

Our Ref:

Mr Lyndon Rowe
Economic Regulation Authority
6th Floor
Governor Stirling Tower
197 St Georges Terrace
Perth WA 6000

Dear Sir,

INDUSTRY SUBMISSION RE NETWORK ACCESS

The Urban Development Institute of Australia (UDIA) (WA Division) is the body representing the property industry in Western Australia. It is in this capacity that UDIA responds to the ERA.

Following on from the meeting on 22 September 2005 of the Economic Regulation Authority (ERA) Technical Rules Committee, below is UDIA's response to the Network Access Submission's specifically addressing the 'ADMD' component of Western Power's submission to the ERA.

At the meeting we were invited to consider and discuss a submission by Western Power to amend various design and construction standards for urban subdivision underground power schemes. As you know, we were not aware of many of the proposals contained within Western Power's submission until only a few days before the meeting. We were surprised to be advised at the meeting that the proposals had already been formally submitted to the ERA. Notwithstanding please find below our initial comments.

1/. Load Growth:-

We acknowledge that Western Power has carried out research into this, and we fully support the notion that all systems should be designed using the correct load criteria. However we are also very wary of over-designing the system by using ADMD values which are too high, because under the current arrangement the cost of this will be directly borne by the buyers of new residential lots in Western Australia.

Using the figures in the Western Power submission and assuming a lot production rate of 12,000 new lots per annum, the increase in cost/lot will be of the order of \$4,000. We believe this is a significant impost to pass onto lot buyers in Western Australia, and may stifle development.



The industry is concerned that Western Power may not have taken into consideration the recent changes to design parameters in their reports, nor undertaken a detailed enough study on relevant projects.

For example:-

1. Loads on transformers are now limited to name plate rating and only within the last year transformers were loaded to 20% above name plate rating.
2. LVDesign is more sensitive to volt drops along the main feeder cables.
3. ADMDs have recently increased to 3.5kVA and 4kVA which, with these recent design parameter changes, equates to an ADMD allocation of near 6kVA already, without further prescriptive changes.
4. Western Power's data appears to be from subdivisions designed using the old ADMD allocation methodology and therefore the data won't reflect the recent design parameters used today. Perhaps more recent subdivisions should be considered in more detail
5. Peppermint Grove was allocated 4kVA per lot ADMD, however the number of transformers appear to be the same now as the original design which was undertaken in 1998. Based on Western Power's new ADMD calculation formula these lots should be allocated at least 11kVA, which if correct would indicate that the existing system would have surely failed long ago.
6. Anecdotal evidence within the Western Power report seems to indicate that the penetration of airconditioning may have reached saturation some time ago. Their reports are based upon a further increase in airconditioning penetration and more computers in the home. Airconditioning penetration appears stable and computers are simply getting more and more energy efficient, with the prevalence of LCD screens for example. The same may be said for most other household electrical equipment.
7. We consider that establishing a range of ADMDs from 4 to 11kVA being specific to areas within suburbs based on land value and socio economic factors etc, may have significant issues. The most expensive lots are often smaller, and perhaps not family homes. Diversity in these areas may be higher than the 'cheaper' areas.
8. We understand transmission network increase in load at the substation is documented as 3% per year and presumably this would reflect the increase of new loads as well as an increase of existing loads however the quantum is somewhat curiously different to the large quantum leap in ADMD values.



9. From the later 1980's Western Power levied the cost of a 500kVA transformer even though a 315kVA transformer was installed. Western Power logic was to upgrade the transformer when the load justified the increase capacity transformer. However perhaps these 315kVA transformers have not been monitored and therefore the upgrade was never done and part of the reason transformers failed. The circumstances of transformer failure is also unclear from Western Power's reporting, transformer age, pole-tops or ground mounted, etc?
10. Western Power hasn't undertaken design work for subdivisions for near on 10 years and their lack of understanding is evident when you review their design information. It is expected that the industry designers certainly have more experience with the detailed design, planning and staging issues than Western Power's people and as such industry designers could and should have been included in the design ADMD review.
11. Is the traditional 4 x 2 house still the product that the market is demanding, and have demographic shifts been considered?
12. Has the introduction of BASIX where the industry is to meet new BCA building codes on energy efficient construction been considered? Are new homes not going to become more and more energy efficient?
13. Has Western Power considered alternative engineering solutions to that of simply prescribing a possibly oversized system, such as power factor correction equipment?

It appears that there is still much work to be done to properly approach the perceived issues in a frank and transparent manner and appropriately involve the industry.

2/. Industrial / commercial developments:-

The allocation of 110kVA per lot will significantly reduce the number of industrial / commercial lots which can connect to the transformer, due to protection restrictions and as such there will be at least one transformer per 3 to 4 lots. The quantity of low voltage cable will increase significantly and perhaps the placement of the transformers won't match the purchaser's requirements. This eventually leads to more high voltage installation and the existing network under utilised.

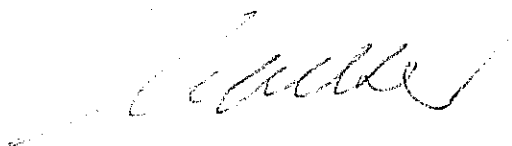
Perhaps it is time to review the network design requirements for commercial / industrial developments, such as installation of a high voltage network only with the transformer being installed when the lot is developed and has a known demand.

3/. Acoustic:-

EPA is requiring noise abatement for transformers, which means transformer kiosks will need to be inside a masonry enclosure in residential areas. Perhaps an acoustic engineer can be engaged on behalf of the industry to investigate further. This noise abatement will mean brick compounds around all transformers if they can't be located on POS.

If you have any queries, please do not hesitate to contact me.

Yours sincerely



Marion Fulker
Executive Director