
the **INDEPENDENT**
 **TRIPE SYSTEM REPORT** **SYSTEMS**
thinker

PALEONI Multimedia, Inc.
93 Pleasant Street Apt. 7
Hyannis, MA 02601

Steven J. Scannell, *President*
www.environmentalfisherman.com
itchybum_@hotmail.com

Re: *Track Pipe (TRIPE)*
Transit Development and Energy Delivery System
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The following report introduces the world to a comprehensive new rail transit and energy delivery system. The brainchild of Steven J. Scannell, a political and environmental activist from Cape Cod, this system has at its core a multi-use composite pipe containing several conduits, each responsible for carrying a utility or material. The pipe, initially positioned alongside existing iron railways worldwide, will serve not only as the bed for future state-of-the-art locomotives but also as the main component in the shipment of materials and resources such as water, natural gas or compressed air and hydrogen – “frozen electricity,” the life blood of our world’s new green energy technology.

This report, the first in a series pertaining to a variety of timely environmental and energy-based systems, outlines the concepts involved in the *TRIPE* system: a massive (and long overdue) rebuilding of our transit and petroleum-based energy infrastructures. From the creation of new green energy raw materials (by geothermal or solar means, wave and wind power among others) to the commercial and residential end use, the major components of this complex yet versatile system are discussed. Proposals are made as to how local municipalities could plug in to this international grid and the importance of local subsystems, customized for for each area’s individual energy and transit requirements.

Only by investing in research and development of this relatively simple idea can we assure future generations of a virtually unlimited source of clean energy – with the added attraction of a sophisticated new transit system. Funding for models and test sites as well as the input of engineers and laypeople alike will be crucial to the progress and eventual implementation of a mega transit and energy system such as the *TRIPE*. The time has come to restructure our thinking and take real action to save this planet from the potentially dismal future that mankind has scripted for itself. The *TRIPE* system promises to be safe, economical and efficient. PALEONI Multimedia, the publisher of this 10 page report, welcomes forward thinking with regard to this project and encourages people worldwide to get involved.

STEVEN J. SCANNELL

TRIPE SYSTEM REPORT

The Development and Implementation of a Comprehensive New Energy Production, Delivery and Transportation System

“We will transport hydrogen energy in rail road tracks or energy pipes.”

We have one precious, shared earth and the inherent responsibility to protect it. Yet we also must address our current and future energy and transportation needs. Our present systems require overhauling for a variety of reasons, and it's time to step it up and get the job done. Enter the “*TRIPE*” or track pipe – “Transport Hydrogen Energy (in a) Track Pipe.” It's a new energy and transportation invention. The problem is always old thinking – bad infrastructural investment thinking. It means we make attempts to fix the existing, often exquisite but fundamentally failing infrastructures with temporary fixes, also known as “band-aids” or “good money chasing bad”. The new thinking, the good thinking, the better thinking is to build new and efficient systems. We will construct complex systems for the long-term green energy future. In this plan, the world will lay down fiberglass tracks – four foot diameter pipes, 16 foot gauge – on both sides of our existing four foot eight inch gauge rail lines. These pipes then do double duty as energy pipes that carry (1) Hydrogen (H) and highly compressed air (CA), and (2) form a new, much larger, railroad track. The *TRIPE* (track pipe) is both a comprehensive energy system project and a comprehensive transportation system project. As a designed unit, or complex system, the duality factor of the system returns an excellent “bang for the buck.” When the *TRIPE* is substantially completed, it will be the world's largest project ever...by far. The *TRIPE* is safe and efficient, and in many important ways is much better than our beloved and centralized electricity or gasoline systems. It has to be done correctly using international consensus on various standards. Much of the world's transportation infrastructure needs improvement. The *TRIPE* will be a beautiful complex system, very green and highly engineered. “*TRIPE ... that's the job.*”

Worldwide the *TRIPE* may be a \$200-300 trillion endeavor and could take 30 years to complete, but

remember that this project is what the world has been waiting for. By its design the tripe system could solve our global warming and energy shortage issues. Tertiary uses (broadband carrier, sewage transport) will help offset costs and justify the enormous worldwide engineering, design and construction expense. Whether the *TRIPE* is primarily a fuel carrier or a train/transit system will be a matter of debate.

TRIPE: A FOUR PART PHYSICAL SYSTEM

The system hardware is comprised of four physical main components:

1.Inputs 2.Outputs 3.Energy 4.Transportation

TRIPE INPUTS: Heavy industry will construct wind and wave mills, geothermal and solar sub-systems which will act as energy production/transfer stations. These will load the tripe with CA, H, ORCA (oxygen rich compressed air) in addition to other more traditional resources. Natural gas, fiber optics, water, sewer, electricity, pelletized plastic or biomass – the *TRIPE* has ready-made interior conduits with the capacity to carry multiple forms of energy, utilities and materials. Structurally these pipes are designed to be extremely strong for two reasons. Strength for use as a rail system is required to support the new large railroad cars and maglevs. Also, whether it is primary or secondary, the *TRIPE* must carry extremely highly pressurized energy gasses. The *TRIPE* is large enough to house a variety of inner conduit pipes. This means multiple conduits (some “dormant” initially but destined for future use) at no extra hardware expense. The imbedded carbon fiber specialized pipe has a structured environment and construction parameters based on its use.

