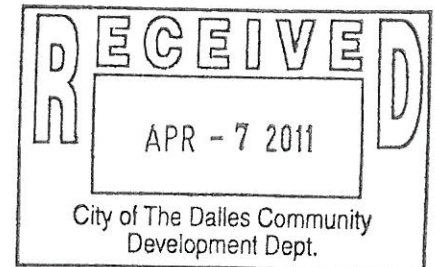


COPY

Exhibit #1

Mark Radabaugh
P. O. Box 1108
The Dalles, Oregon 97058
April 7, 2011

The Dalles Planning Commission
The Dalles City Hall
313 Court Street
The Dalles, Oregon 97058



11:50 ~~pm~~
am

Attention: Dick Gassman, Senior Planner

Subject: **Public Hearing on Periodic Review matters**

- 1) **Revised Economic Opportunities Analysis**
- 2) **Proposed Comprehensive Plan and LUDO amendments**

Dear Planning Commissioners:

I received notice of the Commission's public hearing on April 4, 2011 and have completed an overview review of the revised Economic Opportunities Analysis (EOA) and Comprehensive Plan text and polices. These revisions appear to stem from earlier work done in the 2007 period and are now part of the city's overall periodic review. Going forward, three major issues stand out as unresolved and therefore incomplete.

First, there are remaining periodic review tasks that will very likely have a significant effect on the nature and outcome of your current review. These include, but are not limited to the integrated role and impact of 1) cultural resource management within any expanded urban growth boundary (UGB) area, 2) consideration of different land use proposals in conjunction with public facility capacity, both within the existing urban framework and UGB expansion area, and 3) ability to meet requirements of the Columbia River National Scenic Act of 1986 and its ensuing regulations.

Second, it is imperative that the city do everything it can to use its urban land use and transportation framework as effectively as possible, not just because of state and NSA requirements to do so, but because serious problems with oil and related energy pricing and availability that will dramatic hinder development and redevelopment if it is designed as if energy resources were to continue to be available as they have been during the city's recent planning periods.

The revised Comprehensive Plan's energy element provides some discussion of tools like integrated transit and land use planning that appear intended to move the city towards dealing with these energy problems, but does not provide direction that would implement key ideas

within the Plan and city's land use framework. The Planning Commission needs to understand that the energy problem will be a continuous event, once supplies of oil peak (which some say has already happened), and will certainly impact most of the 20-year planning timeframe upon which the EOA and Comprehensive Plan are based. Unfortunately, the city, like its state counterpart, still builds projections of land needs without meaningful consideration of the role of reduced oil and significant change to other key energy supplies. The impact of not doing so will deny meaningful discussions and development of potential short- to long-term strategies, including local contingency plans, which become key keeping our community structure intact and relatively cohesive.

To assist the Commission and city in thinking longer-term about this energy problem and how we might better use the planning process to help partially mitigate certain parts of the problem, the following three documents are attached:

1. "US military Warns Oil Output may Dip Causing Massive Shortages by 2015", Guardian, April 11, 2010.
2. "Oil Supply Crunch: 2011-1015". Energy Bulletin, April 15, 2010.
3. Local Government in a Time of Peak Oil and Climate Change, John Kaufmann, Post Carbon Institute, 2010.

Together, these documents should provide some fuel for further Commission and city discussion.

Third, given importance and gravity of the above matters and their remaining need to be developed and integrated into the city's proposed revisions, the city should initiate an extended period of more open discussion and dialogue with the community during its periodic review than appear to have occurred to date. The Dalles does have very significant opportunities, and has done well to advantage itself in the past. But the horizon of the future will be very different than that of the recent past and there will be no denying of this in the coming years.

Unfortunately, I cannot attend this evening's public hearing, but would request that this letter and its attachments be incorporated as part of the record for this matter.

