

Why Are the Transmission Lines Needed?

The past several weeks have seen outrage from the citizens of several counties over Duke's possible routes for the proposed transmission line. Now that the deadline for submitting transmission line route comments has passed, it's time to think about the big picture: What are these lines for and why do we need them?

On Duke's Western Carolinas Modernization page¹, under Transmission in the Frequently Asked Questions section it states:

Transmission

Why does Duke Energy need to build additional transmission lines and substations?

Duke Energy has a responsibility to meet our customers' growing energy demand and to propose solutions that maintain reliable service. The transmission infrastructure is needed to maintain system reliability, meet regulatory requirements and fulfill the growing needs of our customers. Existing lines will not be enough to meet the projected future energy needs in the region and regulatory requirements.

In general Duke states that existing lines are not enough and that the new transmission infrastructure is required for two basic reasons:

- 1) Meeting growing energy demand.
- 2) Reliability. When questioned about specific "regulatory requirements" at the September 3 public meeting, the regulatory requirements were explained as state and federal guidelines whose core is "reliable service." No specific guidelines were mentioned, nor was the agency issuing the guidelines.

Let's look at each of these in turn:

1) Growing Energy Demand

Predicted Demand Growth

Duke has made several statements about upcoming increased demand and why they need the transmission line to bring power in to our area:

- Tom Williams, Duke Energy's Director of External Relations Duke has stated² that "The region's power consumption has doubled since the 1970s, and peak needs in hot and cold weather are showing bigger swings". Craig DeBrew, who leads Duke's local government and community relations efforts, agrees with that figure in a recent Letter to the Editor of the Hendersonville Lightning³.

¹ See: <http://www.duke-energy.com/western-carolinas-modernization/default.asp#CORO> visited August 29, 2015

² See "Q&A: Duke on transmission lines" at: <http://www.citizen-times.com/story/news/local/2015/07/25/qa-duke-transmission-lines/30672427/>

³ <http://www.hendersonvillelightning.com/opinion/4334-letters-on-duke-energy-power-line.html>

- In their May 19th press release⁴ about the replacement of the coal-fired plant Duke states: “The region's power demand is also forecast to grow by about 15 percent over the next decade⁵.”
- The Hendersonville Times-News reports⁶: “That extra capacity is needed to support the growing demand for electricity in Western North Carolina, Duke officials said. And the new transmission lines would import power from South Carolina to meet an ever-growing demand in the mountains, they added.” (*Emphasis added*)

On the other hand, Duke’s CEO and CFO paint a different picture in discussions earlier this year of Duke’s 2014 earnings:

- In February of this year the Charlotte Business Journal, citing Duke’s 2014 earnings, reports⁷ that “Duke CEO [Lynn Good](#) says overall use of power for Duke's regulated utilities in six states grew 0.6 percent⁸. But all of that growth came in commercial and industrial demand, and "residential is the challenge”.
- Additionally CFO [Steve Young](#) says the number of customers is growing more than 1 percent a year, with particularly strong growth in the Carolinas and Florida. But consumption per customer has declined, he says, in part because of energy efficiency and in part, he says, because more customers are living in apartments, where demand is generally less than in single-family houses⁹. Furthermore he states¹⁰ “in 2015 we are anticipating retail customer load growth between 0.5 percent and 1 percent.” (“Retail customer load” means use of power by duke customers at retail.)

At 0.5% a year, that’s about 5% a decade. At 1% a year that’s about 10% a decade. Nothing close to 15% a decade.

Who to believe? The PR guys in the context of a marketing communications, or the company’s CFO in the context of a statement regulated by the SEC? After all the PR guy’s numbers range from 50% more to three times as much as the CFO. Or maybe our region is growing at a rate triple that of Duke’s 6 states. Let’s check another source and see if we can get a handle on this. Utilities are required to file reports with the federal government. The data is available online.

