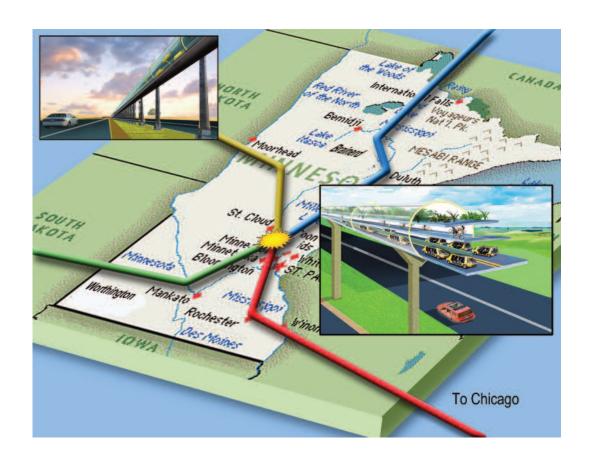


# RAMPING UP THE ELECTRIC CORRIDOR



# HOW DO WE REDUCE CONGESTION AND POLLUTION AND GET MOVING ON THE ELECTRIC CORRIDOR?

STEP I: CREATE THE NATIONAL STRATEGIC PRODUCT COOPERATIVE (NSPC)

STEP 2: BUILD SKYTRAM

STEP 3: DEVELOP ELECTRIC TRANSPORT SYSTEM (ETS)

### RAMPING UP THE ELECTRIC CORRIDOR

We <u>can</u> reduce congestion, produce millions of electric and hybrid vehicles, build the transit delivery system for these vehicles, and maximize outstate and metro corridor development, like Rochester and Duluth to Twin Cities. This only works effectively on a financial level by using a cooperative economic model, like the National Strategic Product Cooperative.

### STEP I: NATIONAL STRATEGIC PRODUCT COOPERATIVE (NSPC)

Actualize the NSPC to start producing standardized, low-cost, mass-produced electric/hybrid HOV vehicles, along with electric storage batteries, home and commercial power generation units, etc.

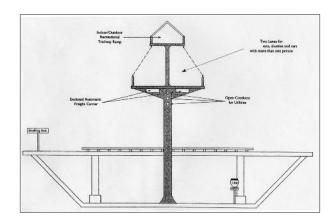
#### STEP 2: SKYTRAM

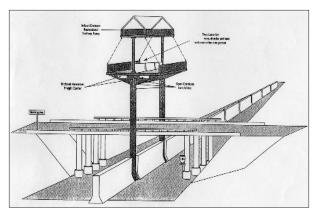
For a public transit evolution, start with a model demonstration system like *Skytram*, the "advanced skyway" as the electric transport and bikeway/walkway connector for a Minneapolis or downtown Saint Paul loop, or the new Mall of America development.



## STEP 3: ELECTRIC TRANSPORT SYSTEM (ETS)

Then work toward a national, city-to-city and intra-city conveyance system for electric/hybrid vehicles, freight, water and alternative energy. Like trains, electricity, cars and freeways, ETS is the next Great American Infrastructure.





### STEP I: NATIONAL STRATEGIC PRODUCT COOPERATIVE

The strategic economic needs of the nation and globe, particularly with regard to energy efficiency, alternative energy development and investment in strategic green product development, is not going to happen fast enough, or perhaps at all, without a national strategic product development initiative. It is the economic basis in fact for the Electric Corridor as it provides production at economies of scale.

