

AEMO Management of System Strength Issues Paper – Comments

Keith Frearson, 1 June 2022

1. The System Strength requirements seem to apply only to Customers, Generators and Merchant Network Service Providers – NOT Transmission Network Service Providers.
2. The Issues Paper makes no reference to reduction in System Strength (or Available Fault Level) caused by retirement of thermal plant. The classic example being the fault levels in the Latrobe Valley in Victoria. The issue being that current 500kV fault levels are around 23.3kA but will drop alarmingly on retirement of both Yallourn “W” power station and LYPS “A” and “B” power stations. There is no discussion about how AEMO intends to provide system strength services for plant already in service. Such plant could potentially include HVDC links (Basslink 600MW and MarinusLink 1500MW) and Off-shore wind farms (Star of the South 2200 MW)
3. The Issues Paper seems to be considering Short Circuit Ratio (SCR) as a criterion. However, SCR assessment needs to consider “nearby” IBR to be consistent with CIGRE TB 671. The only problem with this, as a concept, is that the definition of “nearby” is not available.
4. Use of only a few system strength nodes not particularly useful as Renewable Generation is being added across the ENTIRE network. AEMO should provide minimum fault level load flow case to allow generators to assess requirements at nodes other than Minimum SS nodes.
5. AEMO has conflicting roles:
 - a. System Strength Service Provider (SSSP) in Victoria
 - b. Provide System Strength Report which determines SS levels and advises on potential shortcomings to be remedied by SSSP.
6. The commentary on reactive switching and Fault levels is reasonable. However, the impact of transformer energisation under low fault level

conditions also needs to be considered (noting that Point on Wave switching won't be effective due to remanent flux issues).