- 1) We can look at North Carolina Total Electricity¹¹ Sales by Company for 2003 and 2013 and see if growth was 15% in the last decade, as Duke predicts for the future. We are going to calculate both Duke Energy Carolinas in NC only and Duke Energy Progress (formerly Progress Energy) in NC only to see what the increase has been. Although we are really only interested in Duke Energy Progress (just the NC data), since that is where the Lake Julian generation is used, we’ll check Duke Energy Carolinas (NC only) just to check the reasonableness of our result.

⁴ <http://www.duke-energy.com/news/releases/2015051901.asp>

⁵ This statement is from Duke’s project web site, under the heading “General Overview” and the question “What is the urgency”, as follows: “The advanced timing meets future demand, which is expected to grow by more than 15 percent in the next decade. The project positions Duke Energy to meet current and future demand, and supports industrial growth and future economic development.”

⁶ <http://www.blueridgenow.com/article/20150802/ARTICLES/150809996?p=all&tc=pgall>

⁷ <http://www.bizjournals.com/charlotte/blog/energy/2015/02/three-takeaways-from-duke-energy-s-2014-earnings.html>

⁸ See also: p 4, at: <http://www.thestreet.com/story/13050440/4/duke-energy-duk-earnings-report-q4-2014-conference-call-transcript.html>

⁹ See: p. 7 & 8, at: <https://www.duke-energy.com/pdfs/4Q2014-EarningsCall.pdf>

¹⁰ See: p8 at: <https://www.duke-energy.com/pdfs/4Q2014-EarningsCall.pdf>

¹¹ From data compiled by the U.S. Energy Information Administration at: <http://www.eia.gov/electricity/data/eia826/> Use Sales and Revenue for the years selected and use the spreadsheet to total sales by Company.

According to the federally filed data, the rate of increase in electricity usage (sales in MWH) for all sectors from 2010 to 2013 (the last year the federal government has final data for), is as follows:

NC Only	MWH - 2003	MWH – 2013	% increase
Duke	53,024,865	55,301,813	4.29%
Progress	34,922,247	36,886,571	5.6%
TOTAL:	87,947,112	92,188,384	4.8%

So we see that for the 2003-2013 decade the 15% growth rate cited by Duke Energy **DID NOT HAPPEN!** For Progress it was only 5.6%, about a third of what Mr. Williams is predicting.

A really interesting result appears if we just check the more recent years. This will help us see if the trend is changing in more recent years. Perhaps more recent years indicate an increased growth rate? Why else could a projection be three times the actual rate of the last decade?

Here’s what that data shows for years from 2010 to 2013, the last year the federal government has final data for:

	MWH - 2010	MWH – 2013	% decrease
Duke Energy Carolinas	57,859,736	55,301,813	4.62%
Duke Energy Progress	38,937,149	36,886,571	5.27 %
TOTAL:	96,796,885	92,188,384	4.76%

Oops, no increase there! The data shows a **DECREASE** over that time period. Also note that Progress was increasing a bit faster than Duke over the decade, as shown in the first table, but is decreasing faster over the more recent 3 years. If we take Duke Progress’s 5.27% decrease and calculate out to a full decade we see that **rather than the 15% increase per decade that Duke is predicting, the most current data shows a DECREASE OF ABOUT 16.5% per decade.**

Surely there will be some ups and downs in that decade, but to predict a 15% growth rate when the calculation using the last 3 years for which the federal government has final data is a **16.5% DECREASE**, that is just unbelievably misleading.

So go back up to the bottom of page 1 and look at the statements made about growth by Mr. Williams, Duke’s PR person. See how consumption that “doubled since the 70’s” is being used to make the 15% predicted increase look reasonable? Basing a future prediction on the past 5 and a half decades, while ignoring recent declining sales is definitely misleading. You can see in the graph below a depiction of

Even in supposedly faster growing WNC, the data shows that power consumption is decreasing over the decade, not increasing. So “faster growing” is really just “decreasing more slowly”.

