Renewable energy received a boost in Ontario, Canada with the Green Energy and Green Economy Act (GEGEA), ushering in a new Feed-in-Tarriff (FIT) program modelled on programs from Germany, Spain, Denmark and other jurisdictions. Information about lessons learned elsewhere has clearly benefited the Ontario experience. Part of the Ontario program included streamlining the impact assessment process to facilitate the swift development of provincial renewable energy capacities. In this context, the GEGEA has been remarkably successful, generating renewable energy sector capacities, resources, projects and their spinoff benefits in Ontario, along with more sustainable electricity system. Environmentalists along with industry continue to laud the benefits of renewable energy and the GEGEA, and with good reason. Renewable energy generation in Ontario has grown from to 2 per cent in 2012 and is expected to reach 10 per cent in 2013.

Yet those benefits overshadow numerous undesirable health impacts largely overlooked by environmentalists, epidemiologists and scientific discourse about the sustainability of renewable technologies and environmental informatics. The most apparent being the rising crescendo of opposition to industrial wind energy developments. The groundswell of community voices opposed to wind energy is now targeting renewable energy in general in Ontario, and fomenting a powerful misinformation campaign, driving a wedge between sustainability and renewable energy, and, ultimately, human health and well being, especially where unchecked climate change and air pollution undermine adaptation strategies. Here again is apparent a diverse set of information propagated by digital media.

Additional concerns suggest a lack of community empowerment in the development of renewable energy technologies, direct health concerns and a high level of uncertainty about the overall process by individuals most affected. These posits a potential political and social backlash of renewable energy policies and developments, and, in the broader context, of sustainability. Political concern, in itself, must be viewed as an undesirable impact on sustainability insofar as it underlies fundamental social concerns. Moreover, much of that political concern is supported and driven by varying ideological viewpoints, and information serves important, dynamic and incredibly complex roles in these processes (Sussman, 2012).

This has important implications for management processes in the renewable energy sector, which have traditionally been top-down. ICTs can be inherently distributive and cooperative, embedding the notion of equality deeply within their meaning. This is evident through emerging issues such as copyright debates, privacy discourse, and social media. ICTs also lack the (conventional) capitalist control or management structure. This posits an arrangement where there are no leaders in the conventional capitalist sense, raising questions about class structuration and identities in the emerging information society. Finally, there is a tension between the collaborative benefits and competition in the capitalist framework. This suggests questions about the role of ICTs to create value through competition. Indeed, more equal societies have consistently been shown to be more innovative, healthy and sustainable (CSDH, 2008; Marmot Wilkinson, 2006; Wilkinson and
Pickett, 2009).

The World Health Organization has defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 1967) This includes "the extent to which an individual or group is able, on the one hand to realize aspirations and to satisfy needs, and on the other to change or cope with the environment." (WHO, 1984). This definition incorporates many concepts and linkages among other human activities which may, initially, seem unrelated to health: income; income distribution; jobs and employment; demographics; lifestyles; literacy; social order and cultural elements all influence health to one degree or another. These latter elements often better describe social well-being, but can actually impact on the rates of disease/health outcomes and quality of life (CPHA, 1997).

Health, therefore, combines social, economic, cultural and psychological well-being, as well as the physical, biological, and natural and social environments, and includes the ability to adapt to daily stresses and changes. FPTACPH (1994) examined what makes and keeps people healthy and identified eleven determinants of health. This is important because human health effectively serves as a practical surrogate for well-being.

Impact assessment is conducted to better understand the contribution of projects, programmes and policies to improve well-being (Rattle and Kwiatkowski, 2003). As a surrogate for well-being, health provides a practical approach to assess the value of projects, programmes and policies when defined in terms of population health and the values and understandings of the determinants of health. Health Impact Assessment applies underlying values of equity, sustainability and participatory democracy within a broad determinants of health approach. Based on the determinants of health, a Health Impact Assessment provides a useful tool to assess the overall sustainability, broadly understood, of policies, programmes and projects.

A HIA, with its core values of equality, sustainability and health promotion, can demonstrate that the greatest effects from emerging communication and renewable energy technologies may be in the socio-political environment to which environmental informatics must be acutely attuned. While evidence suggests that these relations are shifting attention from individual health and well-being outcomes towards a social setting that enhances a health for all approach by operating at the fundamental level of values and the social determinants of health for sustainability, specific policies and practices, actors, economic imperatives, and commitment levels appear to be moving, insofar as digital media are related to social values, in the opposite direction. This may prove to be the Achilles Heel of current discontent towards the GEGEA in Ontario and serve to illuminate important areas for future research and policy in environmental informatics and renewable energy practices for sustainability. This contribution will discuss how HIA can be employed as a useful tool for sustainability when applied to environmental informatics and renewable energy technologies.

References


