**Important Points to Consider…..Scoping Plan for GHG Scoping Plan California**

**Introduction**

A scoping plan requires a method to identify priorities to enable success for any endeavor including the California Greenhouse Gas scoping plan with goal to reduce greenhouse gas generation while transitioning to a sustainable economy.

Life Cycle Sustainability Analysis (LCSA) is a method that should be deployed to prioritize and rank root solutions to achieve greenhouse gas reduction goals.

In addition, priority LCSA categories should be identified also that generate the needed activation funding (allegory is energy) to pay for the needed changes.

**Background**

LCSA considers (a) environmental, (b) economics and (c) social consciousness that shows up by following the principles of democracy for (d) quality of life performance or outcome MASLOW Needs for all commensurate with contribution to society and at some level for no participation at all or strategic plan goal for the economy is not sustainable. LCSA includes materials-water-energy-waste-air-pollution and carbon footprint optimization with goal per global warming scoping plan net zero and negative carbon footprint until 350ppm co2 (e) is achieved and sustaining.

This translates that the strategic plan for the economy should be safe and sustainable planet with fair-wage-trade-profit-taxes-benefits with a minimum social pay or welfare for those that are unable or unwilling to participate as an ounce of prevention is worth a pound of cure to reduce and or eliminate negative costs.

The number one priority at this time for a safe and sustainable planet is to reverse global warming. And to restore a living fair wage by simply changing the unfair or un-principles home loan policies that make housing not affordable for owners and renters causing a homelessness crisis. By changing the home loan policy back to pre-Ronald-Reagan 25% of the single MAX income per home from the 50% of two or more incomes per household will liberate the needed funds to pay for the transition to a sustainable economy. This means much less property tax and rent or mortgage loan costs 4 to 5x, and an increase in capital gains costs for corporations. This will move billionaires back to millionaires but also is the basis for MASLOW needs for all without un-sustainable band-aide solutions mandating minimum wage increases driving more businesses to be out of business.

**LCSA Categories**

**Activation Funding Sources**

1. Change home loan policy to pre-Ronald Reagan 25% of one MAX income per household to quality for a loan, lower housing and property tax costs 4 to 5x, and raise capital gains tax on corporations. Most billionaires state that they did not intend on becoming one and would you please tax me because I do not have the awareness to deploy the funds adequately to help humanity. Liberating funds for humanity then provides room to tax or bond measure or to pay more for renewable energy source based items for the changes needed.
2. Energy efficiency using common practice technology reduces the load on all building types 50% (e.g. residential, commercial, industry, government etc.). Turn Tide motors has a new electrical motor for Electric cars that uses 30 to 50% less energy for the same power output. Efficiency saves cost, and provides revenue to use for converting the energy system to a renewable energy system.
3. Landfills – convert all landfills to Materials Segregation and Compost Centers and create 16:1 higher paying jobs. Build Material Recovery Smart Factories of the Future today and create 50:1 higher paying jobs.
4. Bonds and other taxes that are good LCSA Investments going forward that pay back over time to grow the economy while reducing global warming guided by science, facts and principles using the principles of democracy for MASLOW NEEDS for people also stated quality of life for each cultural context implies “inclusion” in education for the economy.
5. Dis-assembly instructions with resource recovery instructions for all new products for net zero waste approach of the economy will fall short of materials by 2040 to 2050 World Bank estimate……….this ultimately saves a lot of costs when the LSCA is performed includes carbon footprint.

**Promising Technology**

**Background Info**

1. Design Smart Factories of the Future Today to Make the Renewable Energy Products to be highest quality and lowest cost is needed. Universities and Industry should be working on this if they are not.
2. All materials used should be resource recoverable using 12 principles of green chemistry and engineering or the World Bank reports mass famine as soon as 2040 to 2050…..along with landfills converted to spent materials segregation and compost centers with factories to recover the materials not downgraded recycling.

**Renewables and Storage**

1. Wind turbines lowest cost energy compared to all energy sources – Lens that doubles the energy output per turbine and turbines can be moved closer together – moves same land space use for wind to 10x the energy output to over 50% of the nation’s energy. Opposed spin per CAL TECH work for vertical systems also work with this effect. Add variable speed drive generators and magnetic bearings and to align generator to wind blade shaft (mange drive out of Washington State) for much lower maintenance cost and down time. Make excessive wind energy and use smart grid to push to correct location with significant less dependence on storage – state to state and then nation to nation smart grid then provides basis to expand this approach with little to no storage costs.
2. 60% solar panels should be funded using super materials like graphene to be commonplace to lower costs to the cost of wind power. 60% has been demonstrated and needs funding for low cost manufacturing.
3. Ocean energy taking advantage of high ocean currents could use graphene composite structures that do not corrode with great potential to provide all coastal energies where more than half the people live in the USA. Adding fish and seaweed farms also are needed bundled approach.
4. Cool fusion using isotope of water – R&D needed to answer all future energy needs.
5. Storage – Hydrogen is sustainable material to store energy and with exhaust from a fuel call the original water….Batteries that use circular materials……….ways to recover battery materials with disassembly instructions and instructions to recover the materials in the original design. Heavy weights hoisted up are 90% EFFICIENCT along with water towers or landscape that accommodates….

**Efficiency**

1. Insulation – new windows with aero-gel in center composite window can match wall insulation. Also add window quilts additional R7 to R 14…..and shutters or awnings outside…..etc…Multi ceramics from space shuttle nose can achieve R 65 in walls optimized for extreme hotter and colder climates in plaster and walling coatings. Foil in attics reflects heat back superior to fiberglass. Floor use aerogel in flooring. Use reflective coating in roof tops. Vent roofs hot air solar fans. Air Pair Airius high ceiling lowers effective ceiling height to 12 feet down from 40 feet and higher……….and pushes hot air back down and cold air up to be useful……….
2. HVAC Hybrid Systems e.g. AIR20 is 70% less energy for heating and cooling……..heat pump, evaporator and non ODS refrigerants in optimal balance using smart chip computer interface….
3. Solar tubes around turns inside reflects for solar lighting…..
4. Energy Smart and Water Sense Equipment.
5. Etc. 50% reduction possible……….see internet. For buildings.

**EV’s – best life cycle cost**

1. Electric Transport – Use Turn Tide new electric motor technology 30 to 50% less energy same motor power output.
2. Circular Batteries – better said materials recoverable end of life or cannot sustain.
3. Fuel cells use of hydrogen from water with exhaust water……circular.
4. Aluminum Air Cell batteries are circular using plant fluids.
5. Air Compressors work.