

# Total Annihilation mechanics

## Origin

[Total Annihilation](#) (short: TA) is a game that follows a slightly modified resource mechanics. Unlike games such as [Starcraft](#) or [Star Trek Armada](#) where you first collect resources and then expend them in one go on a unit or building (so it's more about owning resources), in Total Annihilation and derivative games the rate of resource collection and their expenditure is directly mechanic-determining.

## Principle of game mechanics

### Metal for building, energy for almost everything

Usually it is a combination of energy and metal or mass that determines the production possibilities. While metal/mass is needed to produce units or ammunition (e.g. an atomic bomb), energy is also used for other things, e.g. running a radar, using cloaking devices or maintaining shields. From this mechanic's point of view, energy is actually the more important resource than metal. Because without metal you can't produce anything/less, but you can still use shields or radar installations, while without energy you can't do either. Metal, on the other hand, determines in the end which production speeds are possible, even with an oversupply of energy.

### Income rate vs. construction circumstances

Less relevant for the game is the current energy or metal collection level. Rather, the rate of procurement determines the efficiency of the economy. (In most other strategy game mechanics this is in principle the same, but the construction is more oriented towards resource costs in fixed packages. The rate only determines how fast these are refilled.)

This is further complicated by two other factors that (can) determine production rates. On the one hand, the so-called build power, i. e. the speed at which a certain construction unit or building can produce, determines how quickly a building or unit can be completed. On the other hand, the construction time for a building or unit is not simply determined by the amount of energy and metal required, but also by a kind of complexity factor, which can result in different construction times even with the same amount of resources required and the same construction unit.

### Speed by numbers

Usually, building can be accelerated by involving other units in the building process, e. g. having several construction units build a building. Depending on the variation, there are even buildings that do nothing but speed up processes (e. g. building, repairing and dismantling). But this is exactly where the basis of the rate-dependent economy becomes apparent: no matter how many units you bring in, you can never build faster in the long run than your current income allows. In most cases,

the entire available resource rate is then distributed among the various construction orders within the game mechanics, proportionally according to build power and complexity. This means that if you want to speed up a certain construction process, but still want to use your economy to full capacity, you use as many construction units as possible on that order, but keep the other processes running. As a result, however, the other construction orders are slowed down.

## **Storage buildings**

Load peaks can usually be buffered by means of storage buildings in which energy or metal can be stored. In this way, it is possible to achieve a much higher construction speed than the mere income would allow. However, in the long run, a high production rate can only be maintained through a more powerful income base. There are usually different buildings that supply metal or energy (or both). Often the units and buildings already constructed have low storage capacities as well.

## **Metal sources**

Metal/mass is usually (also) provided at special locations on the card, possibly with different extraction rates at different locations (extractor). This gives you a certain location dependency, which can mean strategic weaknesses. In return, however, extractors involve relatively low energy costs. The extraction building used can also result in different extraction rates (but usually also different energy costs).

## **Power plants**

Energy, on the other hand, can (mostly) either be collected relatively cheaply at special locations (e. g. geothermal power plants), or a little more expensively (especially in terms of space requirements and building costs), regardless of position. There are also different sources that may introduce a tactical aspect through volatility vs. steadiness (e. g. wind energy, which simply delivers nothing when there is no wind, but more when there is strong wind than a solar plant vs. fusion reactor or solar plant, which always deliver a fixed rate).

## **Converter**

Both resources are often linked with conversion buildings, usually energy to metal/mass (converter, metal maker). These buildings in particular allow the player to become mostly independent from map features, because you just have to build enough position-independent energy sources and corresponding converters. It is this aspect that makes more compact energy sources and converters worthwhile, as they offer the opponent fewer attack points than, for example, metal mining sites distributed on the map or large wind turbine farms. These advantages are often at the expense of the fact that buildings that are destroyed cause (sometimes considerable) damage to buildings and units in the surrounding area and, above all, are significantly more expensive to purchase or maintain. The energy costs for the maintenance of metal extractors are usually low or zero, while a converter is relatively expensive.

## Bonuses through adjacent buildings

Bonuses such as reduced energy consumption of a building with directly adjacent energy sources or increased yield of a metal extractor with directly adjacent metal storage facilities may add an additional level of complexity. However, it is often the case that (thanks to a limit of unit numbers) it makes sense in both the medium and long term to use less of these bonuses and instead simply to use the most space-efficient energy or metal sources.

## Unlimited resources

There is at least one game ([Supreme Commander - Forged Alliance](#)) which, as a kind of super-weapon, provides a resource source that has no rate limit, i.e. ultimately infinite income. Whoever owns this building has de facto only the number and type of construction buildings and units as a limiting factor for the economy. Accordingly, this building is intended for the very late game and already requires considerable economic power for procurement.

## Battle Concept

One important aspect behind the above mentioned economy mechanics is the emphasis on large scale battles. The creator of [Total Annihilation](#), Chris Taylor, was unsatisfied with the usual strategy game mechanics and scale. His argument was that most so-called strategy games were actually tactical games, as real strategy, including bigger thought campaigns against the opponent, usually is not an issue.

Therefore many of his games actually make it feasible and meaningful, to think about unit production on a larger scale. That includes the mere ability of the game engines to support bigger numbers of units without breaking down by the sheer systems load and subsequent features to make utilization of large squads and their formations doable. That includes features like automatic air transport of ground units via corresponding drop ships as well as infinite production loops and sequences along with combinations of the mechanics. So in practice you could run a factory with infinite production loop, point its rally point to the pick-up point of your dropships and therefore automate the deployment of units to a distant point on the map.

Also units and weapons intended for large maps are very common, such as the „Big Bertha“ attack cannon/artillery or strategic missiles (nukes). But also on a smaller scale the game mechanics are meant for a divers strategy, like different tech levels of units, ranging from simple reconnaissance units, medium tanks, heavy bombers and mobile artillery. Also kind of a signature of this kind of game are rather big units, also called „experimental“ units, which usually pack quite a punch. Along with long range artillery and other „big“ gun type units these are often referred to as game-enders, as very often successfully deploying them means the end of the match. The concept could be described as „think big“.

## Games with TA mechanics

- [Ashes of the Singularity - Escalation](#)
- [Balanced Annihilation](#)

- [Tech Annihilation](#)
- [Supreme Commander](#)
- [Supreme Commander - Forged Alliance](#)
- [Supreme Commander 2](#)
- [Total Annihilation](#)
- [Planetary Annihilation](#)
- [Zero-K](#)

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