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I suggest that the A1, A2, A3, A4 Access Arrangement reference services be changed to Bi-direction services and the C1, C2, C3, C4 service not be added.

By eliminating the exit only Access arrangements we move away from the old idea of a central producer and a large group of consumers. This change in thinking will be an enabler for the diversification and modernisation of the grid.

A segregation of the Access Arrangements into the A and C adds more complexity to the system when an old exit connection is just a bi-directional service with no entry (feedin) power for the billing period.

The standard access contract would include the permissible magnitudes of the bi-directional power.

The magnitude of Bi-directional power would be variable for different customers with a non zero minimum.

As an example

: Residential urban customers may be permitted to feed in a minimum of 3kW

: Commercial customers may be able to feed in ten percent of the peak load.

(Entry power within the technical parameters of the Western Power Connection manual voltage and frequency limits.) While it is anticipated that the majority of customers would not be feeding much energy into the network having the ability to allow modern technology innovation. This could include grid support inverters that perform automatic power factor compensation. Inverters that perform phase load balancing and automatically transfer available renewable energy to the phase and shape that best supports the grid. Peak shifting devices whose temporary energy storage could allow inverters to supply at their max continuous output during the forecast peak time.

If the Access Arrangements are split into A and C they have separate tariffs. As any addition of small scale renewable energy requires the customer to change to a bidirectional service they are exposed to a potential increase in the future. As an example say a building is considering adding a 100kW PV system. Analysis of this building shows the PV would reduce the consumption of the building by two percent on average for the year. While the cost benefit of this 100kW PV system is easy to determine if the A and C tariffs change in the future the financial risk in the life of the PV installation becomes one that is leveraged by a small solar feed in exposing a potential cost increase for all of the buildings electricity. This risk is eliminated by modernising the access arrangements and making all residential and commercial customers bi-directional.

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