



## Renewable energy revolution – Trillion \$ Investment

- Climate change is real. So is harmful pollution.
- Converting from fossil fuels to clean renewable energies is inevitable.
- Universally accepted barrier is energy storage.
  - Overcome intermittent nature of solar and wind power.
  - Avoid curtailing power during excess power generating periods.
- Grid level energy storage is not feasible with battery technologies.
- We offer a transformational alternative that can be implemented without the need to develop any emerging or new technologies.



Who are we?

## Solar Wind Storage LLC

- **Start up company:** Solely owned by 2 engineers from West Virginia University.
- **Assets:** Intellectual property rights to renewable energy storage system.
- **Patent:** Granted US Patent with pending applications in 38 other countries.

## Why are we at Trans Tech?

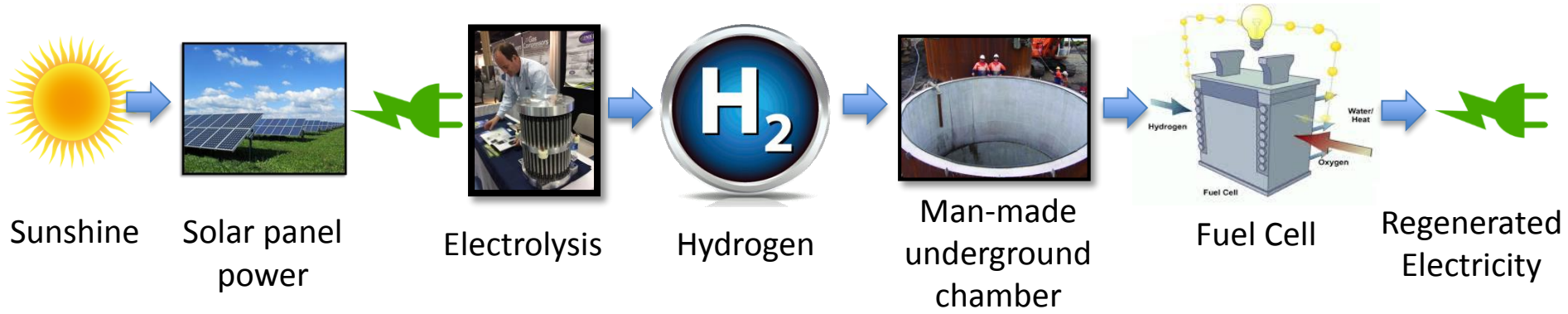
- We believe we have a viable solution to grid level energy storage with a zero carbon footprint.
- We lack the financial resources to move beyond the proof-of-concept stage of development.
- Beyond investors, we need partners who possess the skills, financial resources and business expertise that we do not have.





## How do you store sunshine?

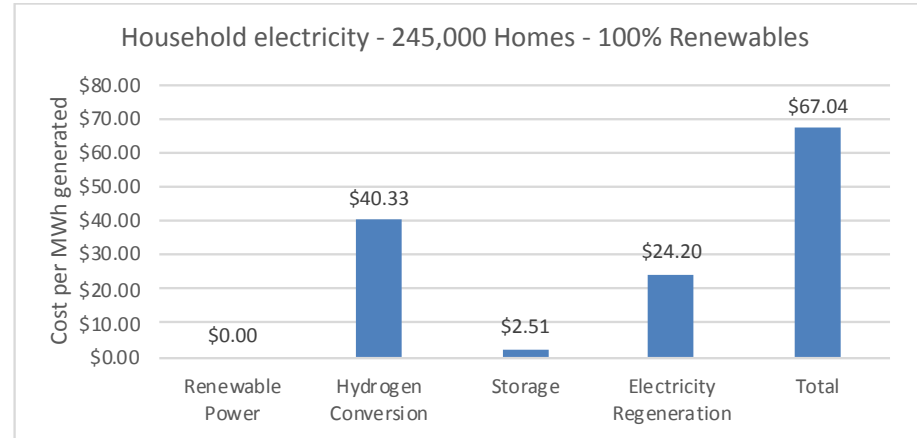
You convert it into hydrogen using an electrolyzer, and store it in a man-made underground chamber, using conventional mine drilling technology to construct.





## Is it economical? – We believe so!

- With my home electric bill – I'm paying 6.56 cents per kWh.
- Our hydrogen storage system adds 0.25 cents per kWh to the cost of supplying renewable energy.
- The total cost including producing the hydrogen and regenerating the electricity is about 6.70 cents per kWh if the excess (curtailed) renewable power is free.



Based on an 8,000 MWh chamber design



# No sun. No wind. No problem!

## Why is our hydrogen system better than competing technologies?

- Higher capacity and scalable by design
- Smaller surface foot print
- More flexible implementation (built anywhere)
- Acts as both energy carrier and a fuel source.
- Better and cheaper than batteries (250 times energy output, 2-3 times the life, unlimited cycling and storage duration)

**Seeking Investment Opportunities:** Utility Companies, Energy Companies, Subsystem Developers, Breakthrough Energy Ventures, Entrepreneurs, Universities, DOE, State Legislatures.

Our problem ... The field of dreams...  
“Build it and they will come”



We need to build a working-scale prototype to establish credibility.