Sincerely,



Mark Radabaugh

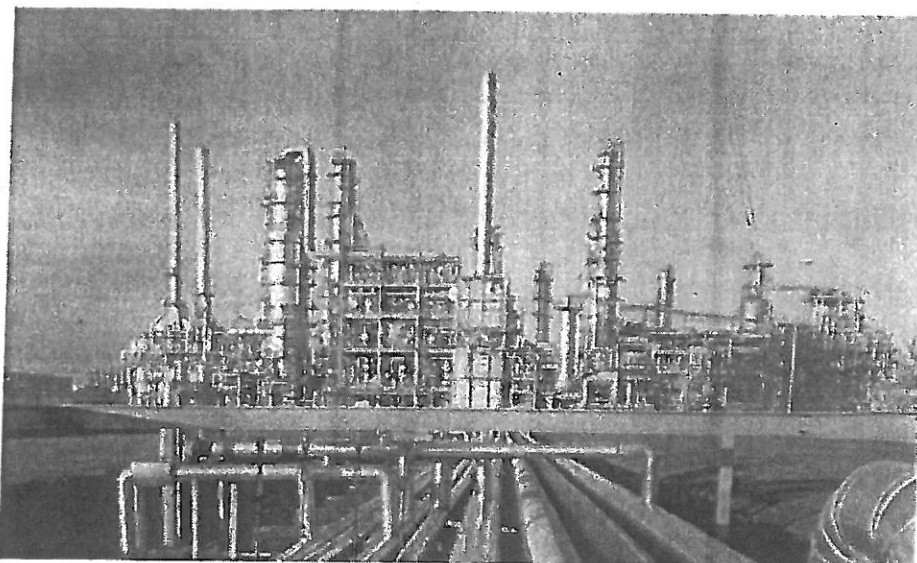
Attachments (3)

Cp:

US military warns oil output may dip causing massive shortages by 2015

- Shortfall could reach 10m barrels a day, report says
- Cost of crude oil is predicted to top \$100 a barrel

- Terry Macalister
- guardian.co.uk, Sunday 11 April 2010 18.47 BST



Surplus oil production capacity could disappear by 2012 a report from US Joint Forces Command, says. Photograph: Katja Buchholz/Getty Images

The US military has warned that surplus oil production capacity could disappear within two years and there could be serious shortages by 2015 with a significant economic and political impact.

The energy crisis outlined in a Joint Operating Environment report from the US Joint Forces Command, comes as the price of petrol in Britain reaches record levels and the cost of crude is predicted to soon top \$100 a barrel.

"By 2012, surplus oil production capacity could entirely disappear, and as early as 2015, the shortfall in output could reach nearly 10 million barrels per day," says the report, which has a foreword by a senior commander, General James N Mattis.

It adds: "While it is difficult to predict precisely what economic, political, and strategic effects such a shortfall might produce, it surely would reduce the prospects for growth in both the developing and developed worlds. Such an economic slowdown would exacerbate other unresolved tensions, push fragile

and failing states further down the path toward collapse, and perhaps have serious economic impact on both China and India."

The US military says its views cannot be taken as US government policy but admits they are meant to provide the Joint Forces with "an intellectual foundation upon which we will construct the concept to guide out future force developments."

The warning is the latest in a series from around the world that has turned peak oil – the moment when demand exceeds supply – from a distant threat to a more immediate risk.

The Wicks Review on UK energy policy published last summer effectively dismissed fears but Lord Hunt, the British energy minister, met concerned industrialists two weeks ago in a sign that it is rapidly changing its mind on the seriousness of the issue.

The Paris-based International Energy Agency remains confident that there is no short-term risk of oil shortages but privately some senior officials have admitted there is considerable disagreement internally about this upbeat stance.

Future fuel supplies are of acute importance to the US army because it is believed to be the biggest single user of petrol in the world. BP chief executive, Tony Hayward, said recently that there was little chance of crude from the carbon-heavy Canadian tar sands being banned in America because the US military like to have local supplies rather than rely on the politically unstable Middle East.

But there are signs that the US Department of Energy might also be changing its stance on peak oil. In a recent interview with French newspaper, Le Monde, Glen Sweetnam, main oil adviser to the Obama administration, admitted that "a chance exists that we may experience a decline" of world liquid fuels production between 2011 and 2015 if the investment was not forthcoming.

Lionel Badal, a post-graduate student at Kings College, London, who has been researching peak oil theories, said the review by the American military moves the debate on.

"It's surprising to see that the US Army, unlike the US Department of Energy, publicly warns of major oil shortages in the near-term. Now it could be interesting to know on which study the information is based on," he said.

"The Energy Information Administration (of the department of energy) has been saying for years that Peak Oil was "decades away". In light of the report from the US Joint Forces Command, is the EIA still confident of its previous highly optimistic conclusions?"

