

Further to my e-mail submission in response to the Crystal River DEIS review meeting on 23 September, 2010, I have since had the opportunity to consult the appropriate FPSC dockets, listen to the transcripts of the meeting so kindly made available to me and re-read the NUREG-1941 documents.

No nuclear plant should exist on a site situated upon a poorly confined aquifer system - a sole source of drinking water to thousands. For decades it has been beyond dispute that tritiated water, a cause of cancer, accumulates in groundwater of such aquifer systems. Mary Olson's indication of cancer probabilities from nuclear plants was compelling. Issuing the combined licenses to PEF at this juncture would be tantamount to a license to kill people and compromise the near shore marine food web in the Gulf of Mexico.

Any consideration of business risk assumed by PEF in pursuit of the LNP, in so far as they may impact customers, was absent from the FPSC dockets deliberating upon one of the costliest private projects ever undertaken. Such risks have precipitated the abandonment of nuclear ventures in past years.

Among those business risks which come immediately to mind are the following:

1. The longer the construction lead time, with its changing component and commodity costs, the greater is the business risk that any estimated cost will be exceeded. The U.S. energy Information Agency (EIA) cites clear patterns how the Nuclear power industry regularly and catastrophically underestimated plant construction costs. That PEF first used a capital cost guess of \$4billion rising steadily over time to \$17billion does not engender confidence.
2. Impact of the magnitude of servicing debt capital on kWh rates to make nuclear plants pay becomes self destructive. The lure of corporate return guaranteed as a given percentage margin is hard to resist - until too late.
3. The severe recession we are suffering, since the docket date in August 2008, calls into question the applicant's assessment of growth in customer demand for electricity for which the plant was deemed to be necessary.
4. That the AP1000 units are essentially a Demonstration Project having never been approved, built or operated and having uncertain construction costs. (Westinghouse has said that it will not bid on a new Finnish reactor following the withdrawal of the French AREVA who had had to commit to a cost guarantee.)
5. Not only do construction cost escalate so too do costs of capital. Both equity and debt finance require returns. Delays to Construction schedules, for example by litigation, serve to downgrade the Utility's and or Customers' credit ratings, increasing Costs of Capital used during construction.
6. Ability to recover capital costs from customers is limited. For a similar project, Craig A. Severence, (2009), Appendices A through C estimates "All In" capital costs conservatively amount to \$10,553 per kW(e). Using a capital recovery period of 40 years and a weighted cost of capital of 14.5% and a recovery factor of 0.1457 which equals \$1537.40 per kWyear; using a capacity factor of 80% and the number of hours per year at 8780 (giving 7008 kWh per year), yields a capital component cost of \$ 0.22 per kWh.
7. Taking account of delays, using a "most likely" scenario in nominal dollars projected to a 2018 First year of Full Operation, including cost elements per kWh for Capital cost \$0.22, O and M w/o fuel \$0.01, Property taxes \$0.02, Decommissioning (Section 468A(d)(2)(A)) and waste costs reserve, \$0.02, and Fuel Cycle costs of \$0.03, Total costs per kWh rise to \$0.30. This suggests that PEF would not be able to provide its customers with adequate electricity at a reasonable cost from Levy Units 1 and 2 contrary to its testimony to the FPSC in Docket No 080148-EI, Page 9 ff.

8. To quote Craig A. Severance: "The availability of Federally guaranteed loans, and/or a guarantee of the ability to charge ratepayers (often during construction) for the costs of a new facility, are no substitute for prudent business judgment. Simply shifting the burden of risks from the utility's shareholders and executives, to the taxpayers and ratepayers does not make any risks go away. It simply sets up yet another situation where profits are privatized while risks are socialized, allowing those who make bad decisions to walk away from the effects of their own imprudence. After hundreds of billions of such outcomes this year alone, the public has no stomach for more of this."
9. It would appear that PEF is intent upon a very risky and an unsustainable course of action in regard to the LNP, especially in today's uncertain economy. A more prudent course of action should be sought, for example:
 - Use the sunk cost in land so far acquired to diversify technology into hydrogen storage and PV arrays as outlined in my previous e-mail, switching to less risky shorter lead time technologies.
 - Each component of such an approach has great potential for nearer term cost reductions as opposed to rising nuclear construction costs. (Replacing glass in PV modules with transparent micro sheeting, using factory produced PV modules with integrated power coupling and inversion electronics capable of mechanized "roll out" installation reducing labor costs, and modular design of hydrogen plant providing for high ratios of off-peak electricity storage to demand cycles).
 - Anticipating the future complementary needs of distributed power and mobile power facilitated by hydrogen technology.
 - siting PV arrays near to center of consumption; e.g., Orlando and The Villages, to save on new power line costs and environmental degradation
 - choosing options and systems with fewer business risks than monolithic ventures.
 - affording scope to emphasize demand side power economies.