| **Company** | **Original Compliance Cost Estimates** | **Actual Cost of Compliance** |
| --- | --- | --- |
| **FirstEnergy** | Respecting the pending maximum achievable control of technology rules for mercury and hazardous air pollutants, *we still expect investments of about $2 billion to $3 billion in our generation fleet to comply*. Our investments are expected to primarily focus on reducing mercury, and particulate emissions at our supercritical units. -- [2011 Q3 Earnings Call, Anthony Alexander CEO](http://seekingalpha.com/article/304211-firstenergys-ceo-discusses-q3-2011-results-earnings-call-transcript?page=2)Now last year, I told you that our spend -- *our capital spend was $2 billion to $3 billion to comply with this rule when it was MACT. Now that we understand the rule and we've dug into it and analyzed the situation more deeply, we are right now looking at a $1.3 billion to $1.7 billion spend to comply*. And we continue to work further to reduce that cost. And we will be in compliance by the spring of 2015. – [2011 Q4 Earnings Call](http://seekingalpha.com/article/402961-firstenergys-ceo-discusses-q4-2011-results-earnings-call-transcript), James H. LashThe new MATS were finalized at the end of 2011, which resulted in our decision to retire nine older coal-fired generation plants by September 1, 2012. *Our current estimate is that it may cost approximately $1.3 - $1.7 billion to bring our remaining units into compliance*.-- [2012 10-K](http://investors.firstenergycorp.com/Cache/12801729.PDF?Y=&O=PDF&D=&FID=12793469&T=&OSID=9&IID=4056944)As a result of this analysis, we have significantly reduced our projected capital investment related to MATS compliance. *We now estimate investment of about $975 million across our Fossil Fleet. This is down from the $1.3 billion to $1.7 billion estimate we provided in February and well below our initial projections of $2 billion to $3 billion*. While we still have work to do to confirm and refine our current estimate, we’re clearly moving in the right direction. -- [2012 Q2 Earnings Call, Anthony Alexander, CEO](http://seekingalpha.com/article/790061-firstenergys-ceo-discusses-q2-2012-results-earnings-call-transcript)“As a result of this analysis, we have significantly reduced our projected capital investment related to MATS compliance. *We now estimate investment of about $975 million across our Fossil Fleet. This is down from the $1.3 billion to $1.7 billion estimate we provided in February and well below our initial projections of $2 billion to $3 billion.* While we still have work to do to confirm and refine our current estimate, we’re clearly moving in the right direction….At the same time, we’re moving forward with our previously announced plan to deactivate units at seven of our older coal-fired plants by September 1st of this year. Again, as a result of the MATS and other environmental rules, the effective units are Eastlake 4 and 5, Bay Shore 2, 3 and 4 and the Armstrong or R. Paul Smith, Albright, Willow Island and Rivesville plants. We expect to continue operating Eastlake 1 through 3, Lakeshore and Ashtabula until early 2015 coinciding with the conclusion of reliability must run or RMR arrangements with the PJM interconnection. We filed with FERC regarding RMR compensation for these units in July.” -- 2012 Q2 Earnings Call, Tony AlexanderAs you may recall, in 2012, shortly after MATS Rules were finalized, we announced plans to deactivate units at 9 of our older coal-fire generating facilities. As a result of our recent analysis, we announced plans to further trim our fleet and deactivate 2 additional power plants by early October. These are the 370-megawatt Mitchell Power Station in Courtney, Pennsylvania; and the Hatfield's Ferry Power Station in Masontown, Pennsylvania, which is a 1,710-megawatt facility. These deactivations are subject to PJM review for any reliability impacts. The Hatfield Station is a large supercritical and scrubbed facility. And while the Mitchell Station is older, it is equipped with scrubbers. However, neither of these plants cleared in the 2016, 2017 capacity auction. And some of the individual units also did not clear in the 3 prior auctions. Our analysis, among other things, consider that together, Hatfield and Mitchell represent approximately 10% of our total generating capacity, with about 30% of our estimated cost to comply with MATS regulations. As a result of these closures, *our MATS compliance costs are expected to decrease from around $925 million to approximately $650 million.* And we continue to look for ways to refine and perhaps further reduce our expected MATS compliance costs. -- [2013 Q2 Earnings Call, Anthony Alexander, CEO](http://seekingalpha.com/article/1610392-firstenergy-management-discusses-q2-2013-results-earnings-call-transcript?page=2)We also significantly decreased our competitive cost structure. Annual operating expenses have been reduced through our continued focus on managing fuel costs and O&M expense. And more importantly, our projected capital spending in the generation group over the next several years has been reduced by more than $1 billion through our recent actions. *This includes additional reductions in our expected spend for compliance with Mercury and Air Toxics Standards , which is now at $465 million across the entire generation fleet, with only an estimated $240 million at our competitive units.* The majority of the remaining capital will be invested in projects to extend the life of our nuclear assets, with new steam generators at Davis-Besse in 2014 and new steam generators and reactor head at Beaver Valley 2 in 2017. – [2013 Q3 Earnings Call, Anthony Alexander, CEO](http://seekingalpha.com/article/1808342-firstenergy-management-discusses-q3-2013-results-earnings-call-transcript)  | On December 28, 2012, the WVDEP granted a conditional extension through April 16, 2016 for MATS compliance at the Fort Martin, Harrison and Pleasants stations. On March 20, 2013, the PADEP granted an extension through April 16, 2016 for MATS compliance at the Hatfield's Ferry and Bruce Mansfield stations. In December 2014, FG requested an extension through April 16, 2016 for MATS compliance at the Bay Shore and Sammis stations and await a decision from OEPA. In addition, an EPA enforcement policy document contemplates up to an additional year to achieve compliance, through April 2017, under certain circumstances for reliability critical units. MATS was challenged in the U.S. Court of Appeals for the D.C. Circuit by various entities, including FirstEnergy's challenge of the PM emission limit imposed on petroleum coke boilers, such as Bay Shore Unit 1. On April 15, 2014, MATS was upheld by the U.S. Court of Appeals for the D.C. Circuit, however, the Court refused to decide FirstEnergy's challenge of the PM emission limit imposed on petroleum coke boilers due to a January 2013 petition for reconsideration still pending but not addressed by EPA. On November 25, 2014, the U.S. Supreme Court agreed to review MATS, specifically, to determine if EPA should have evaluated the cost of MATS prior to regulating. Depending on the outcome of the U.S. Supreme Court review and how the MATS are ultimately implemented, *FirstEnergy's total capital cost for compliance (over