The Joint Operating Environment report paints a bleak picture of what can happen on occasions when there is serious economic upheaval. "One should not forget that the Great Depression spawned a number of totalitarian regimes that sought economic prosperity for their nations by ruthless conquest," it points out.

Oil Supply Crunch: 2011-2015

Published Apr 15 2010 by Energy Bulletin, Archived Apr 15 2010

by Rick Munroe

Concerns are mounting about peak oil, and there continues to be much debate over when the peak will be reached, whether a plateau can be sustained or whether the onset of decline would occur quickly, whether we will hit peak demand before we hit peak supply, etc.

There is convincing evidence that conventional oil production has already peaked, since we have been stuck at around 74 mbpd for over half a decade (despite the incentive of record high prices).

There also seems to be growing consensus that global liquids production (currently around 86 mbpd) is likely to peak within the next decade and almost certainly at less than 95 mbpd.

(Mainstream opinion a few years ago predicted no peak before 2030, with output at 130 mbpd.)

However, there are increasing warnings about an "oil supply crunch" within the next few years, not because of geological constraints, but because of under-investment.

These warnings began just over two years ago, yet the mainstream media have rarely mentioned them, so the public remains largely unaware.

Listed below is a chronology of some of these warnings, with URL links to the original sources.

One of the first warnings came from the chief economist of the International Energy Agency, Fatih Birol in the summer of 2007 and then reiterated in Nov. 2007, cited here:
<http://www.davidstrahan.com/blog/?p=73>

In May 2008 the Wall Street Journal ran an article entitled, Energy Watchdog Warns of Oil Supply Crunch:
<http://online.wsj.com/article/SB121139527250011387.html>

This was followed by a study from Chatham House, a highly regarded think-tank in the UK. In August 2008, it published a paper entitled The Coming Oil Supply Crunch in which author Paul Stevens predicted a shortage within the next 5-10 years. His 40-page study (which includes a May 09 reaffirmation of his 08 prediction) is available here:
<http://www.chathamhouse.org.uk/publications/papers/view/-/id/652/>

On Nov. 15, 2008 the International Energy Agency released its annual World Energy Outlook, which was something of a bombshell. The IEA, which had been quite dismissive of peak oil, suddenly warned, "What is needed is nothing short of an energy revolution... the era of cheap oil is over... time is running out..."

It further warned, "Some 30 mb/d of new capacity is needed by 2015. There remains a real risk that under-investment will cause an oil-supply crunch in that timeframe" (WEO, Executive Summary, p. 7).

The Executive Summary of the 2008 WEO is available here:

http://www.worldenergyoutlook.org/docs/weo2008/WEO2008_es_english.pdf

The release of the 2008 WEO was quickly followed by George Monbiot's recorded interview with Mr. Birol and this article in The Guardian (Dec. 08):

<http://www.guardian.co.uk/business/2008/dec/15/oil-peak-energy-iea>

In August 2009 the IEA's chief economist again mentioned the likelihood of an oil supply crunch, this time indicating that it could occur any time after 2010:

<http://www.independent.co.uk/news/science/warning-oil-supplies-are-runni...>

In October 2009 Global Witness in the UK released its Heads in the Sand study which addressed government inaction on peak oil. This study also warns of a potential 7 mbpd gap between supply and demand by 2015 (p. 7 & 36):

http://www.globalwitness.org/media_library_detail.php/854/en/heads_in_th...

In Dec 2009 the CEO of Petrobras made a presentation in which he predicted an oil supply crunch for 2012 and 2013 (see figure 6 here):

http://canada.theoil Drum.com/pdf/theoil Drum_6169.pdf

In Feb. 2010 the UK Industry Task Force on Peak Oil & Energy Security (ITPOES) released its second report. ITPOES analyst Chris Skrebowski predicts a loss of spare capacity and a price spike "as early as 2012/2013 and certainly no later than 2014/2015" (p. 15).

