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# DESCENDING THE OIL PEAK: NAVIGATING THE TRANSITION FROM OIL AND NATURAL GAS

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REPORT OF THE  
CITY OF PORTLAND PEAK OIL TASK FORCE  
MARCH 2007

## INTRODUCTION: PREPARING FOR PEAK OIL

Every day, businesses, government agencies and households around the world plan and make decisions based on the assumption that oil and natural gas will remain plentiful and affordable. In the past few years, powerful evidence has emerged that casts doubt on that assumption and suggests that global production of both oil and natural gas is likely to reach its historic peak soon. This phenomenon is referred to as "peak oil." Given both the continuous rise in global demand for these products and the fundamental role they play in all levels of social, economic and geopolitical activities, the consequences of such an event are enormous. This report assesses Portland's vulnerabilities in the face of wide-ranging changes in global energy markets and provides an initial set of recommendations for addressing that challenge thoughtfully and prudently.

## TASK FORCE CREATED BY CITY COUNCIL

In May 2006 Portland City Council adopted Resolution 36407 establishing the Peak Oil Task Force consisting of 12 citizens from a wide variety of backgrounds. The resolution charged the Task Force with examining the potential economic and social consequences of peak oil in Portland and developing recommendations to mitigate the impacts of rising energy costs and declining supplies. Over the past six months, the Task Force held more than 40 meetings and involved more than 80 stakeholders and interested citizens in gathering information.



## IMPACTS AND VULNERABILITIES: HIGH FUEL PRICES WILL CHANGE PORTLAND

Fifty years from now, the peak of global oil production will be a distant memory. Predictions for the year oil production will peak range from present day until 2040, with the most common estimates between 2010 and 2020. Despite the apparent breadth of current projections, even the most optimistic forecasts offer little time to adapt given the very long lead times required to change such things as transportation and building infrastructure.



Of all the impacts from rising oil prices, the clearest are those on transportation, which will experience profound pressure to shift toward more efficient modes of travel. For personal travel, this means transit, carpooling, walking, bicycling and highly efficient vehicles. Transportation of freight will become more costly and either decline or shift modes from air and truck to rail and boat. Population may shift to city centers, and density and mixed-use buildings will increase.

American food production and distribution have become highly dependent on fossil fuels, accounting for 17 percent of U.S. energy

consumption. Because of this, higher oil and natural gas prices are expected to lead to a decline in the amount and variety of food produced and available locally, even with Portland's proximity to the agricultural production of the Willamette Valley. Food prices will rise, further straining the ability of low-income households to put food on the table.



Like agriculture, the economy as a whole is expected to experience significant disruption and volatility. Impacts will vary widely by industry and firm, and Portland has strengths in high technology and a relatively diversified transportation system. Portland also enjoys a strong and growing clean energy sector, which is likely to see increased demand. Nevertheless, many of Portland's industries are dependent on national and global markets, and business start-ups and failures are likely to increase.

Unemployment could increase. This is of particular concern, since social services are already stretched to their limits. Vulnerable and marginalized populations are likely to grow and will be the first and hardest hit by rising oil prices. Increasing costs and decreasing incomes will reduce health coverage and further stress the health care system, which is already in crisis. Heating, maintenance, and monthly housing costs will consume a larger share of household budgets and push people toward lower-quality housing choices at the same time that auto transportation costs increase dramatically. First responders, especially police, are likely to be further taxed as social service agencies struggle to meet demand.

## RECOMMENDATIONS: ACT BIG, ACT NOW

The Task Force findings illustrate the profound economic and social vulnerabilities that could result as fuel supplies cease to be abundant and inexpensive. The magnitude of this issue led the Task Force to explore bold and far-reaching solutions. The Task Force is unified in urging strong and immediate action.

The Task Force recommends preparedness on two different levels. Most of the recommendations seek to reduce Portland's exposure to rising fuel prices, anticipating the economic and lifestyle adjustments that will be needed in the future. Other recommendations prepare Portland to maintain community stability as volatile energy markets trigger conditions ranging from emergency shortages to longer-term economic and social disruption.

*Reduce Portland's exposure:* The Task Force proposes cutting oil and natural gas consumption in half, transforming how energy is used in transportation, food supply, buildings and manufacturing. It proposes strategies to maintain business viability and employment in an energy-constrained marketplace.