- 2) Well, that was fun, let’s poke about in some more data and see what we can find. There’s a section on just North Carolina.¹³ Table 4 shows capability increasing: from 27,674 megawatts in 2010 to 30,048 megawatts in 2013. This three year period is showing an increase in capacity of 8.6%, which is even faster than the 13 year increase in sales (in the first table of example 1). So capacity is increasing at a fairly good clip in the last three years! Things must be looking up! However, increased capacity does not necessarily mean increased power consumption. It just means you can make more, not that you are selling more.
- 3) To see how much is selling, look at Table 5. It shows generation (line 25) decreasing: from 128,678,483 in 2010 to 125,936,293 in 2013: **This is a decrease of 2.1%**. Capacity for generation, which increases due to building new facilities, is significantly outpacing actual generation, which represents sales and is actually decreasing.

What does all this mean?

- a) You can hide recent sales declines by including them in a much longer period of increasing sales.
- b) In the period 2010 to 2013, NC sales decreased by 4.8%, generation decreased by 2.1 %, and capability increased by 8.6%. First of all, why the difference between sales and generation? The sales numbers are retail sales (sales to consumers, either residential or business). Generation, on the other hand, includes both retail and wholesale (sales to other power companies). But the real kicker is why is capability increasing while generation and sales are declining? There normally should be a difference between how much power you can make (capability) and how much power you do make (generation). You want to have some kind of margin there. (Just like buying a car that can do over 100 miles per hour when you never go over 65!) But if a regular business was ramping up production while sales were declining, that would be a problem. Maybe there’s a problem with not enough capacity? So they might be trying to get to a point where there’s a good margin. Mr. Williams has stated¹⁴ “Duke tries to have an available capacity 15 to 17 percent higher than the demand.” Capacity of 27,674 megawatts in 2010, multiply by 24 x 365 equals 242,424,240 megawatt hours of capacity for the year. Compare that to generation of 128,678,483 megawatt hours. Margin then would be 113,745,757 megawatt hours that could have been generated but were not needed, or 46% of what was available. OK, in 2010 they sold only 54% of what they could have produced. Really, that seems like enough margin – about 3 times as much as they try to have! Gosh, it seems the state is just swimming in power generating capacity! Which the ratepayers are paying for but do not actually need.

How can an electric utility get away with that kind of overbuilding of its power plants? Because its rates are regulated by the state, and the state sets rates based on their capital investment (among other things, like fuel cost). So more investment in generation capability (power plants and transmission lines) means higher rates, whether you use the capacity or not.

¹³ <http://www.eia.gov/electricity/state/northcarolina/>

¹⁴ See: <http://www.blueridgenow.com/article/20150802/ARTICLES/150809996/0/search?p=all&tc=pgall>

To summarize Duke’s position on growth and compare that to actual data, we see:

DUKE PR TEAM	DUKE DATA
Growth of 15% in the next decade	CEO: no growth in residential (6 states)
Ever growing demand in the mountains	CFO: 0.6% total growth in 2014, predicts 0.5% to 1% in 2015 (6 states)
	Duke Energy Progress (NC only) data from federal records: decrease of 5.27% from 2010 to 2013, which equates to approximately 16.5% a decade
	WNC data from Duke, reported in Citizen-Times July 25: decreasing at a rate of 4.8% a decade

With better technology for residential renewable energy (see the section below entitled “New Technology and Electricity Industry Growth”), and commercial/industrial operations looking for renewable energy, declining electricity usage may be likely to continue for quite some time.

Causes of Declining Power Usage

Not so long ago, if a new plant came to town, it would require significant amounts of electricity. However, according to PricewaterhouseCoopers:¹⁵

The importance of sustainability now goes far beyond environmental issues, as the need to behave responsibly becomes a key aspect of strategy and operations, maintaining brand and reputation and seeking good growth. And that’s true irrespective of the sector in which a company operates.