<http://peakoiltaskforce.net/>

On Feb. 18, 2010, the US Joint Forces Command issued its Joint Operating Environment (JOE) which warned that "By 2012, surplus oil production capacity could entirely disappear, and as early as 2015, the shortfall in output could reach nearly 10 MBD" (p. 29). A review of the 2010 JOE (with link to the original) is available here: <http://www.energybulletin.net/node/52029>

In March 2010 the Financial Times mentioned a crunch "in the middle of this decade" and blamed it on uncertainties caused by biofuels policies:

<http://www.ft.com/cms/s/0/ea030306-26e8-11df-8c08-00144feabdc0.html>

Also in March we had the chief scientist for the UK quoted as saying, "We're talking supply not meeting demand in 2014-2015":

<http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/7500669...>

In April 2010 the Guardian (UK) cited the US JOE report and raised an interesting question: why are warnings over near-term oil supply (in the 2012- 2015 time-frame) being issued by the US Department of Defense, while the civilian Department of Energy has issued no such warning?

<http://www.guardian.co.uk/business/2010/apr/11/peak-oil-production-suppl...>

As the above information indicates, these warnings are numerous, consistent in their time-frame, and from highly credible sources.

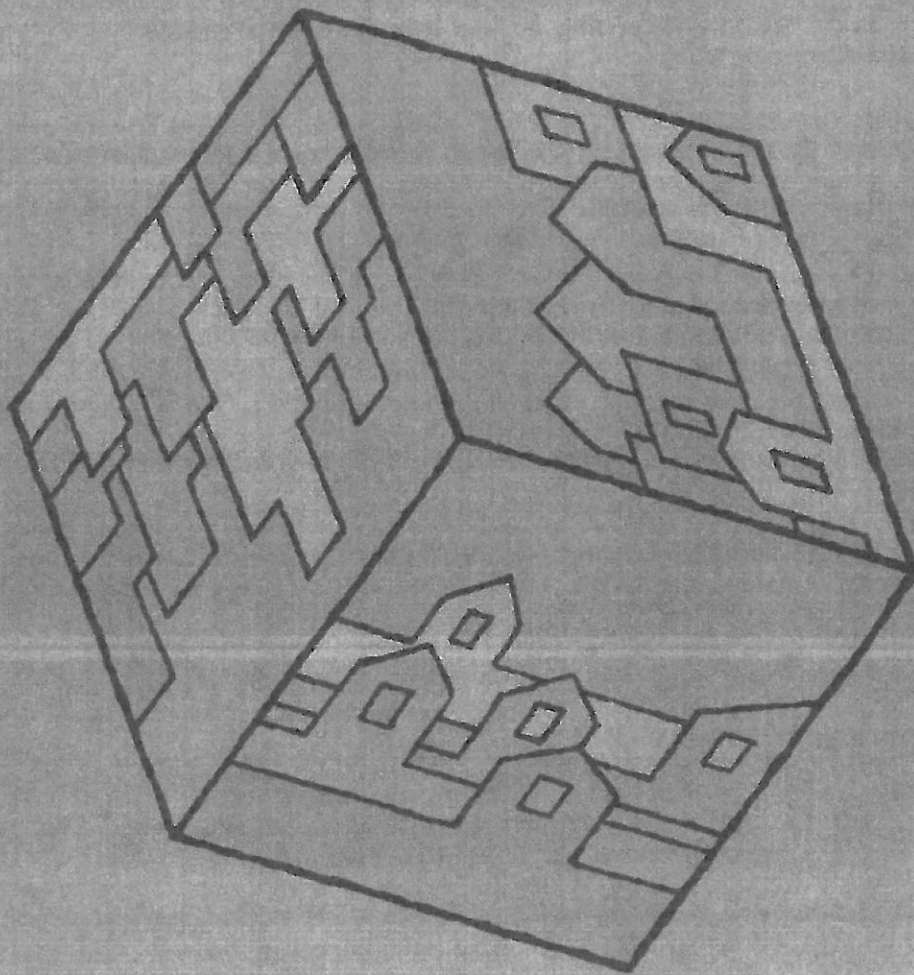
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The Post Carbon Reader Series: Cities, Towns, and Suburbs

