Power Generated

The number of homes supported by the power from a single Thrust Architectural unit must be computed for each individual unit depending mainly by the power generated by the particular Reaction Engine.
The power of a Reaction Engine is typically given in pounds of thrust.

The conversion between the units of horsepower and pounds of thrust is not direct, that is they are two separate parameters.

As a general rule of thumb one (1) pound of thrust is equal to two (2) horsepower.

This power output is determined by

1) **The energy (BTUs) of the fuel source.**
2) **The pounds of thrust**
3) **The efficiency of the Reaction Engine**

The power generated by a single Thrust Architecture unit can be computed as follows.

A typical reaction engine might produce 125,000 pounds of thrust

125,000 pounds of thrust = 250,000 horsepower (hp)

1hp =0.745699872 kilowatts

125,000 pounds of Thrust = 186,425 Kw.

Therefore since

Power = 186,425 Kw X Engine Efficiency X n

Where n = number of engines.

Thus when n =4 a single Thrust Architecture unit's output might be approximately 745,700 Kw.

Since the Thrust Architecture is a direct drive system, that is, suggesting that there is no intermediately steam turbine to consume efficiency, there should be very little loss in efficiency from that of the actual engine. Only the friction through which the shaft rotates should influence the overall efficiency that connects directly to the generator.

The energy of a reaction engine in this application that is normally required to carry fuel (that is, the weight of the fuel) in the wings or center tanks such as in airliner application can be avoided and transferred directly into the rotation of the generator.

Lastly we have not overlooked the Brayton Cycle and its relationships, viz, very carefully increased compressor pressure ratios and the like and the Rankine Cycle and its related efficiencies in terms of plant age, type of coal, fuel used and the like, but have elected not to discuss these issues; the effects of which are well documented in the literature in terms of common knowledge and the fear that such discussions would detract from the overall concept for which we are proposing.

In addition, the efficiency should also be enhanced from the heat develop in the cogeneration surrounding water jacket (as well as the heat trapped in other appendages that comprise the overall architecture).

This added efficiency must be calculated for each unit based upon a variety of factors.

For each Thrust Architecture unit constructed, a second unit must be constructed to operate during the maintenance down time.
Thrust Architectural units must therefore be promoted and constructed in pairs of two units.

A typical home requires approximately 35 Kw (Click Here) and a single Thrust unit (assuming only four reaction engines per unit) could support approximately 21,000 homes per unit or 100,000 homes for five units, 200,000 for 10 units and over 1,000,000 (One Million) for 50 units disbursed throughout strategic locations.

The number (35Kw) is highly unrealistic because it assumes all electrical equipment in all homes are on (that is "Pulling Power' at the same time (24/7)

The number 35kW is very much on the high side. For example removal of central Air Conditioning (12kW) would reduce this number to 23kW and similarly the 35kW assumes all power loads would be operational simultaneously. Power usage in the united states is provided here for your convenience (Click Here For Reference). ***Thus the realistic and proper value for sizing is 1.2 Kw.***

These data suggest that the average home in the United States is sized for only 1.2kW (10,932/8760 kilowatt hours annually) or (911/720 kilowatt hours monthly).

Given that a single Thrust unit can produce 745,000 kW the number of homes increases to 601,000.

The decentralization of utility plants has many advantages two of which are less lost power due to the distance from source to a particular destination and a total "wipe out" of a centralized unit due to events that are totally unpredictable.

A proportional percentage of these values would require factoring in a set aside amount for industry and business interest which would require a more detail unique analysis.

The visitor to this website is invited to confirm the above calculations.

Consistent with the above calculations what does the following states have in common?

Rhode Island	1,051,511
Delaware	925,749

Vermont	626,630
South Dakota	844,877
North Dakota	723,393
Montana	1,015,165
Wyoming	528,658
Alaska	735,132
District of Columbia	646,449

Their populations are less than one million (Click Here) which suggest that between 4 and 5 Thrust Units could meet the complete needs of each state thus removing a state's (or country) dependency on a single fuel type. The reliability of such units is supported by the zero failure of the thousands of engines powering the thousands of aircraft in service.