Traditionally, ‘heavy’ industries like resources, utilities, transportation and manufacturing have attracted most scrutiny. But no company, no matter what it does, can now afford to take its eye off its environmental, economic, tax and social impact. If it does, non-governmental organizations, activists, social networks, the media and its customers will soon hold it to account.

Companies building new locations in North Carolina are meeting this new expectation of sustainability, by either obtaining renewable source energy from Duke, or by providing their own power. Examples are:

- Amazon recently committed to securing its electricity from 100% renewable sources. Amazon Web Services is building a North Carolina wind farm.
- Apple Inc. powers [all of its data centers](#) with renewable energy. Here in North Carolina Apple has a 10MW fuel cell system, plus its two 20 MW solar arrays, and another 17.4 MW solar farm in the works, at its Maiden, NC data center.

This trend is not limited to high tech companies. Other companies are retrofitting facilities to provide their own power as well, including:

- Target is installing solar on eight NC stores, including Asheville.
- Walmart led private companies in capacity of installed solar in 2014 with Kohl’s, Costco, and IKEA also in the top five.

¹⁵ <http://www.pwc.com/gx/en/issues/sustainability.jhtml>

However, Amazon and Apple are not in Western North Carolina. Maybe our mountains are not such a good place for large acreage solar farms like Apple and Amazon's. How does this affect us here? It makes WNC more suitable for local self-powered expansion. Building large fossil-fueled energy generation in Asheville will only increase the trend towards corporate self-powered energy generation, since other options for renewable energy may not be available.

Henderson County's recently completed Sierra Nevada Brewery is an example. Sierra Nevada has 2,200 solar panels and two micro-turbines which together generate about 1 MW of DC power to power the brewery. Sierra Nevada is leading the way in responsible power practices in our county. This is especially important in Henderson County since they support our local economy in (at least) two ways. Not only are they a source of jobs, but their facility is open to the public with tasting rooms, a restaurant, and outdoor facilities. In short, a magnet for tourists, thus supporting our local tourism industry.

The fact is that large corporations (Apple, Amazon, IKEA), especially technology companies, are focusing on renewable power. They are looking for locations that can provide renewable energy, such as solar or wind. The gas plant in Asheville will not do that. If companies cannot get power from a renewable energy source then they will build their own, or locate elsewhere - in a location where renewable energy is available.

The best thing Duke could do for industry in Western North Carolina is to make renewable energy available. Not a gas plant. Furthermore, both the tourism and the agriculture industries have stated that the transmission line would damage those existing industries. Why trade established industries to benefit theoretical new ones?

The message for Duke, from the commercial and industrial sector they rely on for growth, is: go green or go home. A new gas plant may be an improvement on coal, but as far as renewable energy is concerned it doesn't cut it. Better than coal, with its severe water pollution problems, for powering existing needs, but for future growth? Not so much. For that you need energy from renewable sources. Of course, companies like Sierra Nevada just build their own.¹⁶

Electricity consumption may have doubled since the seventies as Duke's WNC Manager Sipes states, but that trend seems to be dead. Why? Read on.

New Technology and Electricity Industry Growth

Perhaps this is just a temporary slowdown in growth? Due, as Duke's CFO states, from living in apartments, and increased energy efficient homes? Or maybe not. On June 29, 2015, the New Yorker published an extremely interesting article¹⁷ entitled "Power to the People: *Why the rise of green energy makes utility companies nervous.*" In it they detail some very interesting developments in rooftop solar. One of them is Elon Musk's¹⁸ new home battery which solves the daylight problem with solar. Using the battery, energy gathered when the sun is out can now be stored for use when it isn't. A week after the battery was announced an entire year's production had been sold out, and expansion of the brand new factory was under discussion. Some interesting home solar installations are discussed in the New Yorker's article. One solar company immediately announced the packaging of the battery with its solar panels. The New Yorker continues "If utilities won't relent and embrace innovation, homes and businesses will soon be able to circumvent them altogether." The article also reports that "many utilities see residential solar power as an existential threat. In 2013, an industry

¹⁶ While solar and wind based renewable energy are somewhat new trends, building your own power source is not a new trend for businesses. Consider Pharr Yarns in McAdenville, NC. Among their "Heritage of Firsts" is "First hydro generator made by Thomas Edison" to power their mill.

