

Dangerous Curves Ahead: An Update on the Energy Sector

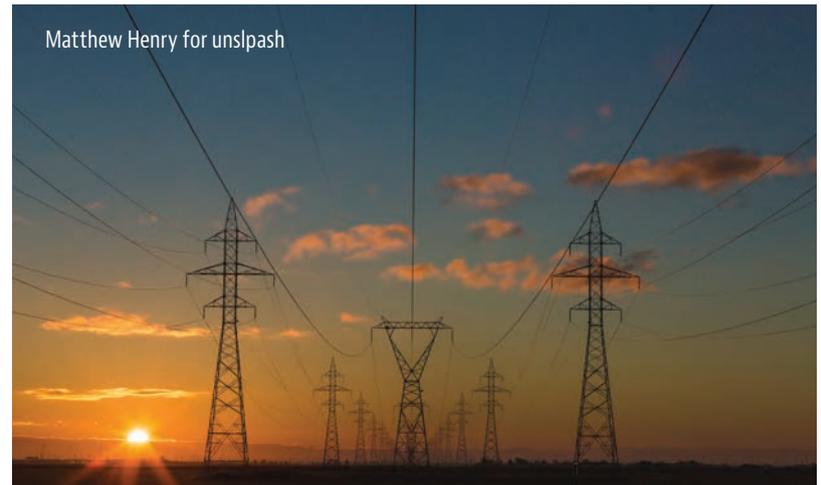
BY RAY HANKAMER

Sector Speaker: Detlef Hallerman-Director of the Reliant Energy Trade Center at Texas A & M University

Takeaway: As we transition from a fossil fuel-based economy to a 'green' economy, there will be many bumps in the road, and hard lessons to be learned. The transition involves moving from a free market energy world to an energy world created by government direction and consumer sentiment...and, the underlying truth of global warming. We are venturing into unknown territory.

Bullets:

- The 'green movement' is creating friction in crude oil exploration and refining markets
- One camp says 'let the free market handle the transition' and another camp says 'it is too urgent to rely on markets and we must guide the process through government initiatives'
- In the meantime, coal is still the dominant fuel worldwide, and new coal burning plants are still being built in some countries
- The 'green goal' is to achieve an 80% energy change in a few short decades; the change is indeed underway, but it will be incremental and not brisk
- We are very slowly reducing reliance on the 'Big 3': coal, natural gas, & crude oil
- It takes only one year in the Permian Basin of Texas to bring a well to production status; offshore and internationally it takes much longer, hence sudden shortages in crude oil cannot be instantly be caught up
- There are a lot of government programs to accelerate battery and electricity storage development, and the solar energy to feed them, but progress is slow; solar energy cannot be created at night and wind energy cannot be created when the wind does not blow. During the Texas energy crisis during the big freeze, frozen infrastructure and no wind combined to reduce electricity generation right when we needed it the most
- In the current climate, stockholders are pushing green initiatives in corporations, although some do not make financial sense at the end of the day
- Banks are giving green energy project financing favorable loans
- Hydrogen is the newest possible green solution on the horizon
- Carbon reduction technology is still somewhat ill-defined, although many are working on it
- The next 5-8 years will be chaotic as new initiatives are explored and eventually rejected
- As the current center of the energy world, Houston is well-positioned to retain the lead as we transition to energy sources other than hydrocarbons...which is a good thing for our local economy
- One roadblock on progress is that politicians do not like to spend their immediate political capital on something that will benefit someone 30 years from now, after they themselves are gone
- Some green initiatives turn out to be more polluting than the problems they set out to solve
- Even this summer we have come close to running out of electricity and having to go into 'slow-down mode'



- How will we have enough electricity to charge all the electric vehicles projected for coming years? How will we generate and store the needed power without fossil fuels? The transition which is in progress will encounter friction from unanticipated sources
- We do have oil and gas wells which were drilled but not completed during the era of low price per barrel, and many of those are being completed to take advantage of current high price per barrel; crude oil prices are expected to remain on the high side for the foreseeable future, not dropping below \$80
- Stocks of crude oil are expected to go down in the near future as demand starts to return with falling gasoline prices-the market is at work here
- Gasoline has to go to \$10 per gallon to precipitate a rush to buying electric vehicles-gasoline prices have almost reached that level in California
- With the Ukraine war and overall energy markets, electricity costs are expected to soar in Europe this coming winter
- Since LNG is considered a 'green fuel'-for the moment-it is under high demand in Europe
- Oil companies are making lots of money but out of uncertainty about the future, they are hesitant to invest in more drilling and refineries; in anticipation of moving to green energy, refinery capacity in the US is down about 10%-the demand is there but the supply is not responding
- Supply chain/logistics problems are hampering new drilling worldwide
- Increased energy prices spread all through our economy, from agriculture production to delivery of goods across the economy
- Inflation in the US is affecting low income citizens more than any other class
- Some green initiatives are facing legal challenges by citizens and stockholders
- Long term we will have 'demand destruction' for carbon-based fuels