GENERAL

"Enisviilles" are buildings, streets, homes, offices, warehouses, factories, data centers, ball fields, gyms, hotels, taverns, schools, churches, bus terminals, airports, banks and restaurants. In addition, Enisvilles contain appropriate *retrofitted existing parochial energy structures to make them green* and *new green energy structures* - each requiring workers and suppliers, raw materials, food and clothing, gasoline and replacement parts, building materials and tools, furniture and fixture - the list of things a town needs is virtually endless, as are the jobs to make that town function. There are investment opportunities, tax revenues, and entrepreneurial possibilities literally without number. We of course do not, cannot, own or produce these; we need unlimited partners!

And if we can start from scratch in remote locations where the green energy sources are located, we can build that town with the latest in construction technology: wind turbines, solar panels, water purification, LED, wireless, etc. What if our schools can teach the thinking and manual skills the town needs. Can we start with the infrastructure for driverless cars and maglev public transportation?

Just a few top-of-the-head thoughts, to begin conceptualizing 21st century living spaces - going beyond 20thcentury and use 21st century innovation to develop job opportunities. The beauty of capitalism is that we need not, cannot, visualize what free people can make and do. We just have to get out of the way! Hopes these very preliminary scattered thoughts pique your interest.

SPECIFIC

Consider that the new town does not contain high voltage electrical power transmission lines that are: unsightly, require a swath of gated real estate and reduce home values of nearby residents. Each time there is a wind storm or ice storm there are electrocutions and forest fires. Furthermore, the wind farms and solar photovoltaic panel farms going up so rapidly that the distribution of current transmission lines is insufficient.

And consider that whenever electricity is produced somewhere it is required that there is immediate demand to accept that electricity. During hot summer months there are brown outs and blackouts in spite of Time-Of-Use rate schedules that force expensive use of power during these times. During late night power demand usage that is so low that it is necessary to ship the extra power to anywhere that is willing to use it…even at zero cost.

There is an answer to these considerations. Consider Enisville where none of these problems exist. Furthermore there are opportunities to use all the green energy that one can generate, store it, transfer it and use it to supply:

1) Electricity
2) HVAC
3) Cold Storage
4) Reduced use of natural gas for Gen-Sets and replaces the high volume of water used by foggers and other water vaporizing systems to reduce air intake temperatures to Gen-Set air intake turbocompressor*
5) Purify seawater aboard ships and on land*
6) Purify waste water from metal mining, fracking and agriculture*
7) Remove CO2 from the plumes of coal fired power plants. Thus existing coal-fired power plants can be retrofitted for use again. But the CO2 and water vapor are collected for use.
8) Use the removed CO2 to sequester the CO2 as well as provide fracking for gas/oil without using water and its toxic additives that not only poison aquifers but also lubricate seismic faults
9) Use the removed CO2 to sequester the CO2 as well as provide oil from abandoned oil wells
10) Provide new green energy applications for single- and two-stage companders to replace refrigerants that are toxic, explosive during accidental release or harm the ozone layer.

*Note that the asterisked applications are described in more detail by clicking on their button.

In more recent times, wind turbine farms are being located off-shore. The underwater and under seabed pressure vessels may be constructed of inexpensive reinforce concrete to save funds. The required heat exchange into the Compressed Air Energy Storage (CAES) system is supplied by the steel pipes whose outer surface is in direct contact with the infinite heat reservoir of the ocean or lake. Recall the T-CAES system we use does NOT burn fuel. This condition requires that the expanding and cooling air from the pressure vessel still supply 60- to 70^{o}F air to the turboexpander intake.

The barge configuration of the CAES system is particularly economical because the cost of the barge already includes a floatation system. Thus if this floatation system, already included in its basic cost, is comprised of robust, high air pressure vessels that are thick steel-walled, cylinders…the CAES system becomes strongly competitive as a mobile CAES system for island and river scenarios.

There are examples of these applications throughout the drawing of Enisville.

The key is the use of 4-inch, inside diameter, high air pressure, pipelines that are 50- and 100-miles long. When they are above ground, in desert areas, these pipes not only store energy and transfer energy, but also absorb the sun's thermal energy for use in the system. The 4-inch pipe line can be arranged as a single pipe line or as several pipelines in parallel. The total volume need only match the energy demand needs of the community. It does not make a difference when the wind is blowing or the sun is shining the energy not immediately used, the excess energy, is stored in the pipe lines awaiting use.

When the pipe line has reached its capacity, say, 1,200 psig, the compressed air is simply vented. Note that we are simply releasing fresh air. Should there be a sudden accidental break in the pipeline, only air is vented. No one is electrocuted and have no structures falling on their homes.

The main trunk of the pipeline will have branches of smaller diameter and lower pressure, say of the order of 200-psig for the turboexpander/generator sets and 100-psig for all the compander and conventional uses of "house air".