¹⁷ <http://www.newyorker.com/magazine/2015/06/29/power-to-the-people>

¹⁸ CEO and CTO of [SpaceX](#), CEO and product architect of [Tesla Motors](#), and [chairman](#) of [SolarCity](#).

trade group called the Edison Electric Institute¹⁹ warned that utilities face what company executives were quick to call “a death spiral.” As customers began to generate more of their own electricity from the solar panels on their roofs, utility revenues would begin to decline, and the remaining customers would have to pay more for the poles and wires that keep the grid alive. That would increase the incentive for the remaining customers to leave.” So would higher rates that include paying for new generation plants that are bigger than they need to be, as we discussed above. Or rates that include paying for transmission lines that are not really needed. How likely is the “death spiral”? Take a look at what’s happening in Hawaii, as reported²⁰ by the NY Times. There residential rooftop solar systems are so prevalent that for over 18 months the state’s largest utility barred thousands of customers from getting rooftop systems, citing concerns that power generated by rooftop systems was overwhelming the utility’s ability to handle it. The state energy officials eventually ordered them to start approving the backlog of solar applications. As the U.S. EIA (whose data we looked at above) states²¹ “The high electricity prices in Hawaii have made wind and solar technologies economically attractive alternatives, especially as their technology costs have come down in recent years. These factors have led to growing wind and solar generation on both the utility scale and in smaller distributed applications—particularly customer-sited rooftop solar PV.”

What happened in Hawaii when the Death Spiral met decreasing alternative energy equipment prices? The company owing utilities that supplied 95% of Hawaii’s power got bought out by one of the U.S.’s largest developers of renewable energy, NextEra.²²

Another encouraging development is yet another company²³ planning to produce home batteries, with at storage capacity of up to 8 KWH. That’s just the initial product. As will most technologies, capacity will likely go up and price down.

Home batteries can be used for several purposes: storing power from low peak daily usage periods for use in high peak periods (thus lessening peak demand on the electric utility and if appropriately used saving the homeowner money on electric bills), storing excess solar power for use when solar power is not available (thus mitigating the need to transfer solar power to the local utility), and of course for backup power during a power outage.

Then there’s the Zero-Net Energy home movement. With test model homes now being built²⁴, the California Public Utilities Commission’s Energy Efficiency Strategic Plan aims to have all new homes be zero-net energy, beginning in 2020. That means they will generate more energy than they use. If Duke gets their way and is allowed to continue overbuilding then Duke Energy Progress ratepayers will start paying on a 30-year rate increase (to pay for the new facilities) just when growth in other areas (and perhaps here too) comes to a screeching halt.

¹⁹ Edison Electric Institute, of which Duke is a member, is the same organization that is asking the federal government to make it easy for them to get transmission line permits through national parks. See page 4 at:

<http://energy.gov/sites/prod/files/2014/10/f18/CScomments-KOnaran-EEI-attach-102014.pdf>

²⁰ http://www.nytimes.com/2015/04/19/business/energy-environment/solar-power-battle-puts-hawaii-at-forefront-of-worldwide-changes.html?_r=0

²¹ <http://www.eia.gov/todayinenergy/detail.cfm?id=19731>

²² NextEra and Florida Power & Light, which is Florida’s largest utility and a competitor of Duke Energy Florida, are the two major subsidiaries of the FPL Group.