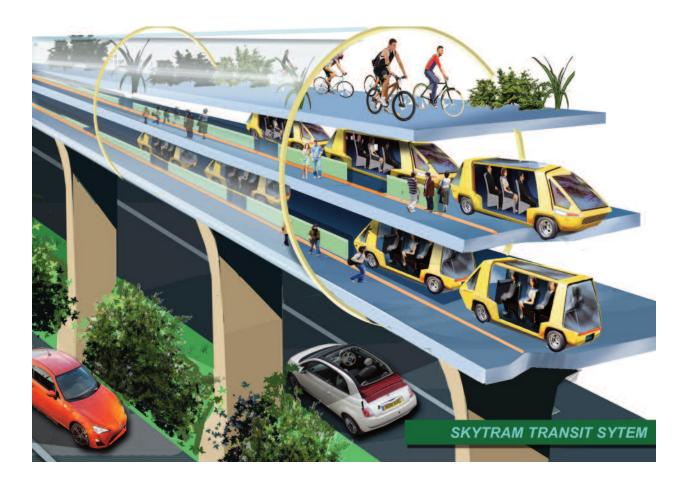
As a highly public example: President Obama wanted 1 million hybrid/electric vehicles by 2015. To meet that goal these vehicles would have had to be mass produced at a much cheaper cost and thus much cheaper sales price (under \$20,000) than current models. This can only happen if these vehicles are (1) standardized; (2) mass produced due to mass purchase advance orders (investment); (3) built with guaranteed cooperative labor arrangements; and (4) produced without profit-model manufacturers, hence the cooperative business structure. If we do not cooperatively act now, China or India will flood our markets soon with standardized models well under \$10,000.

The National Strategic Product Cooperative initiative determines, through both a public citizen process and with broad input from many experts, a number of strategic "green" products, such as:

- Energy efficient controls for commercial and residential buildings;
- Battery packs that are both power and storage units (a) A key cost factor for hybrids and electric vehicles are batteries. (b) The cost of transmission lines is a major factor that prevents alternative energy production locally. The "holy grail" solution for alternative energy development is electric storage. (c) A solution for both is a power pack that is also a storage unit. Every substantial building in America could have these units, and Tesla company has already built a relatively expensive model;
- Hybrid/electric vehicles Mass advance ordering for mass production of the same basic vehicles is
  the only way millions of hybrid/electric vehicles will be manufactured as HOVs and smaller
  commuter cars, and be affordable for the average commuter;
- **Solar panel units** Mass installations along Electric Road delivery systems, on every flat roof and many non-flat roofs with residential "Power Tower" installations. These units need to have cross power generation built in like water collection;
- Small, modular wind power systems Small scale and micro wind turbines;
- Waste conversion units/products Advance marketing and product R & D from recycled plastic and other waste products is in its infancy. Waste conversion to fuel and products should be a high investment priority nationally, after energy efficiency. It is a win-win and we have virtually unlimited amounts of waste, much of which CAN be processed cleanly in units such as anaerobic digesters;
- Electric Road Corridor (ERC) Local-to-national green power delivery AND production; and
- Modular roof energy/waste units Standardized "combo" building units for solar, wind, water, biomass, local power, etc. This method simply needs organization and mandates. Then millions of roofs will begin to seriously reduce our energy dependence, collect carbon and convert waste.

### STEP 2: **SKYTRAM**

**Skytram** is the ideal transit and tourism system for getting around downtown Minneapolis and other concentrated developments, such as what we are proposing for the Arden Hills site. It will connect business and residential sectors. Skytram is an urban and development park application model of the Electric Transport System (ETS), an evolutionary rapid transit option and complement for light rail transit. (See next page for detailed application.)



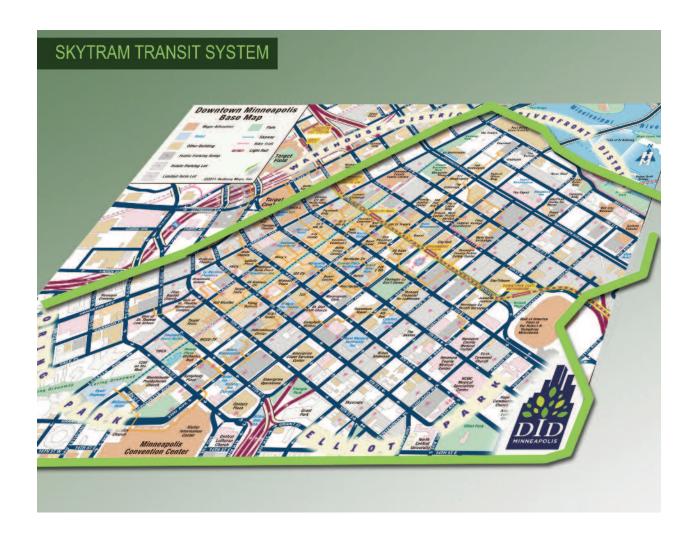
The above sketch is one possible configuration of the support and upper superstructure for the Skytram system. The column support could be a single column underneath, one column on each side or a combination depending on the surface it is going over. Again, the general description is that of an advanced, or expanded, 2 or 3 story skyway, like the existing skyway system.