Local Government in a Time of Peak Oil and Climate Change

By John Kaufmann



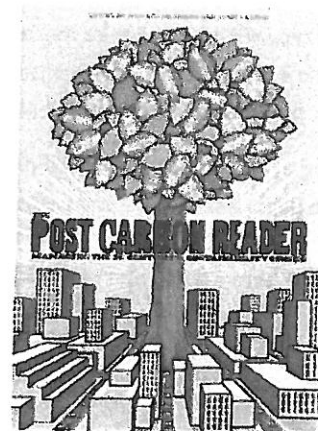
About the Author

John Kaufmann was lead staff for the City of Portland's groundbreaking Peak Oil Task Force. John worked with the Oregon Department of Energy for twenty-nine years, helping to make Oregon a national leader. He received the Professional Achievement Award from the American Planning Association Oregon Chapter for getting 26 jurisdictions in the Portland Metro Area to jointly adopt solar orientation and solar rights ordinances, and received the 2009 Energy Manager of the Year Award from the Association of Professional Energy Managers–Oregon. He currently is Senior Buildings Energy Manager for the Pacific Northwest National Laboratory. Kaufmann is a Fellow of Post Carbon Institute.



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This publication is an excerpted chapter from *The Post Carbon Reader: Managing the 21st Century's Sustainability Crises*, Richard Heinberg and Daniel Lerch, eds. (Healdsburg, CA: Watershed Media, 2010). For other book excerpts, permission to reprint, and purchasing visit <http://www.postcarbonreader.com>.

There are things that can and should be done to address peak oil and climate change at all levels of government.

Government is an orphan—few people, it seems, support it. Over the past few decades Americans have become increasingly cynical and jaded about their government. They complain about taxes. They complain about poor service and government waste. They want government off their backs and out of their lives.

And yet, they still expect government to be there when it's a service they want or need. Many responses to peak oil urge individual and community solutions, ignoring government. They argue that since government hasn't done anything to address the problem, citizens and businesses must take matters into their own hands. Some even argue that government is part of the problem, particularly federal and state governments.

This attitude is shortsighted. While it may be true that government has been slow to respond to peak oil and climate change, it nevertheless has a vital role to play. There are many things a government can do that an individual or community cannot do. As Abraham Lincoln said:

The legitimate object of government is to do for a community of people whatever they need to have done, but cannot do at all, or cannot so well do, for themselves, in their separate and individual capacities.¹

There will always be a need for the things government does. Rather than walk away from government, we should work toward ensuring that it serves our needs.

The Role of Government

In U.S. democracy, authority is divided among several levels of government. The three main levels are the federal government, fifty state governments, and tens of thousands of local (primarily municipal and county) governments. In addition, there are special districts—such as school districts, housing authorities, port authorities, transit districts, and water and irrigation districts—many of which have elected governing structures and the authority to raise revenues.

There are things that can and should be done to address peak oil and climate change at all these levels of government. Moreover, there are things one level of government may be able to do that the other levels can't do. The transportation system is a great example of a service that is, by necessity, implemented at different levels. From pedestrian crosswalks to international airports, local, state, and federal agencies are all involved in some aspect of transportation planning, design, funding, construction, and maintenance.

There are also many things that can be done at the community level by local grassroots organizations, including religious organizations, charitable organizations,

affinity and advocacy groups, the Transition Towns movement, and others. These groups help prepare people at the individual and neighborhood level, and promise to help keep crucial social support networks in place. But while they are necessary pieces of the puzzle, they are not sufficient. They can complement government, but they will not replace it.

What are those things that the people “cannot do at all, or cannot so well do, for themselves” and thus need government’s attention? The main functions of modern government now include:

- Provide *security* and protect *public order*. At the local level this includes primarily police and fire services.
- Administer *justice and fairness*. This includes not just the courts, but the authority to set rules protecting basic rights and opportunities in such things as employment, housing, education, and health.
- Provide *essential services and infrastructure* that are best done in common, such as roads, water, wastewater treatment, public health, parks, and education.
- Provide for the *public welfare*. Ensure that citizens’ minimum needs are met, such as water, food, shelter, transportation, and economic opportunity.
- Provide an environment conducive to *economic prosperity*. There is considerable disagreement about how this might be accomplished, but there is broad agreement on the goal.
- Protect the *commons*. There is general acceptance about government’s responsibility to protect and manage that which is of necessity shared, although there is considerable disagreement over the means, and how far that responsibility extends. The commons includes natural resources like air and water, cultural resources like historically important monuments and documents, and even intangible resources like the electromagnetic spectrum (for wireless communications).



Failure to provide these services at some level will ultimately lead to myriad social problems—crime, unemployment, homelessness, hunger, disease, environmental degradation.