²³ See: http://www.utilitydive.com/news/plug-and-play-storage-startup-orison-seeks-to-challenge-tesla-in-residentia/405143/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202015-09-04%20Utility%20Dive%20Newsletter&utm_term=Utility%20Dive

²⁴ <http://www.latimes.com/business/la-fi-net-zero-home-pilot-20150915-story.html>

And that's just residential. The California Public Utilities Commission's Energy Efficiency Strategic Plan aims to have all new commercial buildings be zero-net energy by 2030. While California, and also Vermont, seem to be leading the way to decreased electricity usage, the rest of the country is sure to follow. The increasing use of solar and other technologies in the industrial/commercial sector is a trend that has been dubbed "the other death spiral".²⁵ Suddenly the slowdown in electricity use does not seem so temporary! After all, what part of the term "death spiral" means "growth"?

Is Imported Electricity Even Needed?

At this point you might be losing your faith in Duke's Mr. Williams, Mr. DeBrew and Mr. Sipes²⁶ and their predictions of 15% increased growth in the next decade. But let's soldier on and take a look at the proposed new facilities. In particular, the question is why can't the new gas power plant meet the predicted growth in demand. (assuming there is any.) Why the need to import even more energy from South Carolina, or as is currently contemplated by DEP, from DEP East?

What do the numbers say? Duke Energy proposes to build a 650 Megawatt gas generation station at the Asheville location, adding a solar component after the current coal plant is discontinued. There also exist two combustion turbines, which can produce another 324 megawatts of peaking power.²⁷ The existing two turbines will remain. After the gas generation station is built the current coal plant (376 Megawatt) will be retired. In addition, Duke has indicated that 400 megawatts is occasionally imported at times of peak need. The turbines are not going away, there's been no indication that the 400 megawatts of imported power will go away, the power generation capabilities of the gas plant will be nearly double the current coal plant and there will also be an unspecified amount of solar available. So the standard generating capacity will more than double, the facilities used to meet peak demands will still be there, and there will be solar too. Even if power consumption did increase by 15% a decade, it would be 40 years before we use this much power. If it increases at the Duke CEO's more accurate rate of 0.6% per year then that's about 6 percent every decade and it will take roughly 12 decades to double – 120 years. (And don't forget death spiral #1 (residential) and death spiral #2 (commercial/industrial!))

In addition to the normal power usage considered above, the need to provide energy during periods of peak demand should be considered. According to Robert Sipes, Duke Energy WNC Manager,²⁸ "Peak energy demand for the region last year topped out at 1,183 megawatts requiring the activation of voluntary load control programs, smart grid-enabled voltage reductions and an overall request for voluntary conservation to manage through the peak." Let's add up what was available: coal plant 376 megawatts, turbines 324 megawatts, imported power 400 megawatts, totaling 1100. So an additional 83 megawatts was needed or had to be conserved as requested. Yes, that's probably too close. But that was BEFORE the new power plant. After the new power plants it's: gas plant 650 megawatts, turbines 324 megawatts, imported power 400 megawatts, totaling 1374. Nearly 200 megawatts (15%) to spare! If growth continues at 15% per decade, as Duke's WNC

²⁵ <http://www.utilitydive.com/news/the-other-death-spiral-utilities-are-beginning-to-deal-with/403286/>

²⁶ We might need to allow Mr. Sipes some time in his brand new job before judging his remarks too harshly. His August 17 article in the Lightning was published only a week after the new position of "Duke Energy WNC Manager" was created for him because of the opposition to the Western Carolinas Modernization Project. See: <http://www.bizjournals.com/charlotte/blog/energy/2015/08/duke-energyinstalls-new-asheville-team-to-support.html>

²⁷ Information provided at the September 3 meeting may not have included this resource. Whether they forgot it or intend to shut it down is unknown.

²⁸ <http://www.hendersonvillelightning.com/news/4307-duke-is-listening-regional-manager-says.html>

Manager forecasts, power consumption would not reach 1360 until 2024. If the growth factor provided by Duke's CEO and CFO are more correct then, just as for normal operating loads, it's 120 years before we need to worry about running out of power during peak load periods.

What are the Transmission Lines for?

