



**City of Bloomington
Office of the Common Council**

To: Council Members
From: Dave Rollo, Council Member, District IV &
Chair of the Bloomington Peak Oil Task Force
Re: Res 09-18 *Approving the Report of the Bloomington Peak Oil Task Force as an
Advisory Document*
Date: 13 November 2009

The Bloomington Peak Oil Task Force (POTF) was created by City Council resolution in December 2007 to assess the vulnerabilities of the community to oil price volatility and possible shortages brought about by the impending global peak in petroleum extraction.

The Council interview committee for POTF appointees completed its interviews in February 2008. The interview committee was composed of Councilmembers Volan, Ruff, and Rollo. The Council and Mayor made their appointments to the group in February 2008. The POTF convened in March of 2008, and concluded its meetings in July of 2009, with a time extension granted by the City Council to finish its report.

The Task Force was composed of the following members: Dave Rollo (Chair), Peter Bane, Gary Charbonneau, Clay Fuqua, Christine Glaser, Stephanie Kimball, Jim Silberstein and Gregory Travis. Biographies of the POTF members are found in the last pages of the report. Member Silberstein resigned due to personal obligations in February 2009. (Note that when asked, he indicated his support for the conclusions of the Task Force Report). Member Fuqua was appointed by the Mayor to fill Silberstein's position in March 2009.

Initial discussions by the POTF involved a comprehensive study of the phenomenon of peak oil, and subsequent meetings entailed updates of the global petroleum picture, tracking of production, and consumption, and prices.

POTF often had public in attendance, and were afforded useful information and resources by members of the public. Outreach was greatly aided by being televised by Community Access Television (CATS) for nearly a full year.

POTF (as instructed by the enabling legislation) also conducted outreach and education to the public, including presentations to the Rotary Club, the Science Café series, five classes in several departments at Indiana University, and several city boards and commissions. Letters were composed and sent to the Director of Bloomington Transit (with regard to their long term comprehensive plan), Bloomington Hospital (concerning their possible move outside of the city), and the University Trustees and President (to encourage them to prepare the University for the effects of peak oil).

Oil is systemic to our society and thus our community, and the group sought to establish major subject areas that would explore vulnerabilities and potential remedies within these major domains. These subject areas included: the Economic Context, Municipal Services, Land Use, Transportation, Housing

and Sustenance. These subjects were delegated to individual POTF members, or teams of members (see topic/member responsibility in the *Acknowledgements* page of the report).

Members then researched their assigned topic, consulting experts, current literature, gathering data from government databases, and so forth. Local experts, managers, City staff and NGOs were contacted to find relevant data and solicit feedback. Once information was collected on a topic, the POTF member presented his/her findings and proposals to the group. The group convened for a day-long retreat in May to discuss findings and a structure for the report.

The group consulted local experts for much of its information. For example: Ron Walker, Christy Gillenwater, Danise Alano, and Adam Wason met with members of the POTF to discuss economic implications and preparation; Lew May, Director of Bloomington Transit, talked to the group about public transit; Tom Micuda, Director of City Planning, discussed Planning's role in preparing for peak; Michael Simmons of the City's Parks and Recreation Department discussed local sustenance; Terry Usrey of the Southern Indiana Renewable Energy Network (SIREN) discussed solar energy with the group, and by teleconference, Nate Hagens of the GUND Institute discussed the subject of natural gas production and availability.

The group's report was edited by Stacy Jane Rhoads of the Council Office, with help from Gary Charbonneau and Clay Fuqua. Rhoads also wrote parts of the report and administered the work of the Task Force.

Some of the Major Findings of the Task Force include:

- Peak Oil has likely occurred in July of 2008 (total liquids), while the Task Force was meeting.
- The decline rate of production is unknown, and is dependent on a number of variables (See *Appendix I* of the *Report*). In any case, the rate of decline has a direct bearing on the degree of effort we should expend to cope. The POTF has determined that it is prudent to attempt a 5% decrease in community oil use year-on-year in preparation. The POTF also concurs with the council in their resolution to support the global depletion protocol proposed by Richard Heinberg and Colin Campbell to commence an orderly process of shifting away from petroleum.
- Economic growth has historically required ever greater amounts of energy. A declining energy resource base is incompatible with the current economic model.
- Coal reserves are likely exaggerated, and further work must be done to examine the energy return on investment of estimated reserves (See *Appendix II*).
- Relocalization is a prudent strategy for communities to focus on, to obviate the need for long transport of goods and materials. Rebuilding local economies to provide a diversity of goods and services is an implicit need, but also great opportunity for communities.
- Local food production can be accelerated that could provide a considerable degree of food security for the community.
- Although Bloomington can make some efforts toward increasing its own energy supply, a great deal of potential exists to work on energy demand, through efficiency measures, substitution of low energy requiring technologies, and a behavioral shift that would place a high priority on cooperation, and building community commonwealth.

Some of the Specific Recommendations of the group as recounted in the *Executive Summary* include:

Economic Context. Bloomington and Monroe County are clearly part of both national and global economies and our reliance on a steady supply of inexpensive goods from as far away as half-way around the world makes us vulnerable to a decline in inexpensive oil. *Mitigation:*

- Promote economic relocalization through “Buy Local!” initiatives; encourage a Local Exchange Trading System and cooperate with *Transition Bloomington*.
- Examine sector dependence on oil.
- Develop and deploy sustainable forms of energy.
- Develop and promote green jobs.

