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On Epic Idea Exchange

Additional submitted attachment is included below.

From: Andy Frank <afrank@efficientdrivetrains.com>
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The idea is simple:

Use only PHEV's with Long Electric Range, PHEVLERS, for energy storage and retrieval from Solar and Wind but at very low cost and low power. 1000 cars transferring power at 1 kW is 1 megawatt and the power is distributed all over the city or state. This power can be economically transferred both ways with bidirectional chargers at 1 Kw. The PHEVLER is much better than the EV since it never needs:

1. to be fully charged, thus never needs high cost, low efficiency, high power charging equipment that are detrimental to current and future electric grid.
2. never suffers from Range Anxiety,
3. has zero impact on the grid.
4. enhances the grid to transfer more energy and thus be more efficient
5. existing grid can support the energy needed for all transportation systems because the grid has been sized for power and not energy! Energy efficiency of the grid is less than 20%, but power capacity is 100%.
6. See definition of PHEVLER (pronounced fevler) at GreenCarCongress/Frank. It is simply; a PHEV with 2X the electric range of the Annual Average Daily Travel Distance. The Chevy Volt comes close to this definition. Efficient Drivetrains Inc., EDI has shown by demonstrations around the world that PHEVLERS make sense for all vehicles from the smallest to the largest class 8 trucks and buses.
7. These vehicles use less than 1/3 the batteries of an EV and never require fast charge because they are dual fuel Vehicles.
8. The cost of the PHEVLER is less than an EV since it can be built without a transmission, much smaller I/C engine and much less batteries than an EV.
9. The PHEVLER will use less than 10% liquid fuel and more than 90% low power electricity from local and central Solar and wind energy. See Idaho National Lab Reports on comparisons between Chevy Volt and Nissan Leafs.
10. This means The PHEVLERS can be ZERO Green House Gas, GHG, machines with 90% renewable electricity and 10% bio fuel. This is a sustainable and lowest cost option going forward.

Please contact me for much more information.

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