After looking at the above calculations, can we really believe Duke Officials statement that, in addition to the new generation capability, the transmission lines “would import power from South Carolina²⁹ to meet an ever-growing demand in the mountains?” Compare that to what Duke's Mr. Sipes says:

“The new substation and transmission line will connect the new plant and the region to our main transmission system, making it possible to jointly produce and deliver energy to benefit customers in both states. . . .The closest location to the main transmission infrastructure is a 525 kV transmission line that runs between McGuire Nuclear Station in North Carolina and Oconee Nuclear Station in South Carolina. And the closest and most viable location to connect to that line is in Campobello, S.C., near where it crosses Interstate 26.”

However, as we discussed above, except for the occasional peak need, if even then, the excess power we don't use in North Carolina is likely to be at least half of the total from the new plant and eventual solar. It appears from Mr. Sipes' statement that the power will more commonly be flowing the other way. Through South Carolina into the grid – for other areas.

Let's look at another puzzling Duke statement³⁰:

Transmission Question: Who is going to pay for it and when?

“The transmission projects will serve and benefit Duke Energy Progress customers in the region and the costs will be passed through to Duke Energy Progress and recovered through base rates over a 30-year period.

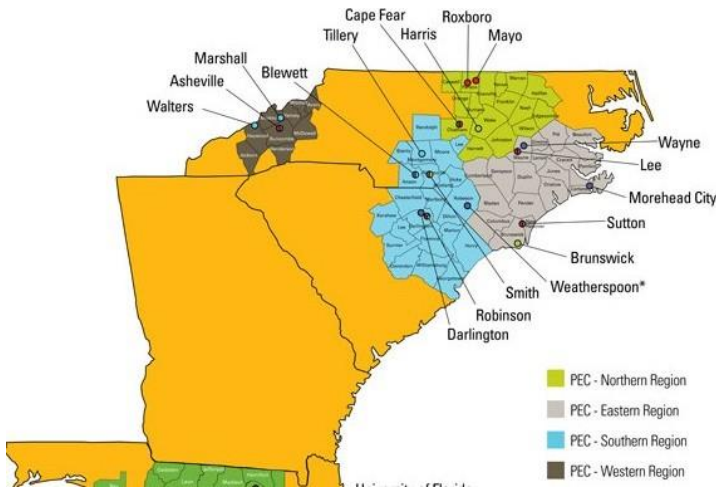
Duke Energy Progress customers will earn a fuel savings that will more than offset the cost. With the additional transmission infrastructure, we will be able to use more economical generation sources, thereby lowering the costs to Duke Energy Progress customers. The enhancement program has no cost impact to **Duke Energy Carolinas** customers.”

To summarize: Duke Energy Progress customers will “benefit” from and pay for the transmission projects. **Duke Energy Carolinas** customers will not be affected by the costs. Where then is the energy going if it's not needed in the Asheville area? Where exactly are the lines between Duke Energy Progress and Duke Energy Carolinas? Duke has a map³¹ on its website, a portion of which is seen below. It is clearly not accurate since not all of Henderson County is served by Duke Energy Progress. (DEP West is really just 5 or 6 counties and tiny bits of adjacent counties.) However, it does show us where the rest of Duke Energy Progress is located.

²⁹ Mr. Sipes' statement is not exactly consistent with Duke's filings at FERC, which say the lines are needed to import energy from DEP East, only a portion of which is in South Carolina.

³⁰ <http://www.duke-energy.com/western-carolinas-modernization/default.asp#COR6> Third question under Transmission.

³¹ <https://www.duke-energy.com/rates/progress-coverage-map.asp>, visited 8/29/15



Only the Duke Energy Progress (PEC³²) Western Region is located in Western North Carolina. The other three regions are located in northeastern South Carolina, and the eastern part of North Carolina. Since the cost of the new project is being borne by Duke Energy Progress customers, the additional Duke Energy Progress regions are likely to be benefitting from the power. But Duke’s FERC filings indicate that the power is coming from DEP East to DEP West. With conflicting statements and government filings as to which direction the power will be going on these transmission lines, it is hard to see any justification for them at all. Or as was suggested by a DEP wholesale customer³³, maybe the excess capacity on the transmission facilities paid for by DEP will just be sold off by DEC to others. Customers of DEP, both wholesale and retail, may want to keep a close eye on the cost of this line, who pays for it, and who actually uses it. Rather than invest in dubious transmission schemes, wouldn’t it be better to invest in local energy generation, including renewable sources? Wouldn’t it be better to build on-site redundancy and reliability rather than unsightly transmission lines damaging local economies and property values?

