

Shock to the System

State's drive toward electric motors will likely run up costs while only running off businesses.

By T.L. Garrett Monday, November 12, 2012

Almost as soon as Edwin Drake put the first commercial oil well into production in Pennsylvania in 1859, the end of cheap oil was predicted. In 1949, Marion King Hubbert predicted that the world's petroleum production would rise to a peak and then just as quickly decline. While aggressive worldwide exploration and development of oil might have delayed the timing, other pressures to the future of oil are coming to the forefront.

The California Air Resources Board, in its Vision for 2012-2050 report, predicts a wholesale transition from fossil fuels by 2050. The South Coast Air Quality Management District is on record saying that nitrogen oxide emissions will have to be reduced by more than 90 percent to meet the legal requirements of the Clean Air Act. Natural gas, biofuels and synthetic fuels – all of them have greenhouse gas- and smog-forming emissions that eliminate them from meeting those goals. The only viable alternative is electric motors.

Assuming these views of an electric future come to pass, how will future power needs be met? We're not just looking at some nominal rate of growth – we're on the verge of a radical transition toward electrification.

Just think about how many devices you now plug in versus just a few years ago. For goods movement, the joint ports of Los Angeles and Long Beach estimate their power needs will quadruple by 2020 just to accommodate current regulatory requirements and planned development.

Meeting those future demands is not just a matter of building more power plants.

Sources of electricity must meet the dual mandates of supplying 33 percent of that electricity from renewable sources, like wind and solar, while reducing greenhouse gas emission to the level of 1990 by 2020. No doubt that the needs will be met. If it is one thing utilities are really good at, it is making sure that the service is provided to the end user. The one aspect that cannot be predicted is cost.

No known costs

There is also uncertainty about the technologies that will be used to meet these goals. The ports of Los Angeles and Long Beach achieved the goals of their Clean Truck Program, in which all trucks have been replaced or upgraded to meet 2007 emission standards or better. The estimated cost of this program is more than \$1 billion. Now this same truck fleet is being told that it isn't good enough, and that it now needs to transition to zero-emission technology. Unfortunately for the trucking industry, there is no clear technology, no clear consensus and absolutely no known costs.

One way to ensure that emission goals will be met is to regulate. Right now, there is a requirement that half of the container, cruise and refrigerated cargo vessels that call at California ports must connect their vessels to shoreside electrical power by 2014. That requirement increases to 80 percent by 2020. Failure of the vessel fleets to do so will result in significant fines.

Ports throughout California are diligently working on providing the necessary infrastructure to comply with the regulation and shipping lines are retrofitting vessels to comply. While some of the ports have negotiated favorable rates with the utilities, the simple fact remains that regardless of the cost, for these vessels to continue to call at California ports, the additional cost, unique to California, must be paid. Compliance is not optional, but selection of ports other than California's is.

And if you think that you won't be affected, keep in mind that the most liberal estimates say the goods movement industries in California create 20 percent of all emissions in the state. That means the remaining 80 percent of reductions must come from sources other than the goods movement industries.

The only way to achieve these reductions is to replace almost every internal combustion engine in California, like the car in your driveway. Whether you view it as social utopia or draconian control, unless the current regulatory climate is altered, the cost of living in California is going to be more expensive and our way of life is going to be radically different.

The end of oil is coming to California, brought to you and engineered by the state of California.

T.L. Garrett is vice president of the Pacific Merchant Shipping Association in Long Beach. The association represents port terminal operators and shipping lines.