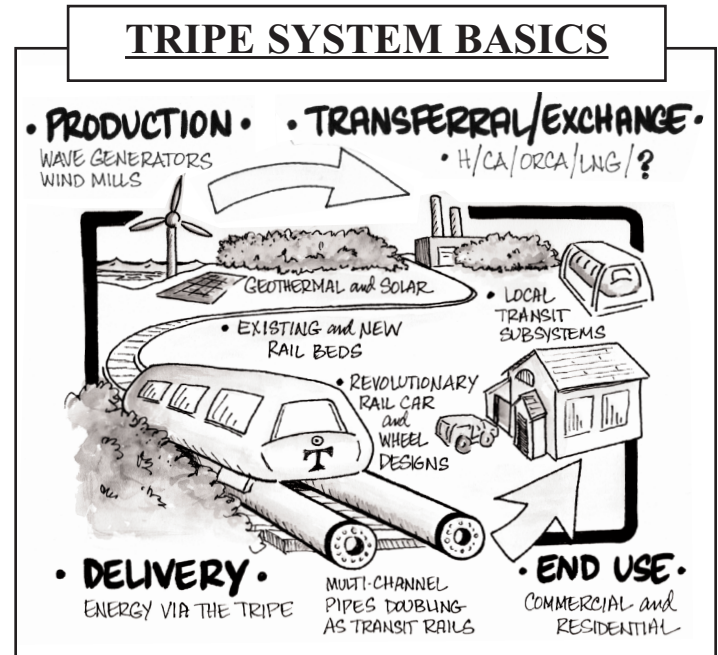
TRIPE OUTPUTS: Commercial, residential and automotive consumers as well as utility companies will use



the materials coming out of the *TRIPE*. Power plant electricity generators (centralized or local) will take the compressed air (CA), oxygen-rich compressed air (ORCA) and hydrogen (H) – the “out-puts” – for production of energy. Your new hybrid car fuels up with CA and or H that is as close as the next – more numerous, quicker and safer – “gas” station. Heating and cooling could be H to electric. The industry and the usage of these fuels will follow the availability of the CA and H. It has taken many years, after all, for our petro-based systems to come to fruition, and often the engineering is similar. Clearly, the financial infrastructure of this system (the buying of utilities, cost offsets, and transportation services and fees) must be addressed. The legal and financial considerations of the *TRIPE* project, such as the Love Power Grid Consortium, are discussed later in this report.

TRIPE THE ENERGY PIPE: Energy and utilities are carried in the pipe. The *TRIPE* carries LNG as well as CA and H. Additionally, the *TRIPE* carries oxygen rich compressed air (ORCA) and fiber optic cable through the multiple internal conduits. Again, the design flexibility allows a multitude of things to be transported through the *TRIPE*. Secondary small gauge pipe “wires” could carry CA and H in high-pressure hoses on the telephone poles to residential areas, or these lines could be buried. Emergency water shipment is one of the many alternate uses of the multiple conduits and a major selling point of this system. Irrigation water, carried in one of the two main conduits within the *TRIPE*, will green vast territories. In third generation systems undersea pipes will ring the Antarctic and come north to all lands with limitless supplies of westerly-generated CA, H and ORCA. The earth’s rejuvenation is dawning.

TRIPE THE TRANSIT SYSTEM: Intermodal philosophies work the best. The *TRIPE* will be the backbone of a revolutionary new transit system. The system expands to bike paths and roadways for cars and trucks and can be adapted for old steam trains and new fast trains, already built, saving them from the scrap heap. We will use either the existing steel railways, or the improved retro-tracks. These are modified for contemporary railroad cars and locomotives, incorporating changes in rail and wheel design. These are important considerations when we move forward in



developing a system that will function for the next two hundred years. The current standard rail style train, which we historically love, will benefit from these wider tracks to run on. Newly designed rails and wheels will give trains more speed, safety, comfort and stability.

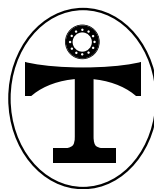
We have been using the old rail system for about two hundred years now. Is the world ready for super fast trains powered by magnetic levitation? Envision construction of a new system that allows for very large industrial (cargo) and luxury cars for us and our guests – large car transit, one standard worldwide for the *TRIPE* transit system upgrade.

The central core component of the *TRIPE* comprehensive energy/transit system is plumbing. The system consists of many small structural pipes within the large thick walled track pipe, which serves to separate different fuels and utilities. This matrix gives some “free” strength to the secondary use, which is a track for transportation purposes. In simple form the pipes will straddle the old steel rails. With a 16 foot gauge track pipe system a train flatbed could be twenty eight feet wide and two hundred and twenty eight feet long.

This forward thinking system, possibly decades in the making but returning our investment for two hundred years, means both grandiosity and practicality.

