As I have a strong background in these matters I would like to offer some ideas relating to the future direction of practical & sustainable energy supply & usage in Nova Scotia.

-Due to the high proponderance of coal & oil based energy in our lives in NS we must be more at risk than most from an economic sustainability & security perspective & also ,most importantly, from a Greenhouse gas point of view. Also due to the long implementation time frames for major energy systems, time is of the essense to move on effectively.

-We must minimize our carbon footprint at all costs & while I applaud the recent commitment to dramatically boost our in-province wind power this is really not nearly enough. Recognizing that the best wind farms globally struggle to achieve a capacity factor of 30% then the best that can be expected from say 300MW of wind is a CO2 displacement of perhaps 700,000 tonnes. We need to displace of the order of ten times thiis amount [perhaps even more] in the 10 to 20 year time frame. So wind although a worthy component, cannot be our saviour.

-The one commercially proven technology which I believe we must embrace is Nuclear power. So the first action the province needs to do is repeal the legislation preventing nucs in this province [this was no doubt promulgated to support Devco coal activities & has definitely outgrown its usefulness.] As we have no in-province expertise with this technology it would be perhaps wise to piggyback on NBEPC experience & co-build a Maritime unit [or units]. Without access to Nuclear power in the province, I fail to see any light at the end of our tunnel. [A 600MW unit would result in the displacement of 4 million tonnes of CO2.]

-That said, there are still a host of other energy supply actions which will offer advantage to us & add to the needed diversity that any logically designed energy system would contain. Some ideas follow:

-The use of natural gas as a electric power fuel source in presently available technology is still wasteful as an efficiency of 50% or so is the best that can be hoped for. Consequently co-generation [electricity & useful heat] needs to be practiced at every practical opportunity. With Gas soon to be available on the Halifax peninsula there will be opportuniteis to implement co-generation /district heating [the Hospitals & universities could be the front runners for this].There have been several studies of the potential for co-generation /district heating over the past 15 years or so in the city so nobody has to start from scratch.

-There may well be other co-generation opportunities province-wide that in the past have been marginal at best, but with oil prices at heady levels, could now be competitive, & with appropriate fuel choices [gas or biomass] could result in environmental & economic advantage.

-There should be a moratorium placed on further new coal fired energy systems in Canada. The only hope for coal is if a means is found to safely dispose of the CO2 from the power plants. There is growing discussion of geological sequestration of power plant CO2 , however this is totally contingent on suitable geological structures being accessable. There have, I believe, been preliminary reviews of this potential in Canada, & the Western Sedimentary Basin looks promising for Alberta & Saskatchewan . However in the east things may not be so rosy due to much more complex geology. Obviously this is an area requiring specialist assessment.
Deep ocean disposal is touted , particularly by the Japanese for obvious reasons, but this is just an extension of mans endless quest to put unwanted stuff where you cant see it ,`& in Nova Scotias case totally out of the question.` Should a home be found for CO2 of the magnitudes under discussion, then coal gasification combined cycle power generation will offer a super clean fossil based option, but again this will be very site specific.

-For decades a cost effective Tidal power [or Wave power] option has been sought by developers & the aggressive nature of the sea [or the anticipated environmental impact] has always won out. Hopefully we are getting closer to a practical solution & the pilot project promoted by the province will hopefully bear fruit - only time will tell. Should a solution be found then we in Nova Scotia have the holy grail of energy supplies.

-Demand side management has hardly been touched in province, consequently future energy demand growth can be curtailed somewhat by aggressive application of DSM solutions.

-Although heat pumps [air source & particularly ground source] carry a relatively high capital cost, the agressive efficiencies [200-300%] make long term operation in a high oil cost environment more & more acceptable , hence these should be promoted heavily for new construction homes & other facilities. In fact I seem to remember GSHPs being touted by government sources as the ideal technology for instiitiutional /commmercial buisnesses in Canada.

- All new single family homes , condos & apartments ,îf they are not already, should be mandated to be at least R2000 standard. The long term energy savings will be invaluable. Also, passive solar solutions should be promoted in designs & siting .

- The energy strategy must also address transportation energy as the transportation sector is the largest of all Green house Gas contributors in Canada. Hence I throw in the following ideas :
-introduce a 90kmh max speed limit on highways as this will resilt in a 10 to 20 % reduction in fuel use. & probably vastly improve safety on the roads

-Dont spend a quarter of a billion dollars twining little used highways. We can redirect those $ to some of the aforementioned projects .

-Mass transit is the way of the future so invest in more buses & discourage use of private cars after you have provided a logical alternative appropriately sold to an educated public.

-Container traffic should be on trains which are vastly more efficient & not roads whenever possible

-adopt California emmission & fuel useage standards nationally & provincially.

-introduce legislation to get cars older than 15 years off the road unless they can meet certain fuel efficiency & emmission standards.

I hope some of these comments are of use

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