

North Carolina's Energy Future

Data shows we can close power plants instead of building new ones

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Prepared for:



SUMMARY

Electricity rates for most North Carolina customers will increase dramatically if new coal-fired and nuclear power plants are successfully completed by Duke Energy and Progress Energy. Our analysis of recent filings by both companies shows that even with a growing population, North Carolina can eliminate the need to risk \$35–40 billion on new plants. This can be accomplished through modest increases in energy efficiency, cogeneration and renewable power sources, and if necessary, by using a large oversupply of electricity in the Southeast. This approach will generate thousands of jobs statewide and allow retirement of over one-quarter of the existing coal generation capacity — the equivalent of 7 to 9 sizeable plants. Doing so would help the state become a leader in the critical task of reducing greenhouse gas emissions. To that end, several conditions already in place remove the need for Duke Energy's Cliffside coal-fired unit now under construction.

Electricity from new nuclear plants will cost three to five times as much as the power now being generated by Duke Energy and Progress Energy. Even the lower end of that range is much more costly than energy-saving programs, and the nuclear price tag makes all forms of renewable energy attractive in North Carolina, especially because many of them enjoy declining costs.

Upcoming carbon regulation will also drive up the price of coal-fired power, giving even more impetus to efficiency programs and new renewable energy.

Duke Energy and Progress Energy can avoid the risks of new power plants by doing just four things:

1. Stop impeding progress toward real energy efficiency. Through proven programs growing at a modest pace, efficiency can be increased at least 1% per year through 2023. Twenty other U.S. utilities and municipalities have already achieved at least this much.
2. Bring on renewable energy as required by the 2007 Energy Bill, Senate Bill 3. At least 7.5% of electricity from new renewable sources is well within reach, especially as prices for solar equipment continue declining and as North Carolina joins other mid-Atlantic states in developing its large wind energy potential.
3. Make modest increases in load control programs to soften demand peaks.
4. Add some cogeneration ("Combined Heat and Power"), a proven resource that is largely untapped in North Carolina.

This report shows that, based on the utilities' numbers and the modest changes noted above, electricity demand can be reduced by up to 3,700 Megawatts (MW) within 15 years, avoiding the need for any new plants and allowing retirement of many coal-fired units.

The utilities' record on energy efficiency remains very weak; both forecast only minuscule efficiency savings

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over the next 15 years. By contrast, an independently-administered efficiency program such as the NC SAVE\$ ENERGY proposal would avoid the utilities' conflict of interest between building expensive power plants — upon which profits are based — and selling less electricity.

Southeastern industry data shows that regional utilities are seeking to build the equivalent of around 50 large coal or nuclear plants in excess of regional electricity needs so they can increase sales of power outside the region.

Already, Duke Energy is seeking to sell electricity to at least nine cities and other large customers outside its service area, whose total usage exceeds the 800 MW capacity Duke Energy is building at its controversial Cliffside coal-fired plant. Also, reducing Duke Energy's excessive reserve margins to the level used by Progress Energy would, on its own, negate the need for the Cliffside unit.

If nuclear plant cost estimates continue rising, power bills could easily double by the time they are built. New nuclear reactors are likely to cost \$8–12 billion each if they are ever completed. In the 1980s, dozens were cancelled during construction, and now, serious delays and design problems have emerged. This could leave customers with large rate hikes for abandoned projects, since under the 2007 N.C. Energy Bill, corporate stockholder risks are largely shifted to ratepayers. In early 2008, Wall Street lenders insisted they will not finance new plants without 100% loan guarantees by taxpayers.

State law requires protection of customers against the overbuilding of power plants. One reason the new plants are being proposed is that the utilities have considerable influence in state legislatures and Congress.

The public is gradually realizing that we must use energy wisely — and must require bold leadership by elected officials. Building large new power plants is simply too financially risky for North Carolina, especially when there are viable and economically superior alternatives. ■