We will build a system that we can grow with, and plug new technologies into, for years to come. Systems beget systems. When the standard is set only then can the vacuum be filled. It is only when CA and H are available that systems will flow like liquid to their appointed stations. Hybrid bus and taxi transit systems will focus on how they can feed the train, and vice versa. *TRIPE* sub-systems could be constructed in the middle of existing divided highways, to fit hand in glove with existing bus and car systems. We can't be afraid to design cores that will incorporate as yet undeveloped technologies and unite previously scattered subsystems.

In summary, the *TRIPE* will carry hydrogen (H) or "frozen electricity" (unfrozen later for energy production in the form of electricity or combustion) allowing for the formation of the so-called "H economy". Sea and land based wind and wave generators, as well as solar and geothermal energy transfer stations, will "feed" the *TRIPE*. Pipes will carry many forms of fuels (such as natural gas) and other utilities (water) and house conduits for fiber optic cables and the like, adding to the usefulness and value of this revolutionary new system. Owing to their dual functionality, the pipes also serve as a brand new style of rail road tracks, supporting traditional rail cars as well as new, super-fast (mag lev) trains, and larger, more comfortable rail cars. Local energy and transit subsystems literally plug into, or draw resources from, the *TRIPE* – the common denominator in our long overdue transition from fossil fuels to a greener, cleaner way of life.



TRIPE SYSTEM DEFINITIONS:

Diagrams for the systems discussed in this report will be available for viewing, and a compilation of these illustrations is in development. All systems designed by Steven J. Scannell for the LPGC (see below), patents pending.

CA: Compressed air. Used to assist combustion, as in a turbo charge. Steam production at coal or gas or oil fired plants will be boosted by 300%. Cars and washing machines will use CA. A mechanical force on tap using pneumatics or kinetic energy.

GEORGES BANK MEGA MILL: A first generation offshore windmill and wavemill system of multiple large wind and wave mills tied together for strength. A new design genre, this would be considered a "wind forest," as opposed to a wind "farm" with many individual mills. The Mega Mills are a complex system and have many parts – hubs, blades, millhouses, base caps, bases, sticks, standing and running rigging designed to be heavy duty yet flexible. They have large cement standpipe bases that measure sixty feet in diameter by four hundred twenty feet tall, dependant on water depth. These base systems are held in place by stays to helical (screws into the ocean floor) anchors. The windmill sticks are steel and bamboo cored. The sticks telescope in the base system: up for moderate and strong (higher elevation) winds, and dropping down for storms. The windmill sticks are fifty feet in diameter by fourteen hundred feet tall. There are a variety of mill styles that can hang from this top-stayed densely packed forest of steel sticks. The systems carry wave generators from the lower structural elements and are built with purposefully designed artificial reefs for fishery production. Total height from sub-sea floor to the top of the tip of the top mills is twenty four hundred feet.

HOWWDI: Originally named for wind and wave CA and H generating systems, as "Helping Our Wind and Wave Development Infrastructure." A worldwide consortium of *TRIPE* system project leaders, companies, universities, government employees, engineers, designer/researchers and developers of model equipment and proto-types, installation equipment and construction manufacturers, individuals and clubs. An example of the HOWWDI R&D work: in coastal waters ten percent wind and wave models are constructed and operational on a small scale. Also, typical of a HOWWDI project would be a large scale model of a regional *TRIPE* system, with all the inputs and outputs and ancillary projects shown. "Wind and wave" should stand broadly for not only wind and wave, but any number of other ancillary *TRIPE* planning projects, such as solar, geothermal, coal and CA hybrid plants. HOWWDI is the "workshop" for the *TRIPE* project and presents to the Consortium (discussed below) various system designs and methods.

