

# The positive effects a nuclear reactor politics essay



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“ Providing incentives for energy efficiency and clean energy are the right thing to do for our future - because the nation that leads the clean energy economy will be the nation that leads the global economy. And America must be that nation.” (Obama) This was the endorsement made by the President of the United States in January of 2010 during his annual State of the Union Address of adding more nuclear power facilities around the United States. Nuclear power is the energy source of the future, and Louisa County is on the cusp of becoming one of the frontrunners in the nation in this aspect with its partnership with Dominion Power Electric Company to add a third reactor to its nuclear power plant situated on the shores of Lake Anna. Lake Anna was originally built to fuel the nuclear reactors that began commercial use in 1978 (Unit One) and 1980 (Unit Two). The lake is used to provide the water necessary to fuel this power station and its use and output will soar to new heights in the coming years. Already armed with two nuclear reactors on its power plant, the addition of a third reactor will only bolster Louisa County’s already advantageous position in the alternative energy game. In adding a third reactor at the Dominion Electric Power Plant on Lake Anna, Louisa County will put itself in a position to be the benefactor of numerous Federal aides, it will also create more jobs to be added to the local economic structure, and spark an influx of new businesses opening in the Lake Anna region as a result of this jump in population. More people will be attracted to the area, and more money will be brought into the county as a result, all of which will benefit the area while the recreational value of the lake and surrounding area will not be harmed, as some residents are fearful will happen. All of these factors bode well for the local economy and the citizens of Lake Anna and Louisa County.

In times where oil and coal are insufficient in appeasing worldwide energy needs, nuclear power is an efficient alternative. They are often constructed in times when oil is in short supply. The below chart depicts the growth and addition of nuclear power plants [NPPs] worldwide from 1950 to 1997. The near bell-curve shape of the chart and the nuclear 'boom' from 1970 to 1990 can be attributed to a worldwide oil crisis, forcing countries to find alternative energy sources to compensate for their deficit of oil. Nuclear energy was also the hot new form of alternative energy and there was an arms-race of sorts to have the biggest and best fleet of nuclear performance. Nuclear growth proved to be cyclical as it dropped and leveled off at the turn of the Century.

#### Number of Reactors

In the coming years however, another spike in nuclear production will be seen as military tensions in the Middle-East reach new heights. The addition to the North Anna power station, when completed, will be one of the first plants to lead in this upward trend. It can be predicted that the growth will peak again around the year 2014 as the world settles into using nuclear power as a safe and reliable alternative to coal and oil.

As Americans, we will soon see more and more nuclear bases around the nation, as it has been proven and endorsed by the government that nuclear is the way of the future for America. With the recent fuel crisis that has hit the United States, a concentrated effort has been put into discovering and fostering alternative energy sources. Hybrid cars was the first alternative venture in which American citizens began to alter their buying habits, but it

has since spread into all facets of American society, including power supplies as a whole. Through the American Recovery and Reinvestment Act of 2009, the United States has allotted 2.4 billion dollars of Clean Renewable Energy Bonds [CREBs] to be given to local governments to fund mass projects that will promote or provide alternative energy for mass numbers of people.

(Department of Energy, April 10, 2010) The funding Louisa County will receive through the 'Recovery Act' will foot most of the construction bill for the reactor, leaving Louisa ready to profit off of the venture.

Energy shortage is also hitting very close to home for Louisa County residents. The Commonwealth of Virginia itself is currently looking at an energy deficit that could reach 4,000 megawatts by year 2017. (Dominion Power, March 13, 2010) The demand for energy is heading in the opposite direction, growing by over 40% over the past ten years and can grow to almost 50% by the end of 2011. (Dominion Power, March 13, 2010) This can be accredited to growing populations and a large number of citizens that are not energy-conscious. The third reactor at North Anna Power Station is aiming to help appease these new demands while cutting into the deficit itself.

With any great change will come those who are resistant, those who do not want to alter their ways from the status quo. There have been specific groups of people from the lake community who have been opposed to the expansion of the nuclear power plant. The Lake Anna Civic Association (LACA) is a group of lake residents who have served as the voice of the cautious opposition. Termed 'N. I. M. B. Y. s' (meaning Not In My Back Yard) by colleagues in the area, this association stood in the way of county