*Strengthen community cohesion:* However well Portland succeeds in its energy transition, it will not be able to isolate itself from global energy crises or the resulting economic implications. The Task Force sees the potential for profound economic hardship and high levels of unemployment, and it recommends having plans in place to adapt social and economic support systems accordingly. Similarly, contingency plans are needed for fuel shortages that may last for months or years, well beyond the time considered in existing emergency plans.

The Task Force recommends a comprehensive package of actions, proposing strategies to initiate institutional change and to motivate action by households and businesses. The recommendations



propose major changes for Portland, but the Task Force believes their implementation can have a positive social and economic impact as local residents and businesses spend less on imported fuels and redirect dollars into the local economy. This presents a significant economic development opportunity for Portland.

While all the recommendations are important, achieving a significant reduction in oil and natural gas use is a necessity for easing the transition to an energy-constrained future.

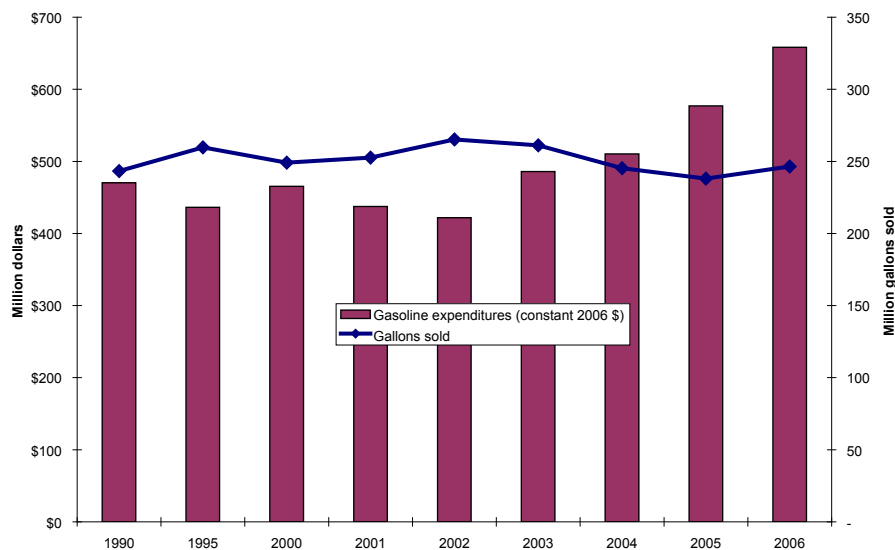
1. Reduce total oil and natural gas consumption by 50 percent over the next 25 years.

*Leadership* builds the public will, community spirit and institutional capacity needed to implement the ambitious changes. Leadership is needed to build partnerships to address these issues at a regional and statewide level.

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.

GASOLINE SALES AND EXPENDITURES  
(MULTNOMAH COUNTY)



*Urban design* addresses the challenge at a community scale.

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 infrastructure investments that would not be prudent given fuel shortages and higher prices.

*Expanded efficiency and conservation programs* shape the many energy choices made by individual households and businesses.

6. Encourage energy-efficient and renewable transportation choices.
7. Expand building energy-efficiency programs and incentives for all new and existing structures.

*Sustainable economic development* fosters the growth of businesses that can supply energy-efficient solutions and provide employment and wealth creation in a new economic context.

8. Preserve farmland and expand local food production and processing.
9. Identify and promote sustainable business opportunities.

*Social and economic support systems will be needed to help Portlanders dislocated by the effects of fuel price increases.*

10. Redesign the safety net and protect vulnerable and marginalized populations.

*Emergency plans should be in place to respond to sudden price increases or supply interruptions.*

11. Prepare emergency plans for sudden and severe shortages.

*Each of these 11 major recommendations is accompanied by a series of action items detailing how it can be implemented.*

## **NEXT STEPS**

A number of the recommendations imply the need for a central program to coordinate goal setting, tracking and communications. Other recommendations are policies, programs or projects to be implemented by specific bureaus or groups of bureaus. The Task Force proposes that a team of city staff be appointed to translate these recommendations into a funded, operational course of action.

Acting on this report, however, does not need to await further study or analysis. City bureaus can immediately look for ways to incorporate these energy concerns and impacts into ongoing planning activities and educational programs around sustainable development. City Council can challenge bureaus to align their investments and activities with the recommendations outlined in this report.

Finally, the Task Force members would like to express their willingness to continue assisting the City of Portland as it engages City staff and the public about peak oil and Portland's energy future.

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