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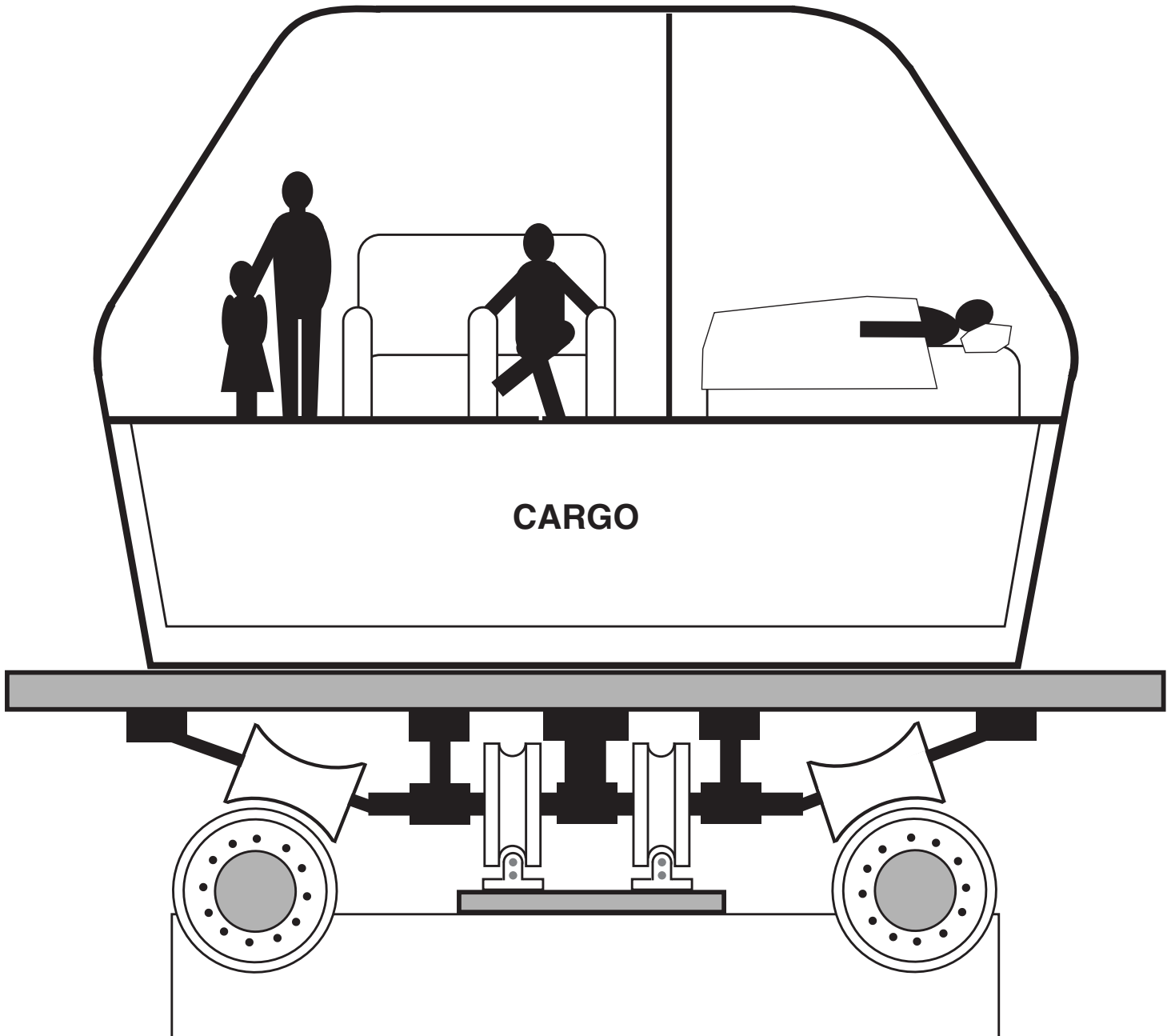


FIGURE 1

Figure 1 is a graphic representation of a “cross section” of the TRIPE (track pipe) system. Each of the two pipes is 48” wide and constructed of a fiberglass reinforced plastic (GRP) and a plastic impregnated bamboo/wood fiber composite. The center conduit measures 24” in diameter and is surrounded by a strong and purposeful matrix of twelve smaller (2.5”) super strong carbon fiber conduits embedded in epoxy and fiber. (Alternative designs contain as many as 36 smaller conduits.) These pipes are designed for high pressure shipment of compressed air, hydrogen, water, natural gas, oxygen-enriched compressed air, granulated or pelletized solids as well as other materials and utilities. The track pipes also provide support for the 28’ wide bed which carries the large capacity, ultra comfortable train cars of tomorrow.

FIGURE 2
(NOT TO SCALE)

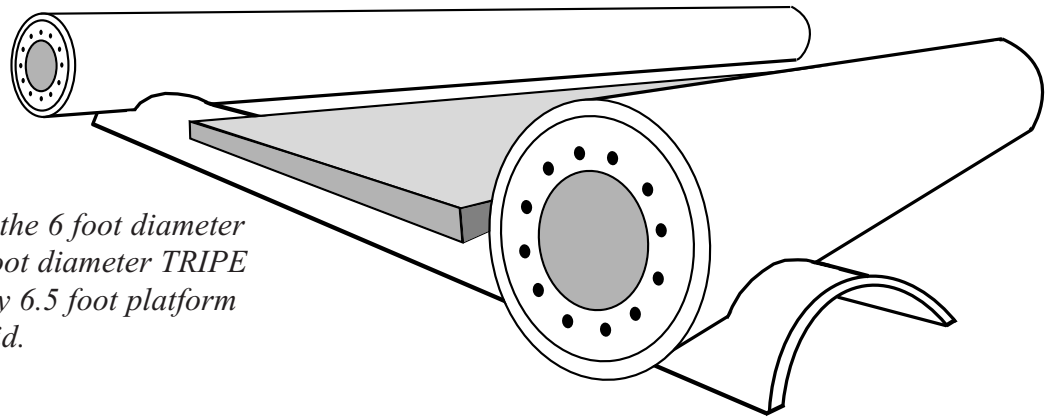


Figure 2 shows a cutaway of the 6 foot diameter half-pipe railroad tie, the 4 foot diameter TRIPE (track pipe), and the 9 inch by 6.5 foot platform on which the retro track is laid.

LOVE POWER GRID CONSORTIUM (LPGC) TRIPE FINANCIALS: COMPLEX YET SIMPLE

The major financial component in the *TRIPE* world will be a consortium with an admittedly odd title. The Love Power Grid Consortium will buy and sell green energy such as CA and H, and the LPGC will own most or some of the tripe infrastructure, providing fee for service use. Drawn into the contract is the Love theme, or a 2% social systems (people helping people) fee. This fee helps to lessen political wounds common to mergers of this sort. The LPGC will buy utilities outright going in.