### SKYTRAM MINNEAPOLIS

# The Perfect Marriage of Transit and Tourism Connecting all the major sectors of retail, residential, and business offices

Imagine driving up to downtown Minneapolis—or more appropriately arriving by light rail—and being greeted by a stunning, elevated, and totally unique "garden concourse" that encircles the entire city center, and actually transports you around and through this vibrant urban core. Then you park near the new Vikings Stadium—or get off light rail transit (LRT)—and enter the newest national sports attraction. Soon you are entering *Skytram*, a bright green circular corridor to take you around and through downtown. Currently, outside of LRT and skyways there is a much-needed direct connection to the disparate businesses and residential sectors of downtown and the riverfront.

**Skytram** is a multi-tiered "advanced skyway" with an indoor electric transit system at two and a half or three levels. It is connected to downtown buildings and the Vikings stadium, much like the current skyway system in downtown Minneapolis, but winds "around" and through the city center.



#### **Skytram Minneapolis**

#### **Skytram** Transit/Retail Level One

The main level would be wider than most skyways with a common walkway. Along one side of the structure would be the *Skytram* transit system of rubber-tired electric trams—standardized vans with sliding doors that bring you to additional destinations either on multiple trams hooked together or on a single tram, driven by an operator and auto guided, but without any expensive guidance structure. They are battery powered, but also could be powered by road-powered electric vehicle (RPEV) technology, which is like an "extension cord" hooked directly to the vehicles.

Retail outlets and restaurant bar stations would be directly accessible on this level and could be multi-leveled structures depending on where they would be located and the investment potential of the tenant. A number of stations (restaurant/bars/cafes) could be Minnesota tourism and downtown business services café "portals," i.e., brick and mortar webstores where you would purchase tickets, merchandise and services while having coffee, lunch or dinner.

**Skytram** should be designed to promote everything and not compete with current downtown development. It is intended to drive traffic, literally, to the rest of downtown, the city, and the state. Existing retailers and attractions would be given every opportunity to have a structural and promotional presence.

#### **Skytram** Green Path Level Two

Trams on one side and a bikeway, electric bike, running and walking path through a garden corridor. Large windows may open and it could open to third level sunlight during appropriate weather months.

#### Skytram Garden Level Three

The first, miles long, linear greenhouse, green roof, garden and solar panel level (or roof structure for the bottom two levels). It would be mostly enclosed, but possibly open late spring, summer and early fall. **Skytram** would be designed to be one of the most "FUTURE GREEN" structures in the country, if not the globe. It will be a living laboratory and evolving structure.

#### Convention hotel/anchor tenants

As envisioned for downtown Minneapolis, *Skytram* could be incorporated (or vice-versa) into a uniquely designed linear convention center hotel attached to the Vikings Stadium and Minneapolis Convention Center. An anchor retail tenant could also be designed into a linear/circular model. For instance, anchor tenants could be stretched over many blocks directly accessible to the public on one or more levels.

#### **Phase One**

The *Skytram* corridor is envisioned to "wrap" around the east and southeast sides of downtown and connect the new Vikings Stadium to the existing convention center. A convention center hotel would have the stadium complex for potential event use, and where space allows along the corridor, large event spaces would be designed, likely near the restaurant bar stations to cover the more expensive expansion of the corridor. Suggested tenants would include Target, Life Time Fitness, and Best Buy.



