## TIME TO CHECK THE FACTS By Linda Pentz Gunter, Beyond Nuclear

A response to the New Yorker blog piece, Time To Go Nuclear, by Michael Specter, which like the film it glorifies, fails to look further than the sound bites for factual verification.

In unquestioningly accepting that the "environmental credentials" of the protagonists in *Pandora's Promise* "are beyond dispute" Michael Specter then laps up the rest of the film's rhetoric apparently without a moment's research to ascertain whether any of it is even true.

First, the film promotes its "cast" as former leaders of the anti-nuclear movement, which none of them ever was. Second, it rather changes the definition of "environmentalist" to ascribe this term to individuals who support an extractive, polluting and cancer-causing industry like nuclear energy, capable of catastrophic accidents that can render vast areas permanent sacrifice zones. Add that to some of the protagonists' support of natural gas fracking, so-called "clean coal" and genetically modified organisms, and the more appropriate description would be "former environmentalists who now support nuclear power."

Specter then buys into a whole host of sound bites articulated in the film that have no basis in scientific or medical reality.

The "new" reactor design referred to in the film isn't particularly new. The sodium-cooled reactor the film's zealots have in mind cannot "recycle" its own waste. It could transmute rather than consume waste fuel. But this process, which uses plutonium and requires proliferation risky pyro-processing, will, as the National Academy of Sciences pointed out, take hundreds of years with very high costs and marginal benefits. While the reactor could transmute the more long-lived radioactive isotopes, it still leaves others that remain deadly for several hundred years and that will require some sort of as yet non-existent management solution.

The use of sodium as a coolant consistently resulted in catastrophic fires in all the previous breeder reactors that have used it. The safety of a new version of this design is unproven and would require extensive modeling to have any certainty about accident prevention. The exorbitant costs of this reactor - more than twice those of the already expensive, over-budget and behind schedule light water reactors under construction in some countries - are artfully not mentioned.

It is a known medical fact that exposure to radiation does and has caused cancers, heart diseases, birth defects and changes in DNA, thus affecting the quality of life for future generations. The one never refuted study of the health impacts of the Three Mile Island nuclear accident - by Dr. Stephen Wing - shows that lung cancer and leukemia rates were two to 10 times higher downwind of the Three Mile Island reactor than upwind. No one can state with any certainty, and certainly no one can prove, that "no

one died" as a result of Three Mile Island. But Specter repeats this myth straight from the nuclear industry script. And death should not be the only measure. No one should be forced to suffer an avoidable cancer, even if they survive it.

Pandora's people cling to the utterly discredited World Health Organization study of potential cancer deaths from Chernobyl. But they don't mention that the compromised WHO is answerable on all things nuclear to the UN agency mandated to promote the industry - the International Atomic Energy Agency. They don't mention that the WHO's own press release - that predicted 4,000 eventual cancer fatalities - suppressed its own numbers by almost half; that it only looked at the most heavily affected areas; only at cancers; only at mortalities; and only in Belarus, Russia and Ukraine. More than half the Chernobyl fallout landed outside those countries. Even conservative studies have concluded that future cancer deaths would number into the tens of thousands. Those "survivors" forced to endure cancers, birth defects, heart disease and genetic changes are simply overlooked as if such suffering must be accepted as collateral damage.

Fukushima's nuclear accident is a little over two years old and radiation leaks are still on-going. Exposure to radiation results in a latency period, sometimes of several decades, before solid cancers emerge. It is therefore far too soon to know for certain what the health consequences will be and callous in the extreme to dismiss these as almost non-existent as Mark Lynas does in the film. But no independent medical doctors were interviewed for this infomercial. Equally, no independent scientists without a vested interest in seeing nuclear energy perpetuated, were consulted or featured in *Pandora's Promise*.

The "if not nuclear then fossil fuel" argument is not borne out by reality, so this again was conveniently omitted from the film and from Specter's unresearched critique. Just last week, Warren Buffett, no adversary of nuclear energy, gave up on the eternal wait for the still theoretical small modular reactor he had in mind for lowa. Instead, his company, MidAmerican, will install a huge wind farm, 1.05 gigawatts, which will be on line in less than two years - far faster than any nuclear plant. A serious US commitment to advancing these kinds of projects would answer climate change faster, cleanly and more safely than a nuclear program which could never install enough reactors worldwide in time to reduce carbon emissions significantly. Even MIT acknowledges this - recognizing a new 1,000 megawatt reactor would need to be built somewhere in the world every two weeks until 2050, a technically and financially impossible proposition.

Then there's Germany, moving full steam ahead to a 100% renewable energy economy by 2050. Renewables account for 25% of Germany's electricity supply and solar capacity climbed 47% in the last year and wind by 20%. The renewable industry supply chain has provided 380,000 clean, long-term jobs in Germany - compared to 50,000 for lignite and 30,000 for nuclear. If the US follows the lead of *Pandora's Promise*, vast sums will be squandered in the illusory chase after a handful of "new" reactors that will cost us probably the only time we have left to actually address climate change. The inconvenience of this truth is so profound that The Breakthrough Institute - whose

personnel dominate *Pandora's Promise* - spend a lot of energy trying to misrepresent and discredit the German renewable success story.

Specter should have been clued into the fact that he was watching a propaganda piece as soon as Helen Caldicott appeared in the film. The approach was straight out of the propaganda playbook used very effectively by the Nazis and others: show your adversary in the least flattering light (literally), looking and sounding their most unattractive and caught impromptu with no formal interview context. Then allow your protagonists time to primp and preen, light them beautifully in a scenic ambience and let them state their case uninterrupted.

There is no excitement in the board rooms of America, nor on Wall Street, about nuclear energy. *Pandora's Promise* is well funded by those whose personal agenda is to promote new nuclear reactors and they are paying handsomely to promote it. The film began with a thesis, and found people to articulate it. But it never examined the scientific and medical facts that blow its thesis out of the water. That would have been journalism.

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