The Challenges Facing Governments

The two main challenges governments will face in the post-carbon future are:

1. How to maintain order and basic services during a time of economic contraction, when demand for services is rising and revenues are shrinking.
2. How to use governmental powers to enable, foster, support, and lead the transition to a more resilient world.

The impacts of peak oil and climate change will vary from region to region, state to state, and city to city. Specific impacts will depend on location, geography, natural resources, population size, and many other factors, but all have one thing in common—they will all be manifest in the local economy.

Peak oil and climate change are energy problems: Both are driven by our high use of fossil fuels. Society as a whole must reduce its use of these fuels; unfortunately, at this time, all alternatives are less energy dense and less productive than fossil fuels.² Unless and until that

changes, it will cost more to make and move things. We will be spending more of our individual and national incomes on energy, and less on other goods. The result will be a decline in economic activity, possibly accompanied by inflation or even stagflation, where recession and inflation occur simultaneously, as they did during the energy crisis in the 1970s.

How does this affect local government? During economic recessions and depressions, people have less money for food, housing, utilities, health care, and transportation. Demand for government services increases, but at the same time, government tax revenues typically decline. This exact scenario played out during the 2008–2010 national economic downturn as states from coast to coast faced massive budget shortfalls, causing many to cut services and even—in the case of California—to issue IOUs to creditors.

There are many things governments at all levels can do to meet these challenges. But perhaps even more important, there are several things that will be limited or ineffective in addressing the magnitude of the problem:

- *Preserving the status quo.* We know the status quo won't work. Revenues to do things will be shrinking at a time when demand for services will be increasing.
- *Increasing taxes.* Raising taxes to provide increased public services is difficult even in the best of economic times. It will be virtually impossible during a time of economic contraction, when people are struggling to pay their mortgages, heat their homes, pay for medical care, and put food on the table and gas in their tanks.
- *Focusing only on reducing energy waste, improving internal operations, and providing services more efficiently.* State and local government accounts for about 5 to 10 percent of energy use in this country, and energy represents only a small part of governmental expenses. Governments must do everything they can to reduce their energy use and operate more efficiently, but the improvements likely will not be enough to offset both rising energy costs and shrinking revenues.
- *Focusing only on increasing energy supplies.* We need to find alternatives to fossil fuels, but we cannot focus exclusively on supply—we must also significantly reduce how much we use. Alternative energy sources, despite recent advances, are in general less productive and more costly than fossil fuels. More important, they will not be able to be scaled up fast enough to replace fossil fuels in the time frame needed.
- *Relying on markets or technology to rescue us.* It is highly unlikely that renewable energy sources will ever achieve the high energy return on energy invested that fossil fuels have historically afforded; thus they are likely to be more expensive. Moreover, as energy costs rise, economic difficulties will reduce the ability of markets to respond.

What Governments Can Do

PRINCIPLES

In *Post Carbon Cities*,³ Daniel Lerch lists five principles to help guide local government planning efforts in the face of peak oil and climate change:

- *Deal with transportation and land use (or you may as well stop now).* Incorporate peak-oil and climate change considerations into all transportation and land-use aspects of policy-making and infrastructure investment decisions.
- *Tackle private energy consumption.* Improving government operations is insufficient to address the magnitude of the problem. Create strong incentives and support for innovation, and aggressively engage the business community.
- *Attack the problems piece by piece and from many angles.* Meet goals with multiple, proven solutions, and enlist the entire community in the effort.

There are no solutions, just intelligent responses.

- *Plan for fundamental changes—and make fundamental changes happen.* Change internalized assumptions about the future availability and affordability of energy.
- *Build a sense of community.* Strengthen community resilience by encouraging relationship building among citizens, businesses, and government agencies.

To these can be added five principles to guide local government management efforts:

- *Don't expect to find one grand solution.* There are no solutions, just intelligent responses—and there will be many little responses that will help communities adapt and muddle through.
- *Don't try to do everything all at once.* Focus on a few big issues requiring several years of lead time and issues that are immediate problems. Other issues can be dealt with as they become ripe.
- *Consider how energy affects everything and everybody.* Government needs to consider how businesses, institutions, and households are affected by high energy prices and energy-supply shortfalls, not just how its own operations are affected. These impacts are significant to the community and the local economy, and will shape what the government needs to do and what it *can* do.

