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Ms Anne Chadwick
Policy Analyst
Industry Partnerships Section
Australian Communications and Media Authority
PO Box 13112
LAW COURTS, MELBOURNE
VIC 8010

Dear Ms Chadwick

**WIA Submission on the High Power Trial**

The Wireless Institute of Australia (WIA) welcomes the opportunity to comment on the conduct and outcomes of the High Power Trial. This submission contains the results of a survey of WIA members, and also some observations of the trial.

The WIA was directly involved in one incident of interference to a neighbour's TV and AM radio by a WIA member, who requested assistance. The member was able to demonstrate that his use of higher power did not cause any disturbance to digital TV reception. In respect to the interference to the 40 year old AM radio, that could not be resolved. However, the member purchased a new digital radio for his neighbour at his own expense that fully resolved the neighbour's complaint. The member was also the subject of an EMR assessment by the ACMA. The ACMA has provided a letter of satisfactory compliance.

As the WIA is not informed of the names or callsigns of licensees taking part in the High Power Trial, or the total nuber, the WIA was unable to contact participants in order to gain an understanding of the Trial outcomes. Rather, it was necessary for the WIA to ask participants to contact the WIA and relate their experiences. The request was announced as a news release on the WIA website and also as a news item on the WIA Sunday news broadcasts. A small number of licensees responded.

In particular, the WIA aimed to determine:

1. Evidence that the higher power limit assisted radio amateurs to communicate.
2. What techniques licensees used to determine compliance with EMR standards.
3. How difficult licensees found the self-assessment process posed to licensees.
4. The incidence of interference to other spectrum users or to domestic radio and television receivers.
5. Any general comments or concerns about the operation of the trial.

In order to obtain this information, trial participants were asked to respond to the following questions:

1. Have you found it easier to communicate with stations using the higher power and why?

2. How did you find the whole EMR assessment process?

3. Did you use an EMR assessment tool? Which one?

4. Did you need to make changes to your antenna system or your property to comply with the exposure regulations?

5. Are you aware of any increase in interference to domestic radio or television reception resulting from your operations at the higher power limit?

6. Any other comments or experiences you would like to share?

**Summary of the WIA Response**

The WIA received 16 written responses to the request for information. Those responses are summarised in the table below and are reproduced in Appendix A. Some responses have been edited to remove non-relevant information, and names and callsigns have been removed.

Although only a small number of licensees responded to the WIA's request for written information, from discussions at field-days etc, we believe the 16 written comments received are fairly representative and can be relied upon.

| | |
|---|---|
| Improved communications | 14 |
| Advantage in contesting | 6 |
| Easy self-assessment | 6 |
| Some difficulty in self-assessment | 2 |
| Difficult self-assessment | 0 |
| Assessment tool used - ACMA calculator, | 3 |
| Assessment tool used - VK3UM calculator, | 10 |
| Assessment tool used – Other or self-calculation | 1 |
| Change required to station for Level 1 Compliance | 2 |
| Interference to other spectrum users/ broadcast radio/TV | 1 (resolved) |

*Responders' comments are noted in Appendix 1*

**Conclusion**

The WIA's view is that the trial appears to have gone very well, with licensees generally having a sound understanding of the self-assessment process. Almost all respondents used the self-assessment software calculator developed by Doug McArthur, VK3UM.

The WIA is not aware of any instances of interference to other spectrum users.

The WIA is not aware of an increase in interference to other radio amateurs, or an increase in the noise floor on affected amateur bands.

One respondent reported minor interference to a neighbour's television reception, which was found to be caused by a faulty TV antenna connection and easily rectified.

Several people drew attention to the fact that the trial was operated on the condition of no-interference, and they were concerned that the no-interference condition, although perfectly reasonable for a trial, may be extended to all amateur radio licences in the future if a higher power limit is introduced. One radio amateur elected not to participate in the trial for this reason, on a 'matter of principle'.

Many responders noted that the advantage of the higher power was most evident in contesting, where many stations around the world compete to successfully make as many contacts as possible within the contest time period, or outside of contests, where stations across the globe vie for the attention of a rare country or callsign. In those circumstances, when many stations are calling on or about the same frequency and all at once, the relatively small 3-4 decibel increase in radiated power (from 400W pX to 1kW pX) can make all the difference in being heard.

Several responders commented that the information on both the ACMA and WIA websites concerning the trial is somewhat obscure, and that the aims of the trial unclear and measurement targets undefined. The WIA makes no comment on these observations. However, the WIA does suggest that, should the high power variation be adopted, the EMR self-assessment information on both the ACMA and WIA websites should be reviewed and clarified.

Some survey participants commented that they would like to see any future power limit variation include 7.100 – 7.200 MHz and the 1.8 MHz (160 metre) amateur band. The 160 metre amateur band is useful for local and medium range contacts at night and has a strong following of people using amplitude modulation and ex-military or antique equipment. The WIA also notes that the EMR exposure risk is lowest on the 160 metre band.

The WIA is aware the Amateur Service secondary allocation above 7.100 MHz would be an inhibiting factor. However, the WIA requests the ACMA to consider incorporating the 160 metre amateur band in any resulting power variation to the licence conditions.

The WIA seeks clarification regarding the maximum power (pX) allowed by transmission mode. One responder was unsure of the maximum power allowed when using CW (Morse code) and was advised by an ACMA official that 500 Watts would be appropriate.

It has become clear to the WIA that there is a degree of pent up demand for the use of higher power than the current licence conditions provide. It is widely recognised that higher power is a significant advantage when amateurs face weak-signal conditions, particularly where 'traditional' voice and Morse code transmissions are being employed. This particularly pertains to the 10 dB difference between the 100 W pX rating of many commercial amateur HF transceivers and a power limit of 1 kW pX.

The WIA thanks the ACMA for the operation of the High Power Trial. The WIA would very much like to see the higher power 1kW pX limit become a permanent feature for Australian Advanced Grade Radio Amateurs.

Yours sincerely

Phil Wait
**President**