#### **Phase Two**

The next *Skytram* connection would likely either go across the river to St. Anthony Main or from the Convention Center to the West Entertainment District. St. Anthony Main has long struggled as a retail sector, but now has many residents who cannot easily access the downtown area and vice versa. Even during the summer months, relatively few people traverse the river from downtown or vice versa.

# Why is Skytram vital to city centers (downtowns), especially Minneapolis and Saint Paul? Why will it be a unique attraction and use?

- 1) **Transit:** Downtown Minneapolis and Saint Paul, in spite of light rail and skyways, have large retail, residential and parking sectors that are not directly, or more importantly, conveniently and closely connected to the most populated sectors. The two cities have for decades tried to connect these sectors without success. Also, blocks of meandering skyways have not been the answer to maximizing the attractions and revenue of the super connected malls, business communities and now residential sectors that the downtown areas provide.
- 2) **Tourism:** A system that entertains, allows people to see the city, provides easy access to every part of the city, actually transports people efficiently, and is one of kind in the world will be a certain tourist attraction.
- 3) Minneapolis and Saint Paul need to compete with the Mall of America to provide more revenue to reduce property taxes for all Twin Cities residents.
- 4) We typically have eight months of inclement weather that negatively affects mobility.
- 5) No northern city has a year-round bikeway, walkway, running track, and indoor/outdoor garden/green space encompassing and showcasing the city. ■

# STEP 3: ELECTRIC TRANSPORT SYSTEM (ETS)

# The next great American infrastructure - a freight, water, electricity and electric/hybrid vehicle conveyance system

Look down the middle, then up, and you will see the future – yes, just like in the movies. ETS is the 21<sup>st</sup> century answer to not only reducing congestion, but also vehicle numbers and pollution. It is also a system for national water distribution (draught reduction and flood control), small freight transport (eliminating billions of airline and truck fuel), distribution from local electric power production, emergency road response and injury transport, hybrid/electric vehicle conveyance. It is also a linear greenhouse for pollution control from the roadways below.

Below is a schematic for the overhead freeway design, as opposed to a ground-level structure for outstate freeway and highway medians. The ETS lanes design could be "stacked" with one lane on top of the other going in opposite or the same direction depending on urban sections. *Note: There are similar proposed systems but without all that is included in ETS as the next infrastructure system.* 



ETS, as a key infrastructure development, is essentially a national "conveyor belt" system. It will be a lightweight structure, carrying water, electricity and freight in the base of the structure and standardized lightweight vehicles on the central levels. These vehicles can be either hybrids or electric and will be guided and powered by the corridor itself. Bicycles, electric motor bikes, walkers and runners use the top level. It will be built overhead on freeways because there is no way to go but up. Down the middle of highways and between cities, it will be built at ground level and overhead at intersections. It uses mostly alternatively produced electricity (a linear solar power array on sides and top and micro wind turbines) to convey the infrastructure materials and vehicles.

ETS provides solutions, which can begin within the next decade, to a number of large scale infrastructure and delivery system needs in the US and globally. There is no competition to this unique and encompassing infrastructure and delivery system.

