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**Testimony before the North Carolina House Committee on Energy**  
Representative Pricey Harrison, Chair  
July 16, 2007

Thank you for this opportunity to address the Committee. North Carolina is no stranger to nuclear power – we have 5 nuclear power reactors operating in the state today – in our region there are more nuclear reactors, nuclear fuel factories, nuclear support services including laundries and repair shops -- than any other part of the country. The Southeast IS the **Nuclear Heartland** of the United States.

It has been 34 years since the newest nuclear reactor, Watts Bar in Tennessee, was ordered...many thought the Nuclear Age was almost over. We have been lucky; Duke and Progress are right to point out that they have nuclear operating records that do not include any Three Mile Island or Chernobyl events – and further they have built reputations of being generous – giving funds to many people here!

Now Duke, Progress, and their allies would like the State of North Carolina to sponsor a **New Nuclear Era** – or what we call, a **Nuclear Relapse**. Duke and Progress want to build new nuclear reactors – but they don't want to take any of the risk or make any investment – in addition to the possibility of plush federal subsidy for this plan<sup>(1)</sup>, they want the State of North Carolina to make it law that we North Carolinians cover the cost of these new nukes – up front, now. The base-load provisions of SB 3 – specifically Construction Work in Progress -- would essentially force anyone with an electric bill to pre-pay new nuclear reactors in North Carolina, and anywhere else that provides power to our service areas.

There are few things that **any state** should know about the **New Nuclear Era** before signing up as a sponsor. It is a New Era, not because nuclear power has changed -- times have changed:

- 1) No other region of the country is being similarly targeted:



If you like nuclear power, given the level of federal spending that will come with the nukes, maybe this map looks like a good thing to you – but whether you like it or not, it is important to ask **WHY** the Southeast?

Answer: Because this region is the only area of the country that still operates under privately owned monopolies for production AND distribution of electricity in state-regulated service areas – where customers have no option or choice on providers. If we in the Southeast want to get power from the electrified grid, we have only one provider we can go to in any given location.

Top credit analysts on Wall Street have stated clearly for the last three years that the ONLY place that private investment in new nuclear reactors would be *potentially* viable is in publicly regulated utility “markets” (an oxymoron). Why? Because when full lifecycle costs are considered, nuclear cannot compete. This is not a map of development of wealth – this is a map of hostages -- consumers who will be forced to pay higher rates because we have **no choice**.

The rest of the country *learned* when they were burned the first time, when today’s reactors were built – and they have moved, to one degree, or another, into more open energy markets, that today preclude further nuclear “development.”

If nuclear power WERE competitive, it would not need to be pre-paid – it would not need billions in tax subsidy – no, instead of too cheap to meter, nuclear power is **too expensive to matter**.

- 1) How can nuclear power be the “solution” to climate change if it is not cost effective? Some people will say that since we have to stop using coal, clearly nuclear is the only viable option – but North Carolina has enormous off-shore wind potential. Wind is the fastest growing new energy capacity in the world – and two-times cheaper than new nuclear power. Energy Efficiency is 7 – 10 times more cost-effective at reducing green house gas emissions than new nuclear construction and North Carolina has a long way to go before our efficiency potential is used up!

In this New Era – we need to look at two big changes in our world since the time when Shearon Harris, Catawba and Brunswick were built: Climate IS changing, AND we are less secure – terrorism is a reality.

- 2) In addition to questioning whether nuclear power can in fact be effective in impacting climate change, every State should turn the question around and ask: “Does Climate Change impact nuclear power?” Answer: Yes – a LOT – and the picture is not pretty!
- 3) All reactors depend on off-site electricity from the electric grid for routine operations – to run the lights, the computers, the control room, the coolant pumps, etc. Reactors are not designed to power themselves directly so in the event that local power goes down – and weather like hurricanes, tornados, ice storms are primary causes of this – the reactor must go off-line and use diesel generators to power emergency systems. Sadly these generators have only an 80% start-up reliability. In order to keep nuclear fuel from melting, it must be actively cooled. Fifty percent of the total risk of a major reactor accident is tied to the complete lack of electric power – called Station Black-out. Nuclear power is uniquely vulnerable to a changing, turbulent climate – and loss of power to the grid is a trivial part of the potential for hazard.

