CALCULATING THE VALUE OF SMALL-SCALE GENERATION TO NETWORKS

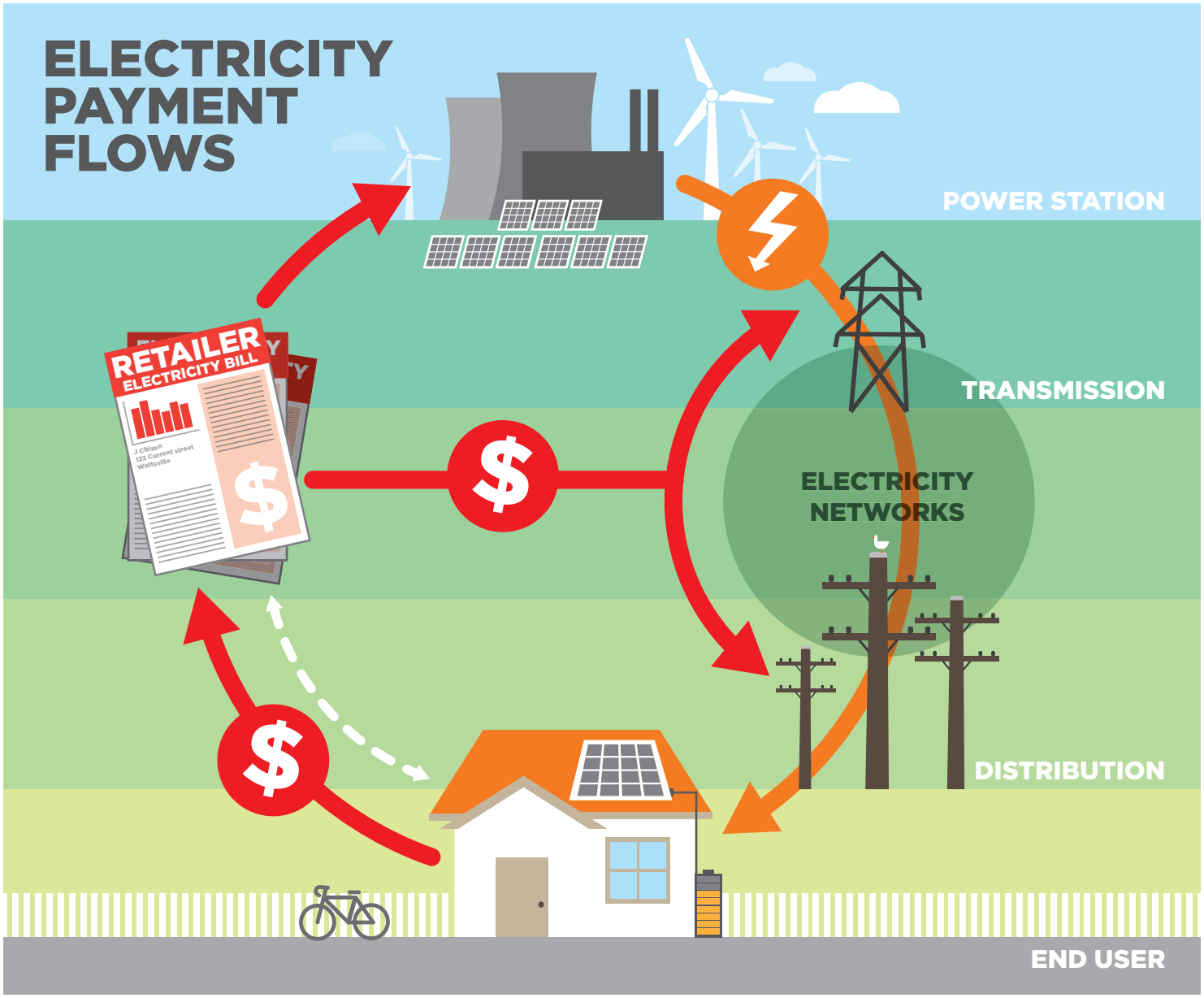
With household solar and battery storage growing rapidly in popularity in Australia, our distribution networks face a 'new normal' in the way consumers generate and use electricity.

The increasing contribution from these new devices can be beneficial to networks, but the costs and benefits are difficult to calculate. A draft methodology has been developed by EY to evaluate the costs and benefits created by small-scale solar PV and storage, based on an extensive review of international approaches.

The report, completed for the Clean Energy Council, aims to help ensure everyone participating in this new normal – from the distribution businesses to households – get the maximum benefits from solar and storage at the least cost.

Electricity customers are charged for the energy they consume and the cost of the network through their electricity bills. Networks rely on power flows from large-scale generators to consumers. The installation of solar and storage undermines these fundamental economic principles.

