community expressed no interest whatsoever in acquiring this particular broadband spectrum. The Commission should therefore feel no obligation to make it generally available when there seems to be no interest in it other than from incumbents and utilities.

To bridge the gap between those two communities, SCE suggests that utilities in a given market be given up to three years to assemble the necessary spectrum resources to create the 3 x 3 MHz band. After that, non-utility incumbents in a market would be eligible to do so. This prioritization process would ensure that those entities with the greatest need would have first crack at the BB license, but if they either were unable or unwilling to seek the license, other incumbents would then be able to claim it.

1. **Voluntary or Mandatory Relocation**

Perhaps the thorniest issue raised by the comments is the question of whether incumbents should be subject to mandatory relocation. All parties including SCE suggested that voluntarily negotiated relocations are the preferred course since it ensures that the relocated party is satisfied with the terms and timing of its relocation. In an ideal world, that process would be fine. Past relocation efforts in other spectrum bands have taught us, however, that voluntary negotiations will not ensure the removal of the necessary quantum of license holders from the broadband segment. This can happen for many reasons – unwillingness to experience disruption, unease about the comparability of substitute facilities, disinterest, concerns about the amortization of embedded equipment, etc. Sometimes, however, incumbents see the prospect of large dollars in much the same way that the last property holder on a city block hopes to garner an unreasonably high price from a potential developer of the block. This kind of opportunism is unfortunate but, if not forestalled, would result in giving a handful of licensees a veto over a process that is intended to ensure the reliability of critical networks to the good of the general public with no adverse effect to the hold-outs. This potential is serious enough that the Commission should create a process that permits such impasses to be fairly overcome when voluntary negotiations do not work.

In other services where the relocation of incumbents by new entrants has been employed, the Commission has placed “sunset” limits on the right of incumbents to command payment for relocation. Such limits strongly incentivize incumbents to reach reasonable agreements with the new entrants because after the sunset date they simply lose their rights to operate upon demand by the new entrant. SCE proposed a similar procedure modified for the peculiarities of the current 900 MHz band licensing scheme. Under this proposal, first, existing SMR licenses at the end of their current license term would be converted to into normal narrowband licenses. Any portions of the SMR bands that are not being used commercially and productively by the provision of service to actual customers or for actual internal communications applications would be returned to the Commission’s inventory and would be immediately available to prospective broadband licensees. This use it or lose approach would both incentivize SMR licensees to reach reasonable agreements with prospective broadband licensees and to make constructive use of their spectrum. The equivalent of color bars or white noise transmitted over a station would not qualify as use.

If these measures are not successful, the Commission should conduct an overlay auction similar to the process that the Commission used in the Broadband Radio Service and plans to use in the EBS. The eligible bidders in the auction would be the same eligibles as for a negotiated broadband license. The winning bidder would undertake negotiations with the incumbents for voluntary negotiation, but now, provided the overlay winner had made a reasonable offer to the incumbent, the incumbent’s license would expire without right of renewal at the end of its license term. The vacated spectrum would be available to fill out the overlay licensee’s broadband spectrum allocation. If an incumbent’s license term expires after 2026, its right to use its license would be sunset and it would have to vacate its spectrum upon demand by the overlay licensee for use of the spectrum in its broadband license. This rule would strongly encourage incumbents to reach reasonable voluntary agreements to relocate, as has been successfully accomplished in the other services with sunset provisions. The objective here is to encourage voluntary relocation agreements, not to strip incumbents of their licenses.

