SolShare Solar Sharing Modes
Version A.5

The SolShare has been designed to deliver solar energy generation among multiple tenants in one building. The way in which the solar energy is allocated is determined by the mode selected during the SolShare commissioning process. This document outlines the various operating modes available.

All of SolShare's solar sharing modes are designed to increase the share of solar generation consumed by the tenancies in the building, and to reduce the surplus solar generation sent back to the grid. This is because, in Australia, there is significantly higher financial value in preventing importing energy to the grid, than there is in exporting energy to the grid.

Please note that the grid (and therefore solar) phase allocations of tenancies, and which SolShare they are connected to, will dictate whether particular allocations are achievable. It is best to investigate this prior to wiring the SolShare to ensure the optimal outcome is achieved.

1. DEMAND-BASED DELIVERY MODE

➢ **Common use case:** A single building owner (e.g., social housing provider) has paid for the total cost of the solar installation, for the maximum benefit among the tenants of the building. These tenants have not contributed directly to the cost of the solar installation.

In *Demand-based Delivery Mode,* the SolShare continually monitors the real-time load or energy consumption of each tenancy. The SolShare uses this information to determine which tenancies the solar energy should be allocated to at any one point in time. Tenancies consuming more energy have solar energy allocated to them. Tenancies using very low or no energy (e.g., for a resident who isn't home) will not receive any solar allocation at that point in time. This process is continually revised to ensure the solar is optimally allocated to all of the tenancies.

The *Demand-based Delivery Mode* does not make any provisions for specific allocations of solar energy to each tenant. As such, one tenant who is always using electricity during the day may end up receiving a more significant solar allocation than another tenant over the life of the solar system.

2. CUSTOM ALLOCATION MODE

➢ **Common use case:** Multiple owners (e.g., an owner's corporation or body corporate) have each paid an even portion of the total cost of the solar installation and expect an even allocation of solar energy as a result.
➢ **Common use case:** Multiple owners (e.g., an owner's corporation or body corporate) have each paid an uneven portion of the total cost of the solar installation, and as a result, expect an allocation of solar energy proportionate to that investment. For example, a three-bed apartment may have contributed twice as much to the cost of the solar system as a studio apartment. Therefore, the three-bed apartment would expect twice the solar energy as the studio.
➢ **Implementation:** Custom allocations, typically expressed in terms of a percentage of total solar generation on each phase, is entered by the solar installer into the SolShare Commissioning App during the commissioning process.

In **Custom Allocation Mode**, the SolShare uses the same sharing methodology as with the *Demand-based Delivery Mode*, but the SolShare also monitors the cumulative solar energy (in kWh) allocated to each tenancy over the course of a calendar month. Towards the end of each month, the SolShare will prioritise sending solar energy to those tenancies that have not yet received their allocated share. Thereby, at the end of each month, each tenancy should receive their allocated percentage of solar energy for that month (but have received the solar power at different times, most valuable to each of them) as others on the same phase on the same SolShare. There may be some small variation from one month to the next based on variable weather patterns and tenants' energy behaviour. An example of this over two months is shown in the graphic below.

Graph showing solar distribution per flat over two months
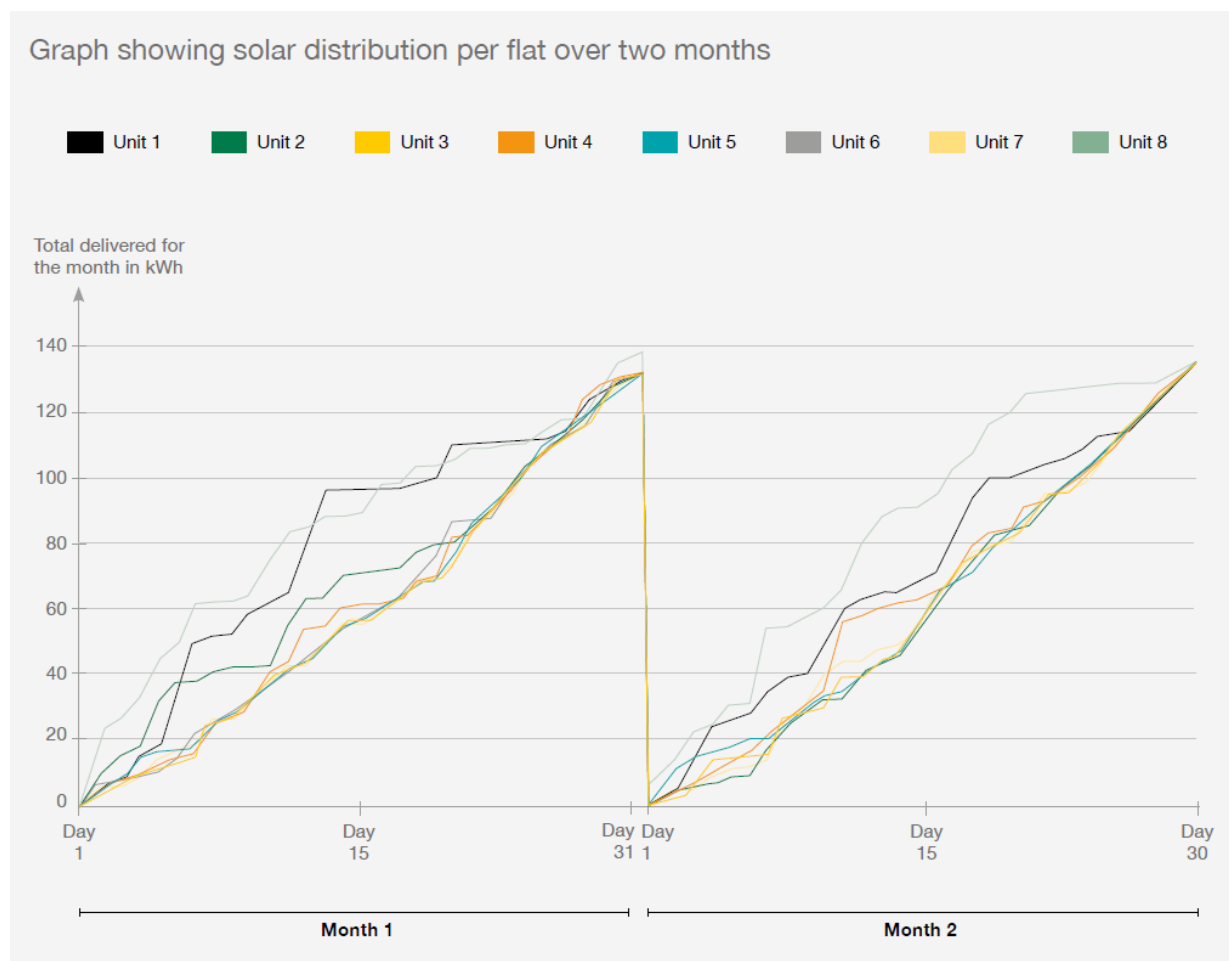
As mentioned above, the grid (and therefore solar) phase allocations of single-phase tenancies may dictate which custom allocations are possible for each SolShare. A three-phase connection (e.g., for common area meter) can be set with different percentages of solar allocation on each phase, which may aid in balancing the solar allocations for single-phase tenancies and better achieving the desired allocations.

Allume has developed a calculator to help our solar partners try out the best ways of wiring up SolShare/s in projects to achieve the desired custom allocations. See the *0756_A1_SolShare custom allocation calculator*, available as a download from Allume's Document Library.