

RESEARCH & DEVELOPMENT PROJECTS

Develop Economic Game-Changers as Central Components of a 2020 EcoPreneurial Business Plan

- **Clean, In-Community Mini Power Plants with Power Storage Units** – Tesla Motors and others are moving fast on power storage units to homes and businesses. The next step is developing mini power plants built in neighborhoods (community solar gardens are not normally in residential neighborhoods). These mini plants would be connected to hundreds of neighborhood storage units so we can really start achieving distributive power on a mass scale. They could be a combination of solar, micro wind turbines, anaerobic digesters and bio fuel with closed-loop burn systems and total air pollution capture systems.
- **Minnesota-based, National Strategic Product Cooperative (NSPC)**. NSPC fast forwards the consensus of a “top ten” key strategic products. The purpose is to allow US workers to produce hundreds of millions of units of these products cost effectively. This is possible only through simple method (mostly by metro areas) of advance purchases (mass collective bidding), and “standardized production.” We no longer have to wait decades for dramatic economic progress toward massive energy and pollution reduction. Visualize the impact of a hundred million units of each of these few key products being sold:
 - Hybrid electric cars, power storage/solar panel units and building energy controls
 - Water storage/reclamation units
 - An undersink, food-to-fuel processing unit that replaces garbage disposal units
- **Electric Corridor and Electric Transport System (ETS)** – building the next evolution of mass transit from LRT and huge buses to standard small vehicles that go and off the system. The Electric Corridor is the next great American infrastructure that we can build right here. This is a natural partnership with Google cars, Tesla, Ford/GM (if they are willing to build a \$10,000 vehicle), Fed Ex, UPS...
- **Neighborhood Ecopreneurial (Entrepreneurial) Clubs** – building green product, service and business ideas to become businesses and jobs from the ground floor, with the Chamber of Commerce, major sponsors and donors paying most of it.
- **Waste Conversion to Products and Fuel as No. 1 Investment Priority** – Only 3% of plastics are being recycled or converted to new products. This is a huge opportunity for a state or country that want to invest in creating new markets, new products and new processes for recycled products and a host of other waste materials. There are newer, micro plant technologies to “clean burn” the cleanest waste and convert more animal waste. We are just not moving big enough and fast enough.
- **“Take over” of power companies** in Minnesota and region along with the waste industry.
- **New, inexpensive industrial process for recycled plastic** – like the Plastic Bank has done with “harvesting” ocean plastic and turning it into threads for 3D printers, this process can turn most sheet plastic into a thick thread (without expensive melting and separation process into like polymers) that is interwoven to blocks and walls of a half inch, inch, up to 6 inches. Whoever develops this process first will build a massive industry in their state.

Initiatives & Projects

- **Capture, Clean and Carry flood and storm overflow control and reclamation systems** – again made from recycled plastic, these uniquely configured unit(s) could also one day be the least expensive, 1000+ mile, removable ocean barrier (instead of building permanent, massive steel, concrete or rock tide walls). They can also function as power dams.
- **Water Capture and Return Ditches** – not a sexy name yet, but essentially it configures a standardized, cheaper method of building a ditch water capture system with farmers to clean and return water to their crops. There is a University of Minnesota researcher working on this now, but it needs a statewide initiative. There are 27,000 miles of ditches in Minnesota. This could also be a great use of state-mandated buffer zones.
- **Weight Displacement Power (WDP) systems** – for drying corn, moving water and delivering pump power for pipelines as a form of hydrostatic power. This is the least expensive and most effective power source to move excess flood and storm water to drought areas in Minnesota AND build a viaduct/desalination solution for western states from the Pacific cean.
- **Captured Carbon Fertilizer** – from power plants and compressed into small tanks with grey water and embedded, using farm implements, into biomass beds and fields, ditches
- **Redesign big blue recycling bins** (into slide out sections for bottles, cans, paper, and food waste for fuel), redesigned collection trucks and sorting systems for easy waste collection.
- **Storm Emergency Vehicles (SEVs)** – mass produced from recycled plastic and positioned in likely disaster areas. They can be pulled in by a lead engine vehicle with the rest of the trailer vehicles behind in train-like formation or flown in by helicopter.
- **Mount Ramsey (Disney North) Eco Park** – Arden Hills site details, development competition, development partners such as Disney, competition of designing a building as a mountain (large hills), illustration design needs
- **Recycled plastics design and development competition** – from products as simple as fun winter helmet hats to compressed air pollution injected into industrial recycled plastic beams to plastic furniture/art with interesting garbage pieces embedded into shelves.
- **Burnable Green Filters** – spun (weave technology) from waste plants (biomass) and sprayed with green mesh from plants for water treatment in rain gardens, industrial water cleaning, water transfer pipes
- **Temporary Green Pipelines** – pipelines made from woven plants and short-term water transfer, like filling White Bear Lake from the Mississippi River during flood season
- **Closed-Loop Waste Burn Units** – example: captures pollution-formed algae off bodies of water; burns it after being dried, which the burning process accelerates; captures the air pollution from burning; and infuses the pollution into additional wet and drying algae to be burned. Excess pollution is also compressed into grey water systems for fast growing algae and other biomass. Burning waste plant material is still far more energy efficient than turning it to fuel, though not dismissing that by-product, even using the energy from burning biomass for fuel development.
- **Vertical Indoor (Outdoor) Rain Gardens (VIRG)** – for residential and commercial buildings - competition, materials and components research
- **Power Towers** – residential and commercial units that create and store power from solar, micro wind, anaerobic digestion ■