So every State considering taking an active role in welcoming new nuclear reactors should really consider if the ends and the means are matching at all – new nukes are one of the most expensive – uncompetitive – and definitely hazardous ways to try and address climate change – so do we squander our resources this way? Further, a changing climate actually increases the risks associated with nuclear power. Nonetheless, these concerns are dwarfed by the additional risks associated with a turbulent social climate.

4) The Chernobyl reactor accident in 1986 is an illustration of how nuclear power reactors are essentially giant “dirty bombs.” Conservative estimates place the cost of Chernobyl at \$350 billion and at ten years out, Ukrainian government officials already estimated 30,000 deaths attributable to the event. Every nuclear reactor in the world has the potential to spew fission products far and wide; they are all on Google Earth and they are all sitting ducks. We have been lucky. If the planes on that terrible day in September 6 years ago had hit the Indian Point reactors 40 miles up the Hudson – minutes by plane from the World Trade Center – Manhattan would still be a ghost town; many more than 3000 would die from the event over time (cancer takes a while) and the US economy would not have recovered. Why would we add more targets to our state? Here in North Carolina we have a nuclear reactor closer to the state capitol, than any other state.

But there is more – really BIG NEWS of the New Nuclear Era – if there **is** an attack on the reactor – there is no insurance. At the beginning of the Old Nuclear Era, no private insurance company – including Lord’s of London, would touch nuclear power – how could you put a nuclear bomb with the clutch-in near a city? So the federal government stepped in – and supported legislation by Mr. Price and Mr. Anderson that created a federally sponsored nuke-insurance co-op – all the nuclear reactor owners pay if anyone one of the players messes up. The Price Anderson Act creates a pool of \$300 million that is maintained up front – the rest, capped at ~ \$10 billion would be paid in annual chunks by EVERY reactor owner! It’s a co-op and to some degree it is a good idea, since it means that these other-wise competitive companies had to cooperate to avoid these catastrophes and the catastrophic impact it would have on their bottom line.

However, in the New Nuclear Era – and this age of insecurity -- if there is a new twist. Although the Price Anderson Act specifies that it would cover one act of terror – this was written before our President declared a War on Terror. In the definitions section of Price Anderson, it is specifically stated that the act “does not apply to acts of war” – and further that it does not cover acts by an Enemy of the State. Clearly if Al Qaeda attacked a reactor, it would be considered an Act of War.

In such an event, Price Anderson would not apply. Then what? If this happened here, in the Triangle, Progress would have no “coverage.” Clearly it would be a federal problem – but as the folks in New York, and on the Gulf Coast can tell you, the feds are not very good at helping most victims of catastrophe.

In this New Nuclear Era that Progress and Duke are asking for us to prepay – pre-authorize and partner in, the risks are going up, the hazards are as enormous as ever – and – there is no safety net.

The good news is that North Carolina can create a different kind of safety net for our energy future – we are leaders in renewable energy in this region. The Southern Energy Environment Expo is the largest such event in the South and second largest in the US; the NC Solar Center is a resource across the region. And there are new breakthroughs in the financing of really clean, really safe, really reliable energy. Goldman Sachs (investment bankers) are selling 20-year shares in solar panels like bonds. They are also selling 20 year contracts for the electricity generated to the businesses that own the roofs the panels are on.<sup>(2)</sup>

If the investment bankers are doing it -- WHY not consider state sponsorship – like bonds -- of solar installations...distributed generation is more efficient and more reliable and a whole lot safer! We can do better than prepaid nukes – why not prepaid solar panels?

See also: Flying in Formation: Price-Anderson and The Commercial Nuclear Power Industry and Questions on Nuclear Liability and (unintended) Consequences of War (attached, or on request).

Respectfully submitted,

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Mary Olson

- 1 The federal Energy Policy act of 2004 authorized a package of direct subsidies to stimulate construction of new nuclear power reactors in the USA at a price tag of about \$14 billion tax dollars. While a large sum of money, if construction were fully subsidized, this taxpayer gift would only build 3 reactor units. The last units completed in the Old Nuclear Era cost \$4.5 billion each.
- 2 See Sunny Side up (Claudia H. Deutsch, New York Times Oct 21, 2006).