

"Saudi Arabia has Peaked..."

Posted by Prof. Goose on April 19, 2007 - 11:30am

Topic: Supply/Production

Tags: saudi arabia [list all tags]

This a guest post by Alan Drake.

Tomorrow morning, as you are starting your first cup of coffee, you turn on the morning news to "In a surprise announcement last night, King Abdullah of Saudi Arabia announced that Saudi Arabia would not be able to increase oil production. He urged conservation by oil importing nations. Reaction has been ..."

After cleaning up a messy coffee stain and vainly trying to log onto TOD, what to do?

And what should, and will, the US and the rest of the world do?

Every responsible government will immediately raise gasoline taxes (this excludes the United States of America).

Switzerland will investigate how their 31 billion Swiss franc Alp Transit and related railroad improvements might be speeded up, completing the shift of freight from truck to (hydro).electric rail. Completion by 2020 does not seem quite so comfortable as it did yesterday. German standards for insulation in new construction are adopted and the push for more geothermal heat is intensified. Debate about a new nuclear plant starts anew.

Basically, Switzerland just speeds up along the path that they were already on.

Thailand will add wind turbines in the south to their Laotian hydroelectric projects and create a 95+% renewable electrical grid. They will pay the contractors building their extensive elevated Urban Rail system in Bangkok bonuses for completion ahead of schedule, the plans for more Urban Rail lines on the drawing board will be started ahead of schedule and streetcars will be built in smaller Thai cities and towns. Aid to small farmers to install manure fed bio-gas reactors for cooking gas and to fuel small tractors will be quadrupled and the national rail network will be improved and electrified with plans for expansion. Electrical assist bicycles and tricycles will be promoted as alternatives to motorcycles.

Basically, Thailand just speeds up along the path that they were already on.

And what of the USA?

I would suggest the following measures, divided into when the conservation effects will first become significant (most will grow in significance over time) and not when they are first implemented.

I would advocate only measures that improve Global Warming or at least, make it no worse.

I also see a North American natural gas crisis shortly after Peak Oil, so massive shifting from oil to natural gas is a poor strategy. However, there will be increased use of Natural Gas and Propane/Butane for transportation and this will require reduced natural gas use for generating electricity, and less NG as well as Propane/Butane for water heating and space heating in order to make available light hydrocarbons for transportation.

Immediate Savings -

National 50 mph speed limit for the next decade (likely to be renewed unless things turn out "better than expected").

Increase fuel tax on airlines for improved Air Traffic Control (higher taxes > less used)

Reduce mass transit fares via federal subsidy, especially off-peak (a dime?)

Put a 50% federal tax on all tolls, increasing tolls and commuting costs.

Reduce sports events parking and set up remote Park & Ride lots (some in near by cities).

A federal tax of 30% on private paid parking lots. (Higher parking fees increase car pooling and transit use).

Media campaign to promote walking, bicycling, taking transit and car pooling. Also promote 4 day work week (4 x 10 hours instead of 5 x 8 hours or even alternating 4 and 5 day weeks, 9 hours/day).

Short Term Savings (1 to 4 years in the future)

Enact a federal gasoline tax that increases at 3 cents/month for 25 years. The funds will be used to steadily reduce payroll taxes and Medicare premiums, depending upon the prior year gas tax receipts. Minimal initial pain due to taxes, but this will motivate people to start making long term structural changes.

Stop all new highway construction projects except HOV lanes

Enlarge bicycle parking and bike lanes, taking street traffic lanes in some cases.

Increase CAFÉ by 50% immediately coupled with Gas Guzzler taxes on any new vehicle under 27.5 mpg (modest tax at 27 mpg, prohibitive at 18 mpg). Further increases in CAFÉ 4 years later.

Have the US Gov't assist the merger of GM & Ford, as it once assisted Chrysler.

Add a federal "Gas Guzzler" tax to license tag renewals to speed scraping of oversized SUVs. Etc.

Revoke authorization for all Bus Rapid Transit projects not actively under construction. Either rework as streetcar or electric trolley buses or postpone for a decade.

Build more vehicles for existing Urban Rail lines on a crisis "3 or 4 shift" basis. Many more rail cars for Amtrak as well but on a slightly less urgent and more economic basis.

Increase incentives for ground source ('geo-thermal') heat pumps to replace oil and natural gas heat. (Air source along the Gulf Coast). Encourage localities to require for new construction. Low cost federal funding for a fraction of the cost is one option.

Increase incentives for solar water heating and require it in some cases for new construction (such as rental units). Low cost federal funding for a fraction of the cost is one option.

Continue incentives for tankless gas and propane water heaters.

Require rental units to replace hot water heaters with tankless, solar or heat pump hot water heaters.

Require minimum energy efficiency on new rental unit construction.

A federal tax of \$200/space/year for commercial parking lots, increasing to an inflation adjusted \$1,000/space/year. This will speed changes in our urban form to a more energy efficient form and provide funds for tax cuts and spending initiatives elsewhere.

Extend the wind and other renewable tax credits several years into the future with a slow phase out instead of the current abrupt cut-off (the risk of abrupt cut-off inhibits building new wind turbine factories). The subsidy during the Phase out period can be increased later as events warrant.

An 80 cent tax on each incandescent bulb.

Intermediate Savings (5 to 12 years in the future)

Start construction ASAP (within 1 to 3 years) of "on-the-shelf" Urban Rail plans listed in appendix.

Any freight railroad that electrifies will be exempt from property taxes. This will also encourage additional infrastructure. (more tracks, better signals, more grade separation) since the railroads will not have to pay property taxes on improvements. Perhaps tax credits or low interest loans (via federal guarantees) for electrification and capacity increases.

Amtrak can allocate \$2 billion/year to freight railroads that will increase capacity via tracks and signals that will, in turn, speed Amtrak trains.

Require that rental units meet certain energy efficiency standards before being sold (an idea borrowed from Germany). This may lead to a faster change in our urban form.

Work with Hawaii, Puerto Rico, Alaskan villages and small islands to reduce oil used for electrical generation.

Improved Air Traffic Control reduces aviation fuel use by 3% or so.

Long Term Savings (13 to 50 years in the future)

Stop all new highway construction, including HOV lanes and remove selected urban highways.

Build a network of semi-High Speed Rail lines that service both passengers (at say 125 mph top speed, 110 mph average speed) and express freight at 100 mph on electrified rail lines.

Encourage, via property tax exemptions, tax credits and low interest loans the development of

long distance HV DC transmission lines and pumped storage as long as these projects are linked to renewable generation (mainly new wind turbines).

Explore bio-sources to replace selected petrochemical feedstocks.

Install electric trolley buses on heavy bus routes that are not appropriate for streetcars or light rail.

Add a "risk premium" to federally funded or guaranteed mortgages that are more than 1 mile from a stop or station for electrified transportation (rail or bus).

The above is a diverse set of government led actions, the free market will respond in a variety of ways to both higher oil prices and government actions.

Are any of these bad ideas with negative unintended consequences? What other actions can be made at a government policy level? And should you skip breakfast and go immediately to the nearest gas station and fill up the car?

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