The draft valuation methodology described by EY would allow these businesses to factor in the true costs and benefits of distributed generation like solar and storage to make sure electricity pricing is fair and equitable to all consumers in the long run. It does this with a consistent approach to assessing the ways in which costs and benefits are created.



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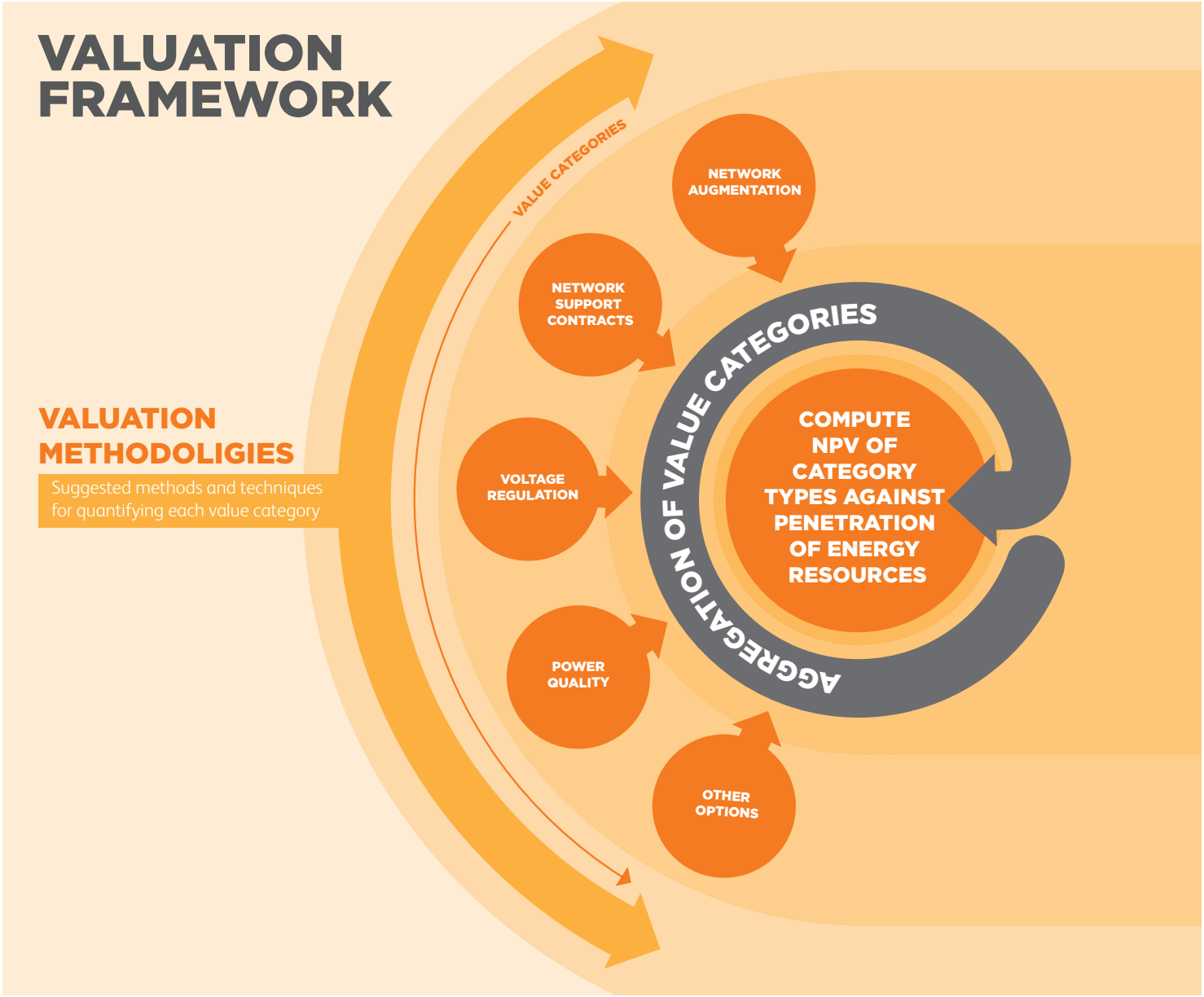
One of the work's main challenges is to deal with diversity across the distribution network, demand and generation characteristics. In a five-stage process the methodology works through identification of scenario boundaries to calculating the values. Experience built over time would also be captured with a library to make future calculations easier.

While there is a lot more work to be done to test and refine this methodology. A solution like this is the first step towards a future energy system where solar, storage and our electricity grids work together effectively and efficiently.

The next steps for this work include

- Test the draft framework in network planning processes to examine its effectiveness and build experience;
- Determine how costs and benefits should be delivered to the right stakeholders; and,
- Look in detail at alternative methods to assess the value of solar and storage to the network.

VALUATION FRAMEWORK



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