#### **Benefits/Solutions Provided by ETS**

- 1) The ONLY solution to congestion is to build above current roadways to "efficiencize" the movement of commuter traffic by taking a large number of vehicles off the major arteries, which has yet to happen, and certainly would not by adding lanes. Most importantly, it will drive the development of low production cost, standardized commuter vehicles that can go on and off the system, and be rented or owned. With lightweight vehicles, the cost of the "superstructure" can be minimized, AND by building a conveyance system into the superstructure for light freight and other commodities, the costs are spread out.
- 2) The time, fuel and vehicle cost of transporting light freight, packages and letters around the country is astronomical and only going to get higher with skyrocketing fuel costs. As ETS is essentially a small freight, conveyor belt-type system, Fed Ex, UPS, USPS and other companies would greatly benefit with a relatively quick return on investment.
- 3) There is no national delivery system for clean and grey water, which would reduce drought and offer flood control. The ETS upper and base structure could also be a linear greenhouse system for cleaning water and growing biomass.
- 4) Fully electric cars are simply not there yet, in terms of costs and battery efficiency (cost again) and thus not going to be mass produced by for-profit manufacturers in our near future, particularly due to non-US battery development. China and India are already dumping cheaply made electric vehicles into the market and will overwhelm our Big 3 automakers again. Auto-guided and road-powered electric vehicle technology (RPEV) is available now so that vehicles, while on ETS, would not need battery power and would get recharged. In addition to optimize speed and efficiency, they would not be operated by drivers. The RPEV configuration envisioned for this system does involve intellectual property.
- 5) The inherent inefficiency of closed-loop transit systems, particularly in areas not densely populated, is overcome by ETS in that personal and lightweight mass transit vehicles can go on and off the system. The vehicles are standardized and mass produced for economies of scale and American jobs.



BluCentral is an EcoPreneurial collaborative that designs cooperative marketing and policy strategies, event drivers and cooperative products. Its mission is to dramatically increase the vibrancy of the Blue-Green Economy through key cooperatively developed products—driven by a new cooperative economy.

Fast Forward Marketing: EdayMax Projects, described below

Cooperative Media and Ad Campaign
Best of Green Online Election Day
Give Green Day Funding
2020 Earth Day Global Event

**Establishing A Cooperative Business Model:** National Strategic Product Cooperative (NSPC), page 2 **Projects To Drive The Cooperative Business Model:** 

Skytram, page 3

Electric Transport System (ETS), page 6 ETS Congestion Solution (see website)

Research & Development Projects: Mount Ecos • Capture, Clean & Carry (see website)

EcoPrenereurial Strategic Business Plan, described below

# Cooperative Media and Ad Campaign

This organizational model begins regionally with companies and organizations marketing products cooperatively through radio, cable, and internet. The premise is that small- and mid-size green or socially responsible companies and organizations can't afford to effectively market services and products alone.

#### Best of Green Online "Election Day"

This is a template for a cooperative Earth Day online event that will help build momentum toward 2020, while creating a yearly, online Best of Green "Election Day" for the green economy and environment. Earth Day exists as the only issue-oriented nationally recognized day. It is,

however, the most underused tool in our toolbox! As importantly, *Best of Green* is a strategic marketing tool to drive consensus and funding toward the best strategic products, policies.

#### **Give Green Day**

A funding mechanism exclusively for environmentally sustainable projects and ecopreneurial endeavors.

#### 2020 Earth Day Global Event

As the 50<sup>th</sup> Anniversary, 2020 Earth Day will garner extensive media coverage. To maximize impact, we need to maximize the coverage leading up to it and to the day's global events. We also need a doable, BIG goal timeline to drive consensus goals forward. We are at a

collaborative design stage for a global event concept for major cities and hundreds of smaller ones, tied to one major televised production.

#### Statewide Neighborhood Entrepreneurial Coops

To create businesses and jobs where they are most needed inside small and large cities while nurturing the next driving economic engine for the region, initiatives have to start at ground level—like mining in the '50s and '60s, large computers in the '70s and '80s, medical devices in the '90s, and now, the gaming industry. Through the coops, individuals would pool resources and mostly their creative business and product ideas. Every neighborhood could organize an entrepreneurial cooperative, funded and

organized by the local chamber of commerce, churches, governments and individuals.

#### 2020 EcoPreneurial Strategic Business Plan

During the next years leading up to 2020 Earth Day, we intend to engage a consensus of THE best strategic plan for the green economy and the best solutions and products. That concensus will be the financial foundation for the economic force of progressive development. We intend to use projects outlined here to help forge the consensus business plan with leaders and advocates engaged in the environmental movement and green economy.