

*Solutions to Peak Oil
Vulnerabilities: A Response Plan
for Lawrence, Kansas*

Lawrence Mayor's
Peak Oil Task Force
2011

Peak Oil

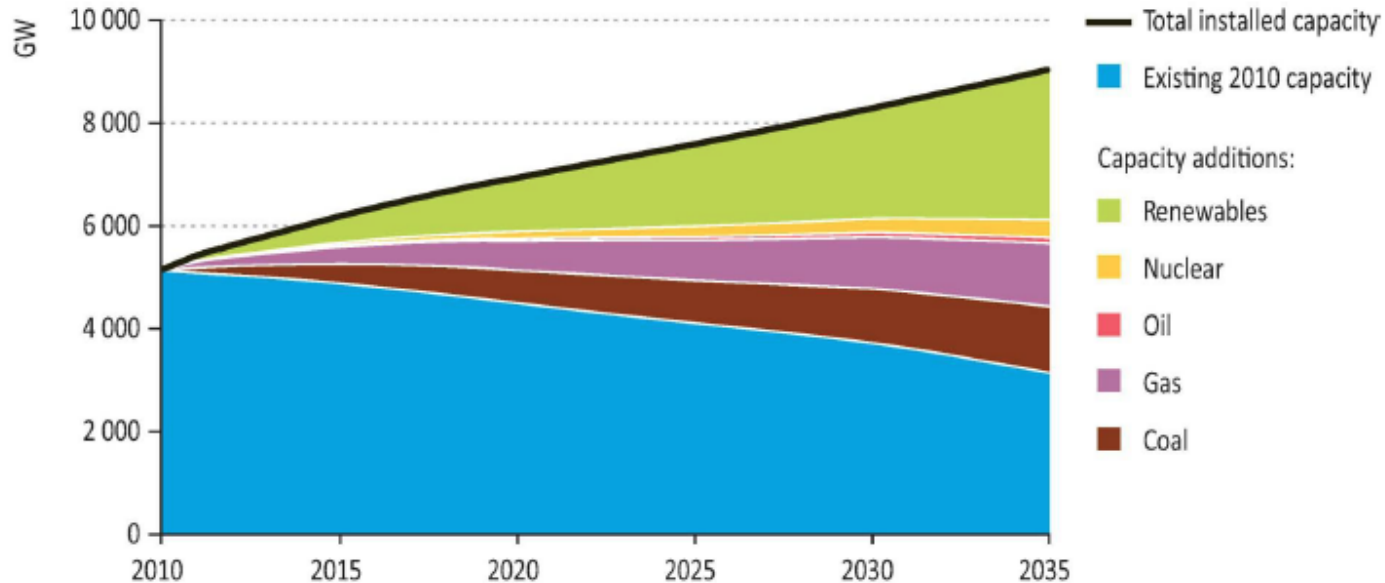
- ★ Peak oil does not mean the end of oil, but the end of cheap oil.
- ★ In 2006, the United States Department of Energy defined “peak oil” as “the theory that the world’s oil production rate will reach a maximum and then decline.”
- ★ “The world is not running out of oil -- at least not yet. What our society does face, and soon, is the end of the abundant and cheap oil on which all industrial nations depend.” -- DOE, 2006

Peak Oil - 2007 Estimates

- ★ Geological Society of America Before 2010
- ★ *Oil & Gas Journal* Before 2010
- ★ Merrill Lynch Before 2020
- ★ Volvo Before 2020
- ★ German Government Before 2030
- ★ “Most studies estimate that oil production will peak sometime between now (2007) and 2040.”
-- U.S. GAO

Worldwide Estimates

Figure 5.11: Global installed power generation capacity and additions by technology in the New Policies Scenario



Renewables and nuclear power account for more than half of all the new capacity added worldwide through to 2035

Solutions?

✦ The International Energy Agency has proposed four strategies to address oil shortages:

- ✦ 1. Reducing demand
- ✦ 2. Switching fuels
- ✦ 3. Stockpiling emergency reserves
- ✦ 4. Increasing extraction

Report's Conclusions

- ★ 1. Worldwide demand for oil soon will exceed known worldwide supply and extraction rates.
- ★ 2. Oil and oil-related products will become increasingly expensive and difficult for communities to procure.
- ★ 3. Lawrence is vulnerable to peak oil challenges in (1) transportation; (2) food supply; (3) water, waste water, and solid waste treatment; (4) energy delivery; and (5) communications.

Report's Conclusions

- ✦ 4. Reducing local demand will be Lawrence's most immediately effective strategy for coping with peak oil challenges.
- ✦ 5. Lawrence should initiate adaptive measures before the need becomes severe.
- ✦ 6. Communication of challenges and solutions is key to success.

Report's Top Recommendations

- ★ 1. Continue to implement fuel reduction policies and programs for the municipal fleet, such as route management, telecommuting, electric vehicles, and anti-idling measures.
- ★ 2. Continue to develop and implement policies that facilitate efficient transportation design and planning, including a “Complete Streets” program and promotion of alternative fuel technologies.

Report's Top Recommendations

- ★ 3. Commit to a growth pattern that supports mixed-use developments that are compact and sustainable with convenient accessibility for biking and walking.
- ★ 4. Continue to work with local and regional partners (e.g., Topeka, Kansas City, Johnson County, Mid-America Regional Council) to enhance and promote services that integrate public transit into a regional transportation plan.

Report's Top Recommendations

- ★ 5. Redraw the City's Urban Growth Area boundaries to preserve high quality soils for agricultural uses.
- ★ 6. Add edible landscape features, such as fruit trees, nut trees, and community gardens, to City Parks and Recreation horticulture plans.
- ★ 7. Partner with the Chamber of Commerce and economic development interests to aggressively recruit businesses engaged in research and manufacturing of renewable energy technologies.

Report's Top Recommendations

- ✦ 8. Create incentives for local producers and consumers to reduce solid waste through volume-based charges for residential waste.
- ✦ 9. Reduce Lawrence's water consumption (and related energy expenditures) through measures such as inverted rates (i.e., charging more per unit for higher use).
- ✦ 10. Inform citizens about potential peak-oil related challenges; guide community on how to respond and prepare.