A consortium is a purposeful formation of companies, universities, non-profits, foundations, government entities, clubs, and individuals with a single goal. To use a seafaring analogy, ships “in consort” sail together. Consortiums, in the macro economic sense, are usually reserved for projects too large in scope for any one company or any one government to dare to undertake. The *TRIPE* transportation, energy and utilities consortium, or form of partnership, is inherently and structurally healthy due to the checks and balances involved within this partnership. Admiralty situations of leadership may fit the consortium management model best. Obviously, this consortium, or fleet operation, requires disciplined leadership and order, lest it sink into nightmarish disarray. The *TRIPE* financials are challenging due to the sheer numbers involved, but breaking the big picture down to a township size and scope makes the objective seem less surreal. Perhaps one scenario for the top pay out for LPGC bonds would be a means tested elderly or disability bondholder that will have a \$100,000 cap. These bondholders may get 5% interest, secured with a guarantee. Local LPGC bond holders may get 4%. And the standard could be 3.75%. These

bonds are solid because the Consortium backs them up. A healthy and efficient business plan for the consortium would include the option to have success tied bonus pay outs, perhaps in the 3% to 7% range.

The LPGC is divided into three regions of control with each having their niche and in succession serving as the base for the next – *international* serving *national* and *national* serving *local*. There must be strict oversight in each region of control lest greed and corruption infect an otherwise healthy system body. Quality Circle presentations, participation and transparency will be important factors as well as employing good, honest people with intelligence and vision.

MAGLEV: Magnetic levitation, one method of locomotion for the development of super fast, high capacity passenger trains. The *TRIPE* maglev may be a retro system, incorporated after phase two of the overall project (installing the large cars) and is designed for use in high traffic corridors as well as secondary areas.

ORCA: Oxygen Rich Compressed Air, used in combustion, and especially for carbon sequestration or recycling. Water is electrically cracked into H and Oxygen at the windmill site. The windmills and wave generators pump CA, H, and ORCA into pipes that come ashore and turn into track pipes.

RETRO TRACK: Heavy steel railroad track rails. Standard world class and gauge to be determined with R&D. The design specifies a round top and a built in pipe to carry light amounts of CA, H, fiber optic,

natural gas etc., usually in branch lines into rural areas where a full *TRIPE* will not be warranted, but which can be added.

“SOLAR COAL” SYSTEM (CA & H GENERATOR) AND “ALGAE OIL SYSTEM”: Solar parabolic mirrors heat water which is then cracked into steam by coal power using ORCA. The coal waste CO₂ feeds algae in ponds along with biomass additives to form a harvest of algae sludge to be cracked into oil at geothermal depth. Jet fuel can be a product of this oil. The main production from steam turbines is CA and H.

TRIPE LABOR: SIMPLE, FAIR, WORKABLE CONTRACTS

Considerations must be made for the large amount of workers required for such a major construction project. Actual groundwork will take time even before any pipes are constructed. The *TRIPE* line clearances are enormous compared to the old rail systems clearances. Crew bosses paid by the consortium would handle the details of construction for each site, using the eminent domain option and modifying the blueprint when required. Pay should be reasonable, but not a gift. Companies that work on the tripe can count on lots of work, but the contracts should be wage and cost plus deals, with worker bonuses, and with company bonuses for high performing crews. Local Love Power Grid Consortiums within the larger consortium will finance their own *TRIPE* projects. The incentive to keep costs in line will be the fact that the local/regional *TRIPE* utility consumer will pay a tax or fee to fund the local lines. Since the consortium is not a strictly government venture, hiring constraints and prevailing wage laws might not need to be applied. The Consortium could proceed with common sense contracting for jobs, labor and materials. Shifts could be six hours on and six hours off for a total of twelve hours per day per man. Six days working followed by one day off could be the norm. The crews can sleep and eat in pods on the job, and can work extra hours and make more money. Units of six to twelve crew members would work best. A ratio of one designer/crew boss to twelve construction laborers and technicians could also be the standard. The crew should have the best of equipment and design and management supports. In many cases the rail road lines will already be in place and graded – ready to

make tracks into a greener future.

Timetable deadlines must be met as we come to realize that the acceleration of climate change is causing a cascade of negative effects. It must be stemmed. In the first phase of implementation HOWWDI INC., the R&D consortium involved with model making and design engineering, will be busy worldwide. Then, as the *TRIPE* takes shape landside, the first of several thousand offshore Georges Bank Mega Mill wind and wave machines start coming on line. These are the heavy duty CA and H generators that feed the *TRIPE* its inexhaustable supply.

