Manuscript accepted to *New Solutions: A Journal of Environmental and Occupational Health Policy*
DOI: 10.1177/1048291115610433
Written in May 2015

From extraction to renewal: a global campaign for healthy energy

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Abstract

A global movement is emerging in the health sector to engage in discourse and advocacy on the health impacts and health costs of energy choices – specifically the health harms of extractive, climate-disrupting energy sources such as coal and gas. Individuals and organizations in the health sector have begun to address climate and energy issues at multiple levels of engagement, including with others in the health sector, with pollution-affected communities, with policy-makers, and with the media. We present recent examples of health sector advocacy and leadership on the health impacts of energy choices, and opportunities for broadening and deepening the movement.

Keywords

Climate change, coal, fossil fuels, health impact assessment, renewable energy, advocacy

Two burdens, one culprit

Around the world – in countries ranging from India to South Africa, Turkey to the Philippines, Australia, the United States, and China – health voices have begun to emerge in support of the abandonment of extractive, polluting, unhealthy energy sources such as coal, and the shift to clean, renewable, healthy alternatives. The voices have sprung up in reaction to the unequivocal evidence of coal and other fossil fuels' contribution to both local and global health threats, coupled with the fact that health is not yet a standard consideration in energy and climate policy decisions.

According to the World Health Organization, more than 7 million people died in 2012 from air pollution, roughly double the mortality rate for HIV/AIDS, malaria, and tuberculosis combined.[1] About half of these deaths were attributable to ambient or outdoor air pollution, much of it created by the combustion of fossil fuels – mainly coal, oil, and gas – for energy generation. While all forms of fossil fuels have health and climate impacts, coal is the dirtiest form of energy generation, producing air, water, and climate pollution in the course of its lifecycle. Its use is already declining in the United States and much of Europe as a result of regulatory and market forces. However, growing demand for electricity generation in developing countries has catalyzed a rapid and ongoing expansion in coal use in many parts of the globe, particularly in China and India, Southeast Asia, Southern Africa, Turkey, parts of Eastern Europe including the Balkans, as well as in Japan.[2] The consequences are self-evident with air pollution levels in these countries among the highest in the world.[3] Deteriorating air quality has led to serious health impacts in many of these countries. Further, while the evidence on health effects of air pollution from the combustion process is the most robust and startling among documented health threats associated with coal use in electricity generation, other concerns include occupational health risks to coal miners, coal dust pollution affecting communities surrounding coal storage yards and transportation hubs, diesel air pollution during coal transport, and water contamination from mining (including legacy and abandoned mines) and fly ash disposal.

At the same time, the growing demand for energy and the rapid expansion of coal, and shale gas

and oil, play a central role in the upward trend in global concentration of atmospheric CO_2 (which in March 2015 exceeded 400 parts per million for the first time in millions of years) and other greenhouse gases (GHGs) such as methane. Accounting for 40 percent of anthropogenic CO_2 emissions, coal is a major contributor to climate change, and worldwide coal capacity is expected to expand by more than 50 percent as of early 2015. The trend in consumption of coal and other fossil fuels contributes significantly to the current and anticipated health impacts of climate change, which has been widely accepted by health scientists as "the greatest global health threat of the 21st century".[4]

As the health and economic burdens of fossil fuel-based energy generation have become increasingly clear, so have the significant health and economic co-benefits of a transition away from fossil fuels and toward clean, renewable energy. For example, according to "The New Climate Economy", a report by a group of prominent economists, "health damage from air pollution averaged over 4% of GDP in the 15 largest CO_2 emitters in 2010. Measures that reduce GHGs and air pollution together in these countries would yield health benefits of US $73 per tonne of CO_2 abated".[5] In addition to preventing many deaths attributable to poor air quality, many cases of chronic lung disease, including bronchitis and asthma, and heart conditions can be avoided. There are also multiple co-benefits from low carbon clean energy policies. Promoting active transport such as walking and cycling can provide substantial reductions in many non-communicable diseases such as cardiovascular disease, stroke, obesity, and diabetes associated with sedentary lifestyles. The financial savings associated with avoided ill health from implementing low carbon policies could also offset the cost of cleaner, low carbon energy systems and policies. For example, a 2014 study by researchers at the Massachusetts Institute of Technology found the health benefits associated with an emissions trading scheme aimed at cutting carbon emissions could deliver savings in healthcare spending more than ten times the cost of the scheme.[6]

A campaign for healthy energy

The health implications of energy policy are largely not considered in policy decisions – neither in allocation of energy sector subsidies, decisions regarding new energy infrastructure projects, plans for our energy future, nor in energy trade. As health arguments are both dire and persuasive to the public and policy makers, there is a need for health professionals and organizations to bring their voices and expertise to the debate. The health sector – with its economic, political, and moral standing – has an opportunity to serve as a liaison on energy and climate issues with policymakers, the media, the health and energy sectors, and communities.

Indeed, the health sector around the world is beginning to take actions and stances advocating transition from fossil fuels toward a healthy energy future. In the United States, for example, the American Lung Association has led strategic campaigns to defend the Clean Air Act to protect public health from air pollution. Another group, Physicians, Scientists & Engineers for Healthy Energy, has reached out to the public and policymakers both in the US and abroad on renewable energy and climate change. We focus here on a few international examples from the Healthy Energy Initiative, a program of Health Care Without Harm (HCWH), an organization that promotes environmental health and justice in the health sector worldwide:

A call to action (global)

At the close of their international conference in Kolkata, as part of a broad "Call to Action for Public Health", the World Federation of Public Health Associations (WFPHA) advocated "a rapid phase-out of coal" to limit further global warming and prevent illnesses and deaths associated with air pollution. The Kolkata Call to Action points to the "contribution of fossil fuels and coal in particular to climate change as well as to detrimental impacts on the health and wellbeing of local communities". Efforts are ongoing to engage WFPHA's member public health associations around the world to heed the call.

