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## **A well-rounded plan is key to solving energy issues**

By C. John Mann

The U.S. cost of living is rising. Much of this increase has been driven by escalation in the price of oil and natural gas. As I see it, a nonexistent U.S. energy policy is responsible for both problems. A comprehensive policy is essential. It is going to take a combination of conservation, greater production of dependable energy resources, and common sense to do it.

The idea that conservation could fuel economic growth might have seemed improbable at one time. But it no longer does. For the last 20 years or so, energy use in California has been flat, but the state's economy has continued to expand. The reason is that California has used incentives to help reduce waste in energy use and develop more energy-efficient technologies. Time-of-day pricing to cut peak demand for electricity is but one example of a conservation policy that the Midwest should emulate. Home energy audits and tax incentives for better insulation and more efficient heating and cooling systems is another.

Higher gasoline prices buttress the case for energy-efficiency gains in transportation. A shift to automobiles with better gasoline mileage is under way. But the full benefits of advanced automotive technologies won't be realized until plug-in electric vehicles begin to make a dent in the market. That will require continuing improvements in battery technology and availability of service stations to recharge batteries. If energy for recharging is provided by clean nuclear-generated electricity, the economic and environmental benefits would be huge.

We need to boost production of our principal energy sources, if we hope to reduce our dependence on imported oil and keep a lid on energy prices. A necessary and unavoidable part of the solution is to open up untapped U.S. oil and natural gas deposits for production, increase use of nuclear power, and foster development of clean-coal technologies, particularly systems for capturing and storing carbon dioxide emissions in deep underground formations.

This is where Congress needs to stop dithering and take action. U.S. government agencies estimate that 116 billion barrels of oil and 651 trillion cubic feet of natural gas lie beneath

federal lands and coastal waters. That is enough oil and natural gas to help meet U.S. energy needs for decades. Even larger amounts of oil shale exist in Western states. But Congress has yet to permit access to these resources. Reducing our nation's dependence on imported oil and, increasingly, natural gas will be impossible without a combination of both conservation and opening up domestic hydrocarbon resources to production.

The devil is in the details. For example, instead of coming up with a balanced energy plan, a group of 10 senators recently proposed access to federal oil and gas resources that is too limited in scope. Although their plan would expand access in 85 percent of the Outer Continental Shelf that remains closed to oil and gas production, it limits any expansion to the eastern Gulf of Mexico and waters off four Atlantic Coast states in the South where petroleum deposits are known to exist. Even in those areas, drilling for oil and gas in federal waters less than 50 miles offshore would be banned, though wide agreement exists that offshore facilities beyond 12 miles can't be seen from shore. Under the plan, oil and gas in the North Atlantic and Pacific would remain off-limits, as would substantial resources in Alaska.

Imposing punitive taxes on oil companies to pay for solar and wind energy is nonsensical. This so-called bipartisan energy plan calls for \$30 billion in a "windfall oil-profits tax," but it would have the opposite effect of the one intended, as clearly demonstrated four decades ago when a similar tax was levied during the Carter administration. Simply put, the tax idea would boomerang. Additional taxes on U.S.-based oil companies, which already pay taxes that are four times greater than company profits, would drastically cut capital that otherwise would be invested in domestic oil and natural gas production and expanded refinery capacity. The result would be increased dependence on foreign oil and gas, while diminishing national security, harming American consumers, and jeopardizing U.S. manufacturing jobs.

Nor can we afford to turn our back on coal and nuclear power, in an expectation that renewable sources can meet our current and future energy needs. Solar and wind combined account for less than 3 percent of U.S. electricity production currently. Solar and wind are intermittent energy sources that require the right weather conditions. If the sun isn't shining or the wind isn't blowing, backup power must be supplied by fossil fuels.

New advances in clean-coal technology are on the horizon. In that regard, it would be folly for Congress to force the regulation of carbon dioxide emissions from coal plants before technology has been developed to capture and store such emissions. If Congress requires companies to adopt a fraudulent "cap-and-trade" system for carbon emissions, the cost of electricity from coal plants would soar, forcing many utilities to switch to high-priced natural gas.

For energy diversity and security, we need more nuclear power. In Illinois and around the country, nuclear safety and reliability have increased significantly over the past two decades. Nuclear plants in Illinois are now running more than 90 percent of the time, producing more electricity than ever before. In 2007, national production costs for

nuclear-generated electricity, on average, were just 1.7 cents per kilowatt-hour (kwh), compared to 2.3 cents for coal, 6.7 cents per kwh for natural gas, and 9.6 cents for oil, and more than five times as much as nuclear power. With this year's increase in fossil fuel prices, nuclear power's advantage has increased.

Nuclear power plants yield an added dividend: They produce no air pollution or greenhouse-gas emissions.

Considering that our country is spending \$700 billion a year on imported oil, it would be foolish not to make maximum use of all U.S. energy resources. Expanding access to untapped oil and natural gas on the U.S. Outer Continental Shelf and Alaska, while pursuing new advances in clean-coal technology and nuclear power, is in everyone's interest. With advanced technologies, energy conservation and improvements in energy efficiency, the United States could move within reach of total energy independence.

C. John Mann is professor emeritus of geology at the University of Illinois at Urbana-Champaign.

# THE PANTAGRAPH

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A comprehensive policy is essential. It is going to take a combination of conservation, greater production of dependable energy resources and commonsense to do it.

The idea that conservation could fuel economic growth might have seemed improbable at one time. But it no longer does.

For the last 20 years or so, energy use in California has been flat, but the state's economy has continued to expand. California has used incentives to help reduce the waste in energy use and develop more energy-efficient technologies.

Time-of-day pricing to cut peak demand for electricity, energy audits and tax incentives for better insulation and more efficient heating/cooling systems are examples the Midwest should emulate.

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If energy for recharging batteries is provided by clean nuclear-generated electricity, the economic and environmental benefits would be huge.

We need to boost production of our principal energy sources. A necessary part of the solution is to open up untapped U.S. oil and natural gas deposits for production, increase use of nuclear power and foster development of clean-coal technologies.

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