TRIPICOLOGY: Consider other traditional systems which could be made greener and more efficient through the use of tripe technology. A case in point is the unnecessary poisoning of our fecal matter and our urine. Animal waste should be fed to plants and run through bio-filters to get it back into the loop. The *TRIPE* can be setting market prices for bamboo, the perfect material for pipe construction. Along with good resins and fiberglass the bamboo will be of paramount importance. The bamboo stock is processed by splitting it into slivers, cooking it, and super saturating it with resin, and then it is ready as a pipe construction fiber. The consortium can set a higher market price for the bamboo grown with waste products as fertilizer, and thus a market is formed for the human or animal urine and fecal matter that does not need or want to be poisoned. Farms and local sewage treatment facilities are natural partners in the Consortium (LPGC).

Fisheries would be another example of an industry reinvigorated by the *TRIPE* system. If off-shore wind mills are used to generate CA and H, then these mills can double as artificial reefs increasing the bio-mass tonnage of the codfish grounds. Indeed, fishery systems are another natural *TRIPE* partner in the Consortium. Fishery management coordination using the Market Quota System (go to www.environmentalfisherman.com for more information on this Steven J. Scannell designed public resource management system) can be plugged into a broader synergistic LPGC value scheme. Tire reefs attached to the George’s Bank Mega Mills can be manufactured by fishermen and aquaculture gear laborers, including disabled workers that have formed a partnership with the

fisherman's cooperatives. The artificial reefs, owned by the Consortium and a subsystem unto themselves, become an integral part of the overall *TRIPE* system's cash flow.

TRIPECONOMICS: Collective imperitives are a most difficult challenge. To organize a project as encompassing as the *TRIPE* (from an international scale down to the town level) will likely seem as difficult as herding jackrabbits. Convincing nations to cooperate in this endeavor will be no easy task.

The Consortium will need to be structured to satisfy businesses and governments worldwide, with sustainability and social issues agreed to in contract form. Global climate change and energy supply issues should be impetus enough to federate a worldwide system. Pipelines with different fuels and utilities (based on each region's individual needs) will cross borders as a commonality. The Consortium will develop a fair regulatory price structure dictated by the governing board – or the empowered chief of the LPGC, perhaps even by a hybrid international democratic town meeting.

HOWWDI and the Love Power Grid Consortium are the two management mechanisms in project development. The Howwdi R&D team will compile and filter contending proposals, the best of which are submitted to the LPGC for approval. The LPGC (an association or partnership of companies, universities, non-profits, foundations, government entities, clubs, and individuals that own the infrastructure) partially funds and controls HOWWDI, and does business as the world's first "international" utility.

The LPGC financial strategy is to overlap and takeover existing, or dinosaur, utility assets. These assets would include transmission line holdings, utility plants, gas pipe companies, telephone line and pole easement holdings with the Consortium purchasing those holdings. *TRIPE* system acquisitions could total as much as 15 to 20% of the system cost, but efficient management of returns from the merge with existing rail and utility businesses would create a healthy cash flow. The Consortium will adopt a buy-in-going-in policy, with the utility operations spliced into the *TRIPE* and used to the benefit of the greater system.

Coal shipments may go down with the tripe because we will not need to burn so much coal if a coal plant is supercharged with CA. We will get more electricity

from 25% of the coal tonnage we previously needed before the tripe. Demand for centralized electricity will decline as hydrogen, compressed air, and oxygen rich compressed air provide on site electricity, essentially from the wind. Railroads get a lot of their ton-miles from coal. Two railroad companies in the USA comprise about 70 percent of those ton-miles. The LPGC can buy the railroads, or merge the old assets into the new *TRIPE* system.

Since all the rail easements, rail rights, and properties are really necessitated for the tripe, a friendly eminent domain purchase of the rail assets may be in order. And since the tripe if not laid on these rail easements would be insanely expensive, also a friendly take over and purchase would be in order. Especially since the major coal run losses to the railroads will happen, due only to a tripe system induced action, a purchase is in order. It would be a shame if inherent falling coal demand bankrupted perfectly viable assets. Private property acquisition of all of the U.S. railroads by the quasi-public Love Power Grid Consortium, essentially an authority, would cost possibly 300-400 billion dollars. The railroads would be run and merged into a new system.

Modern computer based cargo management systems could be handled by the LPGC utility, which certainly would mean some excellent cash flows to pay expenses and taxes. *TRIPE* systems acquisitions (Love Power Grid Consortium) of rail and utility private businesses could total 15 to 20% of the total 300 trillion dollar *TRIPE* system costs worldwide. These existing dinosaurs are then merged into the new, physically and financially, without a bloody, emotional, asset corrosive, green capital v. old systems capital fight. That may be a good thing in our hour of need, as we downshift quickly into the safer zone of green energy. Of course again, the honey to help this bitter pill go down would be the love theme of it all, or people helping people, through a 2% energy sales tax.

Meanwhile road systems, carrying fewer freight trucks and passenger cars, due to efficiencies found in the tripe, will be repaired and improved with less urgency than if the old systems were growing at their old rates. At every bend the *TRIPE* seems to be shaping up as a naturally holistic system, born to cut industrial and societal costs and bred to build staggering cash flows and synergistic efficiencies.

A battle of green capital versus utility competitors would be suicidal for the *TRIPE* initiatives and for this reason it is best to simply agree to buy the assets going in using them to their utmost – perhaps trading bonds for stocks. The 2% social tax is meant to take the sting out of this provision for the common man who might otherwise find this monumental, forced eminent domain style purchase too difficult to deal with. The LPGC gives the existing utilities a generous no cost retirement.

