

**Session 4 – What are the barriers to translating science into policy?****Papers –**

Introductory comments by Hadi Dowlatabadi

- Are governments and civil society prepared for managing the shock of a significant change away from an economy based on fossil fuels?

This question requires examination of at least three implicit assumptions:

- a) Has the current system been under the control of governments & civil society?
- b) How shocking would it be to continue reliance on fossil fuels?
- c) Is hydrogen the only alternative pathway?

I would respectfully submit that the current system is a consequence of inept governance and has all the hallmarks of poor citizenship when viewed in the context of equity and power – regionally, nationally and internationally. Furthermore, the institutions that have amassed control over energy as a fossil based commodity are best placed in managing the transition to a new fuel system. Which particular strategy will win the day depends on what we choose as the energy carrier.

*I should also declare a personal bias against H<sub>2</sub>. In my view it is far from the only solution and in many cases it is the least practical alternative.*

- What non-economic factors (eg popular resistance to change, suspicion of government intentions, attachment to private automobiles, government policies) will have an impact on the extent and speed of the shift to Hydrogen?

This question requires examination of at least two implicit assumptions:

- d) That there would be no other change to consider in the transition.
- e) That should we adopt the H<sub>2</sub> pathway, it would separate the public from their automobiles or other basic services, thrills and social signaling facilitated through energy consumption.

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On the other hand public concern about climate change may spur adoption of H<sub>2</sub> even when there may be other energy carrier options using a hydrocarbon carrier as would be the case in renewable liquid fuels such as methanol or bio-diesel.

- Would there be significant consequences in terms of a shift in global disparities, inequalities or the social distribution of risks? In the concentration of ownership and near-monopoly control of markets by cartels of trans-boundary corporations?

Let us first consider the initial conditions that introduction of H<sub>2</sub> is meant to somehow influence. The global disparity of energy supply is enormous: at one end of the spectrum we have >60% of the world's population still relying on conventional biomass for their domestic energy needs; while at the other end solar pv panels, ground source heat-pumps and electric vehicles