What does all of this tell us about the transmission lines? **These lines are not serving Henderson County at all, nor, except possibly on rare occasions, are they even serving the DEP portion of the Western North Carolina area.** Most (if not all) of the time they are serving the middle part and eastern part of North Carolina and also part of South Carolina, taking the excess power available during the next 120 years (or possibly forever) and sending it away from Asheville. We in the vast majority of Henderson County are NOT going to be using more economical energy sources coming through the transmission lines either from the new gas plant in Asheville, or from some unidentified source in South Carolina, or DEP East. The power through the transmission lines will mostly be going right to other parts of the Carolinas because the new Asheville gas plant will have more than enough power to provide for regional usage.

The lines would only need to bring electricity from outside DEP West only in an extremely rare failure of generation in Asheville, assuming the failure is not spread in a larger area. **No cost to Duke Energy Carolinas customers (most of Henderson County)? Why should there be? We are not getting the benefit.** In fact, we are getting the detriment in damage to our tourism, and agriculture industries, and in destruction of our wonderful mountain views that we either grew up with or came here for. Not to mention property values.

³² The acronym PEC is assumed (perhaps incorrectly) to refer to Progress Energy Carolinas, now Duke Energy Progress.

³³ See FERC Docket ER15-2189, filing dated 8/3 entitled “Motion to Reject Filing”

Summary of need for the large power plant AND for additional power through new transmission lines due to projected growth

There are significant indicators (changing technology), not to mention data, that the growth projected by Duke is exceedingly speculative. The new gas plant will have excessive energy generation capacity, possibly for more than a century, or even longer. The transmission lines benefit neither Henderson County ratepayers, nor Duke Energy Progress ratepayers. **There are surely better alternatives.**

2) Reliability

What about reliability? Yes, the line could be used to bring in electricity in the event of a shortage caused by a catastrophic generation facility failure, or maintenance. Can anyone recall a time when we did not have power due to generator shutdown?

What would it do for our everyday failures? Those are caused by trees falling on power lines, ice storms affecting power lines, and local equipment failure. The transmission line will do nothing to make those outages less frequent.

For emergency and maintenance, if Duke cannot build a new power plant that is internally maintainable without being shutdown, then build two smaller ones and use one when the other is down. They say they have “gold-plated” the coal plant³⁴ to make it reliable. Then gold-plate the new plant!

The excess power and the transmission lines taking it out of state will probably make some area more reliable, but it’s not us. Our only benefit is theoretical – in the event that we need to get all of our power from somewhere else! And the redundancy for which DEP West is paying, to the extent that it is not needed, will be put to good and profitable use by DEC which will own the line.

SUMMARY

The projected growth is speculative at best, and excessive capacity and huge transmission lines to bring in more power just aren’t needed for power consumption at current levels, which are declining, not increasing. Even if the larger capacity was needed for future growth, the transmission lines would not be.

Theoretical reliability in the event of episodes of generation failure which we are not experiencing, seems a small benefit to justify the economic damage to our county. In any case this line would not improve local reliability problems that are caused by problems with local distribution lines rather than by regional transmission problems.

CONCLUSION

This plan needs to go back to the drawing board. Power generation for our region’s basic electricity needs should be sized to meet more realistic projections. The need for regional peak and emergency/maintenance needs should be completely re-evaluated with an emphasis on using renewable sources, existing lines, and regional generation sources.

³⁴ At the September 3 public meeting.