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A Global Strategic Assessment
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## Global Energy Insecurity & The Department of Defense

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Global Energy Insecurity

&

The Department of Defense

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Widespread feeling that our energy system is in a state of crisis

“Solving our energy crisis will be one of the great projects of this generation”

Barrack Obama

“We now know that fossil fuel emissions, by retaining heat within the atmosphere, threaten disastrous changes in climate” John McCain

"There's an energy tsunami coming, and when you see it coming you better get on top of the wave, or you're going to get crushed by it” James Jones

Russia’s “temptation to use energy resources for political coercion” Robert Gates

“The future of the United States, will be threatened if nothing is done to seek solutions to the nation's energy crunch” George Bush

Why all this concern about energy?
There are three simultaneous crises

1. Global warming crisis
   - Ecological catastrophe
   - Diplomatic nightmare

2. High/Unstable Prices
   - High prices at the pump
   - Unstable investment
   - Trillions to dictators
   - Prices forecast to rise

3. Strategic conflict crisis
   - Petro-dictatorships
   - Russian energy blackmail

Why are these different crises hitting at the same time?
Solutions to one crisis mobilizes opposition from those concerned about the others...

<table>
<thead>
<tr>
<th>Climate Change</th>
<th>High/Unstable Prices</th>
<th>Strategic Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raise the price of carbon</td>
<td>Lower the price of fuel</td>
<td>Ensure secure supply</td>
</tr>
<tr>
<td>Create clean energy infrastructure</td>
<td>Create efficient energy infrastructure</td>
<td>Expensive liquid NG infrastructure</td>
</tr>
<tr>
<td>Develop clean alternative liquid fuels</td>
<td>Develop cheap alternative liquid fuels</td>
<td>Develop plentiful alternative liquid fuels</td>
</tr>
<tr>
<td>Reduce demand</td>
<td>Reduce demand</td>
<td>Reduce demand</td>
</tr>
<tr>
<td>Push China on climate change</td>
<td>Make deals with petro-dictators</td>
<td>Form alliances vs. Russia</td>
</tr>
</tbody>
</table>

But conflicting crisis solutions only explain part of the problem
A big part of the problem is that Washington is simply moribund...

NIMBY

Interest politics

Power plays

Pork

Ideological science

Outdated fears

We are stuck and need innovative new solutions
Perhaps the biggest problem is that creating new markets is tough

- Large scale innovation has high startup costs and is financially risky
  - Asking industry to take the lead would be like asking AT&T in 1940 to invent rockets so that one day it could use communication satellites

- “If I had asked people what they wanted, they would have said faster horses.” Henry Ford

Congress, labs, think tanks, and interest groups are working on this but let’s talk about the Department of Defense
The military has often played a role in finding solutions to big problems

- It is able to overcome startup costs and risk too large for private industry

<table>
<thead>
<tr>
<th>Project</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Manhattan Project</td>
<td>Nuclear energy</td>
</tr>
<tr>
<td>Atlas Rocket Project</td>
<td>Commercial space</td>
</tr>
<tr>
<td>ARPANET</td>
<td>Internet</td>
</tr>
<tr>
<td>Military computing</td>
<td>Personal computers</td>
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What is the Department of Defense doing about energy?
Each of the services has an energy strategy

Goals and projects include:
- Technologies and practices to reduce energy use
- Placing renewable energy generation on bases
- Developing alternative liquid fuels
- Creating “green” cultures

DOD’s energy efforts may end up being some the most effective solutions to the energy crises