Meanwhile, road systems carrying fewer freight trucks and passenger cars due to the efficiency of the *TRIPE* will require less urgency in repair and improvement (not to mention the reduction in toxic emissions). At every turn we can see the benefits of the system – naturally holistic, born to cut industrial and societal costs while building staggering cash flows, and important steps in ensuring the future health of our planet.

WIDE WELL GEOTHERMAL SYSTEM: System for generating compressed air and hydrogen on a grand scale, shipped via the *TRIPE*, using deep wells that send steel conveyors into the earth to capture heat, transferring that heat to molten lead (or sulphur) and converting it to steam.

Conclusion:

The *TRIPE* (Steven J. Scannell's gift to the world) when properly installed, integrated and managed will provide all people with a reliable, efficient, green energy and transit system which will serve us well for generations to come. Bigger, heavier retro rail tracks will carry compressed air, hydrogen, fiber optic cable among other things – delivering energy and utilities to communities world wide.

Additionally, the *TRIPE* is a superb water carrier, especially for emergency uses – ask your friend the firefighter about the importance of reliable water delivery. The main line carries water driven by compressed air systems. With the addition of reservoirs to tap, the *TRIPE* can *get* and *keep* an area green – or put an oasis in a desert. The *TRIPE* can hydrate the atmosphere with the asperation of plants as well as cut down on heat and desertification of drying areas. Moving water is a *TRIPE* specialty.

But let us not forget the equally important transportation benefits of the *TRIPE* system. These retro tracks, which are less warped, in conjunction with the proposed track pipes will be able to carry heavier trains, allowing for a much smoother ride to passengers. Large-car capacity (up to 28 feet wide train cars) and longer, taller, wider trains will be a vast improvement over our present rail system. “Old” style trains, still a valuable mechanical asset, will be able to run faster and safer on the upgraded track, extending their useful life a hundred years into the future. Steam trains could also stage a come back due to the addition of the compressed air assist now available with the *TRIPE*. Tourism will revive old style railroad locomotives and the nostalgia that goes with them. Rail side communities will benefit from tourist dollars. The world's old rail assets will not be lost but rather embellished in the *TRIPE* plan.

The need for a long term approach to greener systems is indisputable. We need a system that is smart and sustainable for the next 200 years. Because the *TRIPE* is only a conduit for power and utilities, not a creator of that power, many options are open for exactly how we generate the power, and in what form we load it into the *TRIPE*. This track pipe is the common denominator of all future energy systems, incorporating rather than scrapping the old standby fossil fuel plants or nuclear plants that we are currently so reliant upon. The track pipe is a bridge into the future of productive lands and oceans. The production of electricity using existing plants but, modified for a supercharge with compressed air (CA), will exponentially increase efficiency by melding wind, wave, geothermal and solar power with coal power. This synergy between the old and new systems will serve us well financially in the overlap or the absorption of the old systems by the new LPGC systems. The new system actually plugs into the old, and vice versa. The need to seamlessly blend old and new financial infrastructures as well as old and new technologies (while reducing toxic emissions and reducing dependence on foreign oil) is obvious.

As one of its two core functions (the other being a rail system) the pipe is designed for high pressure, energy shipments of CA, H, LNG (a commodity which will benefit enormously from *TRIPE* technology), ORCA and other gases, granulated or pelletized solids and liquids and water. Imaginative future uses could include

shipment of oyster spat produced in an artificial pond and dumped in a bay. The list is open ended as we have yet to realize the full potential of this multifaceted system. We must avoid shortsightedness and narrowmindedness in designing a system into which we *can* and *will* grow, lest we waste time and money (not to mention squandering a golden opportunity to help the less fortunate with the “people helping people” aspect of the Love Power Grid Consortium). The need for versatility is inherent, and the *TRIPE* project will be a canvas for the world to paint on. Ancillary projects (bridges, intermodal transportation systems and stations, housing – developed by the HOWWDI holistic design teams) will put America back to work. We will need an abundance of good, long lasting materials and suppliers, efficient methods of construction, dedicated scientists and engineers as well as a huge number of laborers and specialists in almost every field.

In this age of global markets and world travel it is especially important that the global community embrace standardization and congruency when work begins on this 200 year system. First, a consensus of the basics must be achieved. Then, a pilot project, large enough to be a working model of construction and implementation, ready for scaling up to the worldwide level, must be built and evaluated. The initial cost of this humungous system will not allow rebuilds and “shoehorn” retro fits, so we are duty-bound to build this system right the first time. It will require time and a concerted, focused world wide effort, but we will persevere. “*TRIPE – That’s the job.*”

PALEONI Multimedia Inc., a start-up media reform company designed to be employee owned, is looking for crew members.

Steven J. Scannell, President of PALEONI, is a Cape Cod (Massachusetts) fisherman, boat builder and environmental activist.

PALEONI staff members Allison Strumski (Engineer and Mass Maritime graduate) and Dave Dickie (UConn graduate and Cape Cod graphic artist/editor) contributed to this report.