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approval of the Dominion project by lobbying the local government and presenting reasons that the construction of the third reactor would be detrimental to the Lake. Though there are not many residents who feel that the extension of the nuclear power plant would be a negative addition to the lake judging by support for the project displayed at local governmental meetings, their arguments have been noted and studied by the authorities in charge of approval. They argued that with increased water movement and usage by the power plant will raise the water level an excessive amount. Though it is predicted by Dominion Power that the water line will rise two inches, it is expected that this will not affect property that shares a border with the lake by encroaching on the land. It has also been argued that some of the bridges that traverse the lake will be made unsafe for boat traffic due to the water level. This would be because the clearance would be lowered by two inches and boats with canopies or a second level may strike the bottom of the bridge when passing. Following a study conducted by the Lake Anna Advisory Committee that was presented on February 9, 2010 showed that the three bridges in question were already below ' safe boating conditions' (the boat, operator, and passengers are not in immediate danger) even when the water was low. It was also argued that an increased water temperature will deter tourists from enjoying the lake and joining in water activities. Discussed earlier, this slight temperature increase (two to three degrees) will not be physically troubling to lake-goers but will rather make it enjoyable for a longer period of time and will also not have any acute impact on the wildlife within the lake. Given Louisa County's developmental support track record, a project with the magnitude that this one possesses would not be approved unless it was certain that it would not cause major harm to the

environment or citizens around it. Those who oppose the power plant on the lake must remember that it was constructed in the first place to serve as a power resource for the power plant and it would not exist without it. In an interview with William Blount (telephone interview, January 4, 2010), a longtime resident and entrepreneur on the lake, when discussing the opposition, he remarked that “complaining about the power plant would be like purchasing land near an airport and complaining about noise.”

Nuclear energy has been proven to be an effective and safe avenue for harvesting energy for a large number of people. Louisa County, through its construction and use of Lake Anna as a power source to fuel its nuclear combines, provides power to the city of Richmond and the Southwest region of Virginia, as well as other states both north and south of Virginia. President Obama has endorsed this method as being safe and logical avenue for providing power to a nation who has seen its population grow by 208 million people over the past 100 years [1900 to 2000] (U. S. Census Bureau, March 4, 2010).

This is a significant step toward nuclear energy becoming more common and available. Being of the Democratic Party, this is a sign that the endorsement is no false advertisement because the Democrats have traditionally been the major stopping point for the implementation of nuclear power as a major source of national energy. Democrats, as well as millions of previously undecided citizens on the topic of nuclear energy are beginning to see nuclear power as a safe alternative to oil and coal, which there has been a recent shortage of, with no end in site as long as the war and associated long term conflicts in the Middle-East continue. With each crisis comes a solution

and a benefactor; Louisa County will be a benefactor from our national oil shortage. In order to ensure and promote the further use of nuclear energy, a town such as Louisa County could be granted sums of money and credits reaching into the millions (U. S. Department of Energy, April 10, 2010) for using this energy source. The wealth accrued through these cuts can be spent on public utilities such as roads and offices, meaning the county as a whole will benefit and be more pleasurable for all citizens.

Reputable people closely involved with the project feel as if it will be a positive for Louisa. Lifetime Louisa County resident and former County Administrator and Clerk of the Court Dean Agee feels as if the addition of the third reactor will only help Louisa County fiscally. The income from the projected boost in commerce and population will help to offset the cost of the influx of public school attendance this county has seen in the past decade. This was most recently illustrated with the construction of Moss-Knuckles Elementary school on Route 208 toward Charlottesville. Schools are being built to accommodate all of the new students being enrolled in Louisa County Public Schools each year, and funding is necessary to make this possible. A large portion of this money will come from County taxes on the construction projects and new businesses blossoming in the area. When discussing the economic benefits Louisa will experience, Agee revealed that “ the Board of Supervisors will increase the value of the county to offset the State lowering it’s fiscal aid, which is taxing on its actual value, this will level off the overall fiscal value of the County... combining that with the Federal incentives that we will receive, a substantial increase in overall value will emerge.”

The growth that will take place can be shocking. During the original construction of Lake Anna Mr. Boogie Duke, a local businessman and prominent land owner in the area, was speaking to a construction official about the digging of the hole where Lake Anna was to go. He inquired about how such a massive amount of dirt was going to be displaced, and was told that over one hundred bulldozers would be utilized in the process, "What?" he exclaimed, "There are only three bulldozers in the entire county!" This is merely a small example of the growth that nuclear power stations can bring to an area. While the area has seen much greater growth since then, adding a third reactor will have similar effects. There will be an influx of new jobs created by this third reactor; construction, building parts for the reactor, shipping, workers, and security for the new component will be needed for completion and use. Different stages of the construction project will involve multiple businesses and contractors, so exact numbers for each specific construction discipline will only be able to be seen with time. These jobs will not only attract workers, but also their families will move with them if they are to stay permanently, these numbers will add up quickly. To accommodate all of the new citizens and workers in the County, the local real estate market will also see a boost as it must provide both permanent and temporary housing for those working. Lake Anna Island has already taken measures of preparation for this by having a building project in the works to create over fifty new housing condominiums to complement the twenty it already has. This undertaking is projected to be completed by late summer of 2010, in time to advertise and sell to migrant workers who are helping in building the third unit. According to local businessman B. J. Blount, by completion of the project over 700 permanent new jobs will be brought in

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to Louisa County in addition to roughly 5, 000 temporary jobs over the next five to seven years, adding wealth and notoriety to the area. According to former Louisa County administrator and lifelong resident Dean Agee, Lake Anna is already by far the most powerful and wealthy market in Louisa County; it is projects and progressiveness such as the addition of a third nuclear unit that makes it such.