Community health skill share (India)

Communities impacted by pollution from the coal industry are often unaware of the environmental health risks in their homes, communities, and workplaces; regulatory frameworks are often inadequate to protect them; and medical care, when available, is often given in ignorance of environmental risk factors. To address these gaps, a group of NGOs including Community Environmental Monitoring, an environmental justice program based in Chennai, organized a three day workshop connecting health professionals with coal-impacted communities from across India to share knowledge and skills on the documentation of local health and environmental conditions, and the use of such documentation for community mobilization to demand responses from government and industry.

Meeting at the same table (China)

To open up communication between public health and energy policy experts – two groups traditionally disconnected from one another – Rock Environment and Energy Institute, an independent think tank, hosted a group of researchers from both fields to discuss challenges and research priorities in coal and health. The roundtable led to the creation of an informal network for continued cross-fertilization and future collaboration.

Amplifying voices through film (Australia)

Recognizing that demand greatly exceeded supply for health experts to speak about the health impacts of coal and gas in affected communities, the Climate and Health Alliance, a health sector alliance advocating for policy action on climate change, and the Public Health Association of Australia produced an acclaimed film called “the Human Cost of Power,” featuring public and environmental health experts speaking on the climate and health risks from the massive expansion of coal and gas industries in Australia.

Health engagement to stop coal (Europe: Poland and Turkey)

Poland and Turkey are the two key countries defying the downward trend in coal in Europe. The Health and Environment Alliance (HEAL), a leading European not-for-profit addressing how the

environment affects health, is successfully deploying the health argument with the help of evidence from the first-ever health economic assessment provided in their report, "The Unpaid Health Bill".[7] For example, health evidence has been used in campaigns to shut down or stall projects in Poland. In one case, HEAL provided expert consultation – using a more current model of health effects and air pollution dispersion than that originally used by the authorities – for a lawsuit that led to the overturning of the environmental permit for the 1 gigawatt Czeczott power plant in a coal mining region already experiencing poor air quality. In Turkey, HEAL teamed up with the Turkish Medical Association, the leading health professional organization, and six specialized medical associations, to call on the Turkish government to abandon plans for a massive coal power investment. Currently, Turkey is set to become the third highest investor in the world.

A challenge to two presidents (Philippines)

When French President Francois Hollande visited the Philippines to meet with Philippine President Benigno Aquino III with a stated purpose of "highlighting the Philippines as a partner in the fight against climate change," Health Care Without Harm-Asia, HCWH's Asia regional office, deployed a media campaign calling on the two presidents to "not forget public health as a central element in climate action – climate justice is health justice". As part of this media campaign, HCWH-Asia urged the governments of France and the Philippines to "not just lead the way to COP 21, but to lead by example", saying, "our two countries should commit to phasing out coal and other fossil fuels and to shift towards healthy renewable energy".

Defending clean air rules (South Africa)

In light of efforts by electricity utilities and other fossil fuel companies' attempts to gain exemptions from upcoming clean air rules, GroundWork, a multicity community oriented environmental advocacy group, partnered with health researchers and community members to publish a study on the health impact of coal and produce media releases and community training videos to build public awareness.

Building the movement

As the renewable energy economy grows, and the lifecycle impacts of coal and gas are better understood and quantified, so does the opportunity for the health sector to serve as stewards of public health during the transition to a clean energy future. In the course of our efforts to date, we have come to realize a few ways in which the movement for health sector engagement on energy and climate can be broadened beyond the core of environmental and occupational health specialists, deepened beyond a one-dimensional advocacy platform, and ultimately made more effective and impactful.

The following are suggestions from one network's experience:

- Seek out direct connections with communities affected by coal and other extractive energy industries to understand their health challenges, whether through informal conversations, site visits, community-based participatory research, or other means.
- Engage a broad cross section of health sector actors in developing and advocating for healthy energy policy. Build capacity for a larger and more diverse group of health sector voices to articulate the rationale for the energy transition. Seek out partnerships with complementary global health movements, such as those addressing non-communicable diseases, social determinants of health, and health systems strengthening.
- Use the WHO frame of 'Health in All Policies' to highlight the need for health in energy policy decisions to protect local communities as well as global health. Advocate for health impact assessment and health economic evaluations to be integrated in decision-making on energy projects and energy policy. Ensure that as renewable energy production becomes increasingly feasible economically and politically, we evaluate their health implications using a similar rubric as we have for coal, oil, and gas, i.e., with considerations for worker safety and health; environmental impacts; air, soil and water pollution; displacement of communities; economic and social disruption; health equity concerns; and contribution to

climate change. Embed the principles of health equity, environmental justice, and human rights in all health considerations related to energy choices.

- Lead by example by investing in clean energy solutions for our workplaces, health centers, hospitals and health systems, and using our purchasing power to decarbonize the health care supply chain. Where our institutions have financial resources invested in the market, consider freezing and/or divesting these resources from fossil fuels.

We welcome the thoughts of allies and critics alike.

Funding

The Healthy Energy Initiative has received general program support from the Growald Family Fund and the European Climate Foundation.

Acknowledgement

The Healthy Energy Initiative is mobilizing the health sector to play a central role advocating for a move away from fossil fuel-based power generation—particularly coal—and toward clean, renewable healthy energy options. The Initiative is coordinated by Health Care Without Harm, with campaign partners in several countries working with local and national health organizations and academics to support healthy energy policies. For more information, including opportunities to get involved, visit www.healthyenergyinitiative.org.

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