In no case should an incumbent with a “complex system” be mandatorily relocated, however, as long as it is putting its system to substantive commercial or internal use. A number of commenters suggested that the threshold for qualifying as a “complex” system should be reduced. Since the NPRM proposes that 900 MHz broadband licenses be awarded at the county level, a “complex system” for the purposes of frequency relocation should also be defined for incumbent operators at that level. Complexity should be based on the number of active narrowband channels (measured at greater than or equal to -95 dBm of received signal strength at an antenna 1.5m AGL) that are visible within the proposed broadband segment (inband channels), plus the number of channels active within 125 kHz from the edge of the broadband channel that may also be indirectly affected by the broadband licensee (adjacent band channels). These inband and adjacent band channels in a county will determine the incumbent operators for coordinating interference studies and negotiating frequency relocations. Upon consideration of this issue, SCE proposes that a system should be deemed “complex” when more than 25 incumbent channels belonging to a single operator require relocation to enable broadband service within a county.  This figure accords with many comments received from incumbent operators as well as the UTC.

In this regard, FCC should take note of the interference analysis submitted by Florida Power & Light. That analysis convincingly demonstrates that only 138 narrowband channels will be available for relocation due to guard band limitations that will require careful coordination between narrowband and broadband systems. Finding sufficient relocation availability for 25 or more channels for a single operator that will satisfy interference requirements of both its existing system and other users of narrowband systems would be an exceedingly complex task that may require additional sites as well as relocation to a different band.

1. **No incentive auction**

No commenter but PDV advocated for an incentive auction. Those who did comment agreed with SCE that an incentive auction would be infeasible in a practical sense since it would have to cover both apples and oranges: narrowband and SMR licenses. It would also unduly enrich the largest incumbents who could simply bid up the prices as high as possible to ensure if they did not win they would get a windfall profit. The Commission should abandon the incentive auction concept.

1. **Treatment of AAR**

The problem posed by AAR’s nationwide railroad license has been addressed by a voluntary agreement between PDV and AAR which assures AAR access to comparable spectrum in another part of the 900 MHz Band at the expense of one of PDV’s SMR licenses and some SMR spectrum from the Commission’s inventory. If PDV is not the ultimate broadband licensee, it would be fair to allot 10 narrowband channels to PDV in the narrowband segment, thus making it whole.

1. **Reversal of Transmit/Receive Frequencies**

First Energy proffered a suggestion that the Commission should reverse the transmit and receive frequencies used by the broadband licensee to limit the potential for interference to adjacent licensees. This suggestion, while well intended, would push the proposed license out of compliance with the frequency configuration standardized for LTE 3GPP LTE Band 8 applications. That would require non-standard devices to be developed for licensees in this band only, which would be unsustainably expensive and impractical and would certainly delay any roll-out of service. Suffice it to say that incumbent systems will need to be fully protected against interference from the broadband operations as discussed in Paragraph B above.

We should note in this regard that the NPRM slightly digresses from the standard LTE band 8 plan defined by 3GPP which requires 45 MHz spacing for FDD operations rather than 39 MHz. This deviation in the proposed rules from the 3GPP standard can probably be accommodated by equipment suppliers, but will require some customization for the US market for both radio base stations and devices. Compounding this problem by reversing the receive and transmit frequencies would constitute a significant enough deviation from the standard to qualify as “non-standard” and therefore non-LTE compliant. This would necessarily delay deployment and drive up costs considerably. PDV’s proposal for the broadband license have prudently tried to conform the new broadband allocation to LTE standards for this very reason. Speed to roll out and affordability of equipment must always be important considerations in spectrum allocations.

1. **CFR Part 90**

PDV suggests that the broadband license should be consigned to Part 27 of the Commission’s rules. SCE disagrees. Part 27 chiefly regulates services which are common carrier in nature, while Part 90 chiefly concerns itself with services that are provided on a non-common carrier basis. Part 27 treatment would represent a dramatic transformation of the 900 MHz band service from one primarily dedicated to internal uses by utilities and enterprises to just another bit of the hundreds of MHz of spectrum now allotted for cellular-type for-profit services. SCE believes that there remains an important place in the country’s spectrum allocation scheme for spectrum use by companies that need dedicated spectrum to meet their own internal needs in the service of their non-communications customers. That is the best and highest use of this particular spectrum band, and the Commission should therefore keep the broadband license where it belongs, Part 90.

Respectfully submitted,

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By: /s/

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