Municipal Services. As the price of oil both becomes more volatile and more expensive, so too will the price of electricity, natural gas, and other energy resources. It will become more expensive for the City to: treat and pump drinking water; treat its wastewater; provide fuel for law enforcement and fire protection; heat and cool municipal buildings; and pick up trash and recycling. Similarly, the City will also experience a general increase in cost of just about anything that relies on energy to produce and transport it.

Mitigation:

- Explore hybrid energy (hydroelectric-solar) generation to complement existing power at the water treatment plant.
- Encourage more rainwater capture by residents and the City.
- Offer energy efficiency and water conservation incentives to residents.
- Expand water storage capacity.
- Transition all back-up generators to renewable sources of energy.
- Develop a community compost program.
- Establish waste reduction goals -- *Zero Waste Bloomington* by 2040.
- Explore sludge-to-biogas energy generation at the wastewater treatment plant.
- Develop a fuel allocation plan wherein, in the event of a fuel shortage, the Police and Fire Departments are given greatest priority.
- Replace patrol cars with electric vehicles.
- Investigate police pursuit vehicles that do not rely on fossil fuels and transition over to such vehicles as this technology improves.
- Explore alternatives to asphalt.
- Offer carpooling incentives to employees.
- Reduce the size of the City fleet through partnerships with car sharing groups.

Transportation. Of all sectors, transportation is the most petroleum dependent and the most vulnerable to a disruption resulting from declining world petroleum supplies. Ninety-seven percent of transportation energy is reliant on fossil fuel. In Monroe County, we drive approximately 2.8 million miles *per day*. That's like driving one car around the Earth at the equator 112 times in one day.

Mitigation:

- Bring daily necessities closer to where people live.
- Establish ride and car sharing programs.
- Increase connectivity & the number of planned “lengthy corridors” for bicyclists.
- Make bus transportation faster and more attractive.
- Seek funding improvements for Bloomington Transit.
- Encourage Bloomington Transit to transition its bus fleet from one relying on diesel fuel to one relying on locally-produced biogas.
- Work toward a regional Comprehensive Land Use and Transportation Plan involving the City of Bloomington, Monroe County, and Indiana University that fosters bicycle, pedestrian, and transit-friendly changes in land use.
- Encourage commuter rail between Bloomington and other cities.
- Encourage bus service between Bloomington and downtown Indianapolis.

Land Use. When it comes to land use, the physical separation of where we live from where we carry out the activities of everyday life – work, food, school, health care, and community – is by far the biggest threat posed by the end of cheap oil.

Mitigation:

- Through zoning and other land management tools, encourage the redistribution of land to bring about denser living arrangements, and a closer integration of residential and commercial activity, thus reducing the total amount of intra-city transportation required. We must restructure our community to provide high-density, multi-use arrangements friendly to transit, bicycles, and pedestrians.
- Update the City's land use documents with an eye to peak oil.
- Target public transit routes to help shape neighborhood development.

Housing. An aging grid, paired with the likelihood that more and more people will turn to electricity to power their cars, means that the grid will be increasingly taxed. In Indiana, the grid is powered by coal-generated energy. Coal relies on oil for extraction and transportation. Absent efficiency improvements, it will be ever-more expensive to heat our homes.

Mitigation:

- Engage in outreach to reduce energy demand through conservation.
- Work to retrofit 5% of homes for energy efficiency per year.
- Explore the possibility of local power generation from renewable sources.
- Establish loans and incentives for installation of renewable energy.
- Create incentives to make rental units more energy efficient.

Sustenance can be understood as the maintenance and nurturance of health and life. The elements of sustenance include: food, water, waste handling, and health care. At present, these elements are provided by private companies, government, and publicly-owned corporations and are entirely dependent on petroleum. Indeed, less than 2 percent of the food consumed by city residents is produced within the city, its surrounding region or the state.

Mitigation:

- Work closely with the private sector and Indiana University to outline a detailed plan for community food security. Adopt a *Food Security Resolution*.
- Plant edible landscapes on public property.
- Organize City-led horticultural services to include the collection, processing, and distribution of organic waste.
- Increase local food storage.
- Train and deploy more urban farmers.
- Remove or reduce legal, institutional, and cultural barriers to farming within and around the city, and open institutional markets to local food.
- Establish food-business incubator programs with access to community kitchens.
- Dedicate public land to intensive gardening and farming.
- Work toward a year-round regional farmers' market.
- Work toward the establishment of a local land trust for the banking of farmland.
- Work toward providing more local or regional organic food to Monroe County Community School Corporation, Indiana University, Ivy Tech, and Bloomington Hospital.
- Create a local, publicly-controlled seedbank.
- Encourage water conservation through outreach and incentives.
- Create community composting sites.
- While the City has little direct influence over health care, it can work with stakeholders to advocate for a health care system that is resilient even in the face of peak oil. Specifically, as a community we should: encourage a mobile medical corps for house calls; encourage more neighborhood health clinics and doctors' offices; and support a concentration of essential medical services to remain in the central city location accessible by public transit and pedestrians.

In all, the Task Force volunteers have spent over 100 hours in Task Force meetings and many more hours beyond that drafting the document. In the end, they've produced a document that is advisory in nature, but, I feel, has great integrity. The Task Force members have worked very hard and I appreciate your support of their final product.