

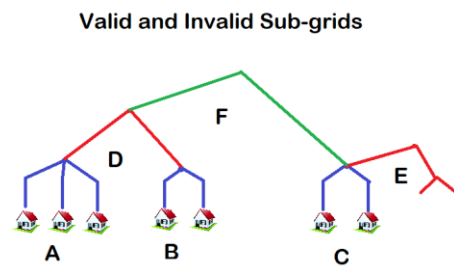
Trebling the Grid



It would be an ecological nightmare if firms could build parallel electrical, gas, water, sewage, fiber, and cable networks. This same problem could occur in hot air, cold air, dry air, and hot water networks in dense population areas.

A grid is composed of one or more sub-grids. A sub-grid has two fundamental elements: the conduit and the content. Content is purchased or created at a source and sold at many terminals. A sub-grid cannot terminate in any other manner than a point of sale, usually to an end user such as a [property owner](#).

Invalid sub-grids terminate at a conduit that is not a point of sale. A conduit could only be a point of sale if it is the source of another sub-grid. Therefore, sub-grids can only be created from the bottom up.



A, B, and C are valid sub-grids in the diagram. D is a valid sub-grid because it ends at two purchasing sub-grids. ADB is a valid sub-grid. So are AD and DB. F is a valid sub-grid. So are FC and FD. Only E is an invalid sub-grid because at least one of its terminals is a conduit that is neither a paying sub-grid nor a paying customer.

Only a valid sub-grid can be trebled!

Grids can be purchased into a [commons trust](#) at a [depreciated replacement cost](#) or 20 x 33% profit from operations (667% profit from operations), whichever is greater. If purchase into a commons trust happens before [federation](#), [access rights](#) will continue to be determined by a citizens utility board or other quasi-governmental agency.

In areas where the [cellular democracy](#) is viable and following federation, access rights will be ratified by 2/3 of the [direct democracy](#) and administered by the [district council](#). Ratification and administration of access rights are independent of

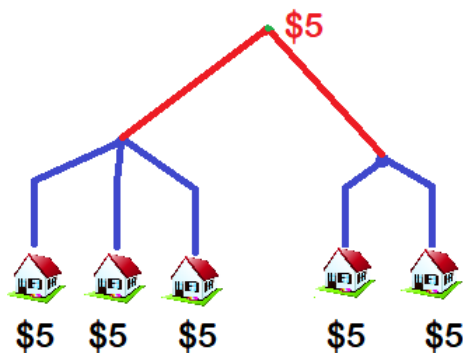
whether the grid is in the commons. Sub-grids' treble-ability is only possible when the grid is in the commons trust.

There are two payments associated with grid usage. One charge is for the content. This varies with content usage. The other is for the conduit. It has a large fixed rate component, although it could have a component that varies with usage if use causes increased wear and tear on the pipes.

Grids are associated with access rights created or inherited by the direct democracy and enforced by the cellular democracy. Access rights might fix the price of the content at no more than 5% over the market. If so, this profit will be taken close to content creation. To capture the 5%, a very large sub-grid will need to be trebled.

Otherwise, the content price going into a sub-grid equals the price of content coming out. While the [trebler](#) can receive permission from the democracy or its agent to add a markup for content, this is an [objective right](#) of the grid trebler that has been [overridden](#).

Because there is a fixed charge for conduit access, also set by the democracy or its agent, a profit can be made by trebling a sub-grid. Consider the diagram.



In this example, a maximum \$5 monthly charge for grid access was established as an access right. The trebled sub-grid has \$25 in revenue and pays \$5 to access the primary grid, leaving a net income of \$20 for grid maintenance, depreciation, and profit.

Because access charges are rights written into long-term leases, a more efficient grid can bring in higher profits before the expiration of the lease and new negotiations.

Because of access rights, rents on a sub-grid will tend to be low. The rent can even be nominal if a sub-grid is owned by a community with very low access charges. This is not recommended. Higher access charges will attract private industry to innovate and perform conduit maintenance.

The chancery court will nullify the attempt to treble a sub-grid without the ability or intent to grant access rights. A cellular council could also require posting a large bond as a condition of sub-grid trebling.

If the existing grid is insufficient, a new grid must be created. Grids created after the start of Phase II will only be purchased into a commons trust at 667% profit from operations. Depreciated replacement cost, if higher, has no bearing on the purchase price. This helps protect the commons trust from fraudulent grids.