- *Connect the issues.* Climate change, peak oil, diminishing water supplies, topsoil loss, biodiversity loss, and most all major challenges of the twenty-first century are ultimately intertwined. Worsening conditions in one area could affect the ability of society to respond in another area. Conversely, there are synergies to be gained by dealing with these challenges in an integrated fashion.
- *Expect the unexpected.* We must avoid making irreversible commitments based on past experience or current projections, expecting the future to be more of the same. We are entering a period of what is likely to be rapid and nonlinear change. We must reconcile ourselves to the idea that there will be no business as usual anymore. We must be able to adapt and reverse direction as conditions change.

PLANNING FOR CRISIS

In developing strategies and actions to address these challenges, governments should ask four basic questions:

1. How will peak oil and climate change affect the community? What are the expected impacts, and when will they set in?
2. What can government do to cushion the community against the long-term negative consequences of those impacts?

3. What should government be prepared to do in the case of emergencies (e.g., fuel shortage, fuel price spike, prolonged heat wave, drought, wildfires, flooding, etc.), some of which are inevitable?
4. How will future government activities be funded as economic volatility and prolonged recession keep tax revenues from rising as quickly as in the past?

In the last five years, several communities have studied how to prepare for some of these challenges. One of the first was the City of Portland, Oregon, which released a report on peak oil in 2007 that has since served as a model for many other cities because of the depth of its strategic analysis.⁴ The Portland report looked at four main areas—the local economy, transportation and land use, food and agriculture, and public and social services—and recommended eleven high-level strategies, with specific steps identified under each strategy (see box 26.1).

Several other communities have prepared reports of various depth and usefulness, from the tiny Town of Franklin, New York, to the regional coordinating agency of the Los Angeles metropolitan area.

Local responses to climate change have a much longer history, with some of the first major climate action plans appearing in the early 1990s; today, more than six hundred communities in the United States are planning for climate change.⁵ However, there are no good examples of tying peak oil and climate change together. Most climate action plans have been generic and do not specifically address how to adapt to local impacts. Moreover, they have primarily looked at strategies to replace fossil fuels with renewable resources. As discussed earlier, it is questionable whether that is a reasonable assumption. See box 26.2 for a list of resources on both issues.

FRAMEWORK

The first step for any government body planning for peak oil and climate change is to identify the expected and potential impacts so that recommendations can

BOX 26.1

Portland (Oregon) Peak Oil Task Force: Recommended Strategies

1. Reduce total oil and natural gas consumption by 50 percent over the next twenty-five years.
2. Inform citizens about peak oil and foster community and community-based solutions.
3. Engage business, government, and community leaders to initiate planning and policy change.
4. Support land-use patterns that reduce transportation needs, promote walkability, and provide easy access to services and transportation options.
5. Design infrastructure to promote transportation options and facilitate efficient movement of freight, and prevent investments in infrastructure that would not be prudent given fuel shortages and higher prices.
6. Encourage energy-efficient and renewable energy transportation choices.
7. Dramatically expand building energy efficiency programs and incentives for all new and existing structures.
8. Preserve farmland and expand local food production and processing.
9. Identify and promote sustainable business opportunities.
10. Redesign the safety net and protect vulnerable and marginal populations.
11. Prepare emergency plans for sudden and severe shortages.

Source: City of Portland Peak Oil Task Force, *Descending the Oil Peak: Navigating the Transition from Oil and Natural Gas*, Final Report, March 2007, available at <http://www.portlandonline.com/tops/index.cfm?c=42894>.

BOX 26.2

Resources for Local Government Responses to Peak Oil and Climate Change

- Arny Shover et al., *Preparing for Climate Change: A Guidebook for Local, Regional and State Governments* (Oakland, CA: ICLEI, 2007), <http://csees.washington.edu/db/pdf/snoveretelgb574.pdf>.
- Daniel Lerch, *Post Carbon Cities: Planning for Energy and Climate Uncertainty* (Sebastopol CA: Post Carbon Press, 2007).
- Post Carbon Institute database of local government responses to peak oil (including task forces, policies, and studies): <http://postcarboncities.net/peakoilactions>.
- C40 Cities Climate Leadership Group database of city climate change action plans: <http://www.c40cities.org/ccap/>.
- Center for Climate Strategies database of state reports: http://www.climatestrategies.us/State_Reports_Summaries.cfm.

be tailored for maximum effect. Impacts can be prioritized by how critical they are, and a broad strategy can be developed that addresses the major impacts and identifies the key needs and goals within those areas. Individual agencies should then be charged with developing specific plans and actions to mitigate and adapt to the expected impacts. The lead government body (e.g., the city council) should establish benchmarks and continually monitor how peak oil and climate change are unfolding and affecting the community, to see what adjustments to the plan are warranted.