TRIPE (track pipe) System

Q. *What about my electrical appliances and lights? Will I need new ones?*

A. No....at least not initially. This new energy system for the world will take time. Our working system of electricity shipped over the wires, from the power plants is going to be overlapped slowly. Current delivery methods will remain unchanged for many years, but will be augmented by the green energy. In the not-too-distant future, however, your home may require some new electrical equipment, essentially powered by wind energy from far away, so that our country can stay energy independent and efficient.

Q. *I like my car. Will I have to replace it?*

A. Gasoline will always be for sale, so you don’t need to retire old Bessy. You may want to get a new car which will carry compressed air and natural gas in a carbon fiber tank/frame. Convenient refill stations will be at every corner in your community. The new Bessy will have lots of power, a custom paint job, and an ice cube dish for your lemonade. She’ll look and feel so good to drive you will love her, too.

Q. *Will the TRIPE make my taxes go up?*

A. Our taxpayers cost/benefit will be complex over many years time. The design is based on parameters for a two hundred year time span on the *TRIPE* system. Essentially we know and accept that roads and such cost money, which is why we pay taxes. This track pipe system is a very high-end intermodal transportation infrastructure that you will use, and pay for. There is no way of knowing at this stage how much that will end up being. You will have more value adding the multiple, or “intermodal energy” aspects and various other uses. *TRIPE* systems will be a high value synergistically combined infrastructure public/private asset which will increase the standard of living tremendously.

Q. *Is the TRIPE project scientifically sound?*

A. Everything about the *TRIPE* project is a synthesis of real world, off the shelf, existing technologies.

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Some of the technologies will move up in the world, as we replace old with new. Hydrogen as a fuel is new, but not a fantasy. Compressed air is good, simple and in everyday use by carpenters and mechanics. The *TRIPE* system is clever and practical, but because of its scope will take many years to become a reality.

Q. I live in a small valley town with a branch railroad line going to it. Why do we need this huge track pipe?

A. For your town the retro tracks will do, if warranted at all. The heavy steel retro tracks have an internal conduit as well, which can carry all the energy and utilities for your small town. If your town is a viable wind energy producer, then you could opt to sell that power to the grid and produce revenue for your community. These new retro railroad tracks carry over the old railroad ties and are comparatively low in cost. The big through systems – the full *TRIPE* systems – don't need to go everywhere. They are for the high energy demand areas and busy transportation corridors, which feed your branch line. Does your valley town want tourism? If so, the *TRIPE* may come just for that alone, for “large car” access.

Q. If there is a railroad nationalization, or purchase by the consortium, does that mean the old trains and companies will be replaced by a big government train company? Do all the old power companies just up and die? Are we all going to be controlled by a government monster?

A. Utility power and transmission stocks as well as railroad company stocks may be exchanged for LPGC bonds. The nice paint jobs for the trains and most of the company teams will remain, and power plants will retain their individual identity. They will be restructured for inter-monopoly competition. Bonus pay for companies absorbed into the *TRIPE* system will be for innovation and performance. New railroad operations companies, new power companies, and new engineering companies will enhance technology and competition with niche strategies. City subway systems and regional transportation authorities will remain and overlap with the *TRIPE* system. Government and private railroad regulators and associations will remain in existence. Old power companies will be absorbed as will the entire rail system, including the old abandoned lines and railroad rights of way. It would be smart to keep the tried and true management systems while

revamping the asset ownership structures. The initial changes will be chaotic enough without unnecessary additional stress to system development.

Q. Is this profound sort of change really possible in today's complex world?

A. The irresistible force is change. The earth's climate and the foundations of energy market and supply issues are in a state of flux which demand our attention. Asset structures, and not their values, are the seemingly immovable objects, whereas they can and should be transformed and absorbed by the *TRIPE* system without being destroyed. While none of these structural changes are easy and may not lie within our economical, political or philosophical comfort zones, we cannot deny that the very physical and chemical natures of our industrialization mechanisms have had a very real negative impact on our environment. While it is true that small climate oscillations are Mother Nature's norm, we cannot deny the fact that recent significant climate change histories mirror the increase in carbon dioxide in the atmosphere. We need to stem this tide of environmental destruction and the time for that change is now.

In analogous terms, our ship is leaking and popping planks. We are in a storm, and running out of rags. We are mending the ship as we desperately bail for our lives. We can put in to refit the ship or we can push on. The refit will cost twenty times what the ship is worth now, but if we stay on course we risk all. The captain and crew and passengers want to put in for an overhaul, but the ship's owner, sitting comfortably back on shore, would rather think about it some more.

Q. How can I get involved?

A. Development of the *TRIPE* system will require all hands on deck and input from professionals as well as laypersons. Working groups and networks must be formed on the local, state, national and international level with communication through the use of the internet (bulletin boards, blogs). The LPGC and HOWWDI will need to be built and staffed. System architect Steven J. Scannell formally invites interested parties to get on board by writing to steve@environmentalfisherman.com.

To personally support Steven J. Scannell, send a contribution to 93 Pleasant Street, Apt. 7, Hyannis, MA 02601. Thanks and let's get busy.