Public Health Association of Australia: Policy-at-a-glance – Preparing for Peak Oil Policy

Key message: PHAA will –

1. Raise awareness within PHAA and the broader community about the peak oil phenomenon and its public health implications.
2. Work with other Special Interest Groups and other organisations to advocate to governments, businesses, and the community on the need to plan for the transition to a socially and economically sustainable society in an era of oil scarcity.

Summary: Over the next several decades, in parallel with continuing global warming, it is predicted that cheap petroleum products will peak and decline in availability. This will have progressively adverse effects on agriculture, transport, health service delivery, the economy and consequently on human society, health and wellbeing.

Planning to prepare society for this eventuality must begin sooner rather than later to avoid or minimise its worst effects.

Reduced availability of oil for agriculture, and therefore food security; for the production of medical supplies; and for the functioning of many aspects of our society and economy; will impact directly on the basic determinants of health – making this a public health issue. There is a clear need to be aware of these implications and for planning from a public health perspective. This policy seeks to outline a series of principles and tangible actions designed to mitigate future impacts on public health.

Audience: Federal, State and Territory Governments, policy makers, program managers, businesses, PHAA membership and the general public.

Responsibility: PHAA’s Ecology and Environment Special Interest Group (SIG).

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Preparing for Peak Oil Policy Statement

This policy should be read in conjunction with existing PHAA policies on Health Effects of Fossil Fuels, Safe Climate, Ecological Sustainable Development, Ecologically Sustainable Population for Australia and Low Greenhouse Emissions Transport.

The Public Health Association of Australia notes that:

1. Over the next several decades, it is predicted that cheap petroleum products will peak and then decline in availability. This is likely to have progressively adverse effects on agriculture, transport, health service delivery, the economy and consequently on human society, health and wellbeing.¹²

2. While the easy recovery of many resources is likely to become constrained over the next decades, a particularly important one for humanity is that of economically extractable petroleum.³⁴

3. Petroleum products are important for modern industrial society life as they are the precursor of nearly all transportation fuel, the source of heating oil, propane, and other fuels, and the starting point for chemical building blocks such as ethylene, propylene, and xylene, which become polymers, resins, and other compounds, which in turn from products as diverse as plastics, solvents, textiles, lubricants, pesticides, and medications.²

4. Many of these goods are essential to the functioning of the economy (which is itself a foundation for health, and for health care itself at the standard we are used to in the developed world, and aspire to for developing nations.

5. Agriculture at the intensity needed to feed the existing and forecast human population is heavily dependent on petroleum.⁵ Severe reduction in agricultural production capacity will compromise food security.

6. The debate is no longer about if but when economically viable production will peak and start to decline. While the exact period of loss of production capacity is uncertain, it is likely to start over the next few decades. Some authors suggest we have already passed peak oil, while others suggest this will occur in the near future, depending on the country. As oil becomes scarcer, new sources of energy and the basis for many industrial productions will need to be discovered.⁶⁷

7. The ratio of the energy used to make or extract an energy resource to the energy obtained from its use is important. The ratio is known as Energy Return on Energy Invested, variously abbreviated to EROEI or EROI. Oil used to be over 100 but as sources have become more difficult to extract this has currently fallen to about 15 for US domestic production. Comparatively, biofuels are about 1 or 2, photovoltaics 10, natural gas 15 to 18, hydroelectricity 20 to 40 and firewood about 30, coal 80.⁵
8. Replacements for petroleum have problems. The EROEI for tar sands is between 2 and 8 and extraction is highly greenhouse gas intensive. Tar sands and unconventional oil sources are unlikely to prolong access to liquid fossil fuel for long, perhaps only toward the second last decade of this century at best. However, there is still active debate about the timing and slope of the curve of decreasing production.

9. Biofuels are a limited substitute for petroleum because their EROEI is only 1 to 2. Recent experience has shown that focus on biofuels leads to substituting for food crops leading to food shortages and increased destruction of forests which are not themselves sustainable activities. Other biofuel developments, such as from algae, are still in early development and their place is unassessed.

10. The danger is that as cheap oil runs out, economies will turn to cheap coal and this could well result in greater CO2 emissions.

11. Population growth and poorly planned urban expansion are linked to increasing oil consumption. As petroleum availability declines it will be important that measures taken to address this problem do not exacerbate greenhouse gas emissions.

12. The public health response to this situation is to acknowledge the issue, develop scenarios and plan the adaption response. This will likely require changes in the health system: from what we make equipment out of, the sources and amount of energy needed, transport, through to how hospitals and community services are run.

13. Urgent attention needs to be paid to how this problem will affect food systems and food security.

The Public Health Association of Australia believes that the following steps should be undertaken:

14. Planning to prepare society for this eventuality must begin sooner rather than later in order to minimise adverse effects.

The Public Health Association of Australia through the Ecology and Environment Special Interest Group resolves to undertake the following actions:

15. Raise awareness within PHAA, government, business and the broader community about the peak oil phenomenon and its public health implications.

16. Work with other Special Interest Groups and other organisations to advocate to governments, businesses, and the community on the need to plan for the transition to a socially and economically sustainable society in an era of oil scarcity. Without expansion of fossil fuel extraction that would exacerbate climate change.

17. Promote the ecological determinants of health as a background to limits to oil.

First adopted at the 2010 Annual General Meeting of the Public Health Association of Australia. The latest revision has been undertaken as part of the 2016 policy review process.

References