With this influx of new jobs in the area, the arrival of a new reactor will establish the northwest area of Lake Anna as a jumping-off point for more businesses and development projects in the area. As is true with virtually all areas that feature a great density of corporate prosperity, there was a major project that served as a catalyst for the attraction of other businesses to establish themselves in the area. A prime example of that would be the Short Pump Town Center erected in 2003 in northwestern Henrico County, Virginia. As soon as that came to fruition, and even perhaps before, more businesses and companies were purchasing land and leasing buildings to establish themselves in and around. There are now over a dozen housing developments and apartment communities established in the general vicinity of the Town Center with more to come. The Short Pump area has also established itself as one of the main shopping and leisure areas in the state of Virginia and many high school-aged kids migrate there on weekends to spend time and money. There is a direct correlation of growth in population to growth in wealth in corporate areas, and this will occur in this region of Louisa County. When the tide comes in, all the boats rise; the growth of the nuclear power plant will serve as that tide in Louisa.

More businesses will flock to the Lake Anna region to reap some of the benefits. An agreement has already been reached to have a Food Lion constructed on Route 208 in Louisa, located roughly five miles from the Dominion Power Plant. A grocery store such as this would not have signed on for development in the area without a projected growth in patrons that would shop there, so this would be a good indication of the projected growth in the immediate vicinity. Gary Griffith, owner of Dockside Realty, is developing Stonewall Town Center on Route 522 that will feature a restaurant and shopping opportunities. Lake Anna Island Realty was an early player in the race for position to attract business from the new growth. To go along with the covered boat slips that house the Lake Anna Island Yacht Club. Owner B. J. Blount and his partners have agreements and are in the process of building numerous other amenities on their property, located next to the 208 Bridge on New Bridge Road. There are boat slips available for lease or rent for commuters or new residents to tie up their boats and access them at any time. As that project progresses, there is a potential for over 400 slips to be implemented, along with storage space for each purchased slip. There are the aforementioned housing units under construction that will be available for permanent or temporary use for specialized or contracted workers and their families. Buildings will be constructed to house a hotel and a restaurant, along with separate housing for a doctor's office and two other separate restaurants. There is also now a houseboat available for rental on a weekly or weekend basis, with the opportunity for more boats to form a fleet that can turn into a steady source of income for the Realty. This is the sort of business plan and construction project that may well be seen blossoming in Louisa County with more regularity in the years to come.

An effect the Power Plant will have on the environment will be the slight increase of water temperature on the lake due to the increased consumption of water by the actual units. It is predicted that the water temperature will rise by two to three degrees. While this is not a glaring difference from the norm, the newfound warmth can potentially extend the tourist season by an extra week. This is because the higher temperature will take longer to cool in the fall and the water will be warm enough for recreational activities for a slightly longer period of time. The increased amount of reactor output (predicted two to three inch water level increase) means that the larger amount will also take longer to cool. Though it is only one week, the collective wealth accrued by businesses of the area, be it restaurants, rentals or general boat activity will pay great dividends in the long run for the local economy.

Multiple studies have been done to back up all of the claims made in favor of the third reactor's positive impact upon Louisa County's economy. From 1960 to 1976, sixty-four towns and cities that were located around any of four Northeastern U. S. power plants were observed and measured by their property market values. Positive growth trends in property value, listing and sale prices were seen across the board in these areas. (Downing, Gamble, Sauerlander, n. d.) Throughout the completion of the study the communities experienced positive growth. Furthermore, it was found that property market values increased at an inverse ratio to distance that they are situated from the nuclear power plants, possibly indicating that buyers specifically paid more to live closer to the plant. The municipalities that were in the general area of the plants also grew disproportionately to areas in the same state that

were not near a nuclear plant. (Bezdek & Wendling, 2006) In 1986, a study was conducted by a group of college professors from Oakland University in Michigan that studied whether the federal policy to deter citizens from living near nuclear power plants had positive effects or not. In a study made of 204 local government that were situated within ten miles of any of the 49 functional nuclear power plants in the United States at the time, the governments were polled on their citizens feelings toward the plants and the physical plant's public safety. (Folland & Hough, 1999) The results showed that feedback was greatly in favor of living near the plants and it was suggested that governments should encourage migration toward the plants rather than discouraging citizens from living near them.

Constructing a third reactor to add to the North Anna Power Plant in Louisa County will provide numerous benefits for everyone involved. Federal incentives will be sent the county's way, citizens will come pouring in searching for one of the multiple new jobs that will be created and numerous pre-existing and prospective businesses will be able to reap the benefits from all of this. All of these factors will culminate in making Louisa County a richer, more prosperous county.

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