In developing plans, governments should focus initially on issues that need several years' lead time. These tend to be issues that involve infrastructure and are not quickly changed, such as transportation, land-use patterns, and housing. Governments should not only look at developing public transit and other land-use and infrastructure changes that may be needed for reducing fossil-fuel use, but should also carefully evaluate large investments in roads, airports, and other infrastructure dependent on fossil fuels. At a minimum, governments need to consider scenarios with much higher fuel prices than exist today when running models to determine demand for various options.

However, while necessary, long-range plans are not sufficient. Local and state governments also need to develop emergency plans for the kinds of events more likely to occur thanks to peak oil and climate change. Fuel spikes, fuel shortages, lingering droughts, and torrential floods are no longer threats only in the developing world—in just the last few years, each of these emergencies has challenged well-funded and highly skilled government agencies and first responders in the United States, Europe, and elsewhere.

During such events, how will essential community needs be met? How will we ensure adequate fuel for police, fire, and medical services? How will we ensure that food gets out of the fields and to market? How will we ensure that people get to their jobs so they can earn an income and so provision of goods and services continues? Higher prices will induce some voluntary



response, but the responses may be inequitable and not necessarily reflect social priorities.

Where possible, plans should address both peak oil and climate change. Because they are both energy issues at their root, there is considerable overlap in the response to each. However, there are also some responses to each issue that could undermine government's ability to respond to the other if they are not coordinated. For example, certain responses to peak oil—such as the development of biofuels and increased use of hydroelectricity—may be curtailed by the effects of climate change.

Any plans should also consider government revenues. As the economy contracts, so too will tax revenues, while at the same time demand for services will increase. Governments will need to determine (1) which services are most critical, and which can be left to charity and other community solutions, and (2) how to raise revenues to provide some level of certainty, stability, and equity, while minimizing the burden on the taxpaying public.

What You Can Do

Government has a major role to play in helping to ensure a smooth transition through peak oil and

climate change to a post-carbon world. Government, by itself, is not the solution—but individuals working alone aren't the solution either. There is a role for everybody: the individual, family and neighborhood support networks, volunteer community service groups, business and industry, local government, state government, and the federal government. Ideally, all would cooperate with one another while fulfilling their unique roles and responsibilities.

If government is not responding as we would like it to, we cannot tear it down or abandon it. We must make it work. Government, after all, is us: Government officials are elected by us, to serve our needs. They are people like us—friends, neighbors, and fellow citizens—and are answerable to us. If you don't like what they're doing, get engaged. Call or write your elected officials. Attend city council or county commission meetings, submit ideas, and testify on issues. Or better yet, run for office yourself. That's what makes democracy vibrant.

Endnotes

- 1 Abraham Lincoln, July 1, 1854, quoted in "Fragment on Government," in *The Wisdom of Abraham Lincoln*, Temple Scott, ed. (New York: Brentano's, 1909), 89.
- 2 Richard Heinberg, *Searching for a Miracle: "Net Energy" Limits & the Fate of Industrial Society* (San Francisco: Post Carbon Institute/International Forum on Globalization, 2009).
- 3 Daniel Lerch, *Post Carbon Cities: Planning for Energy and Climate Uncertainty* (Sebastopol, CA: Post Carbon Press, 2007), 63–66.
- 4 Portland Peak Oil Task Force, *Descending the Oil Peak: Navigating the Transition from Oil and Natural Gas*, Final Report, March 2007, available at <http://www.portlandonline.com/bps/index.cfm?c=42894>.
- 5 ICLEI—Local Governments for Sustainability USA, 2009 *Annual Report: Measuring Up* (Boston: ICLEI USA, 2009), <http://www.icleiusa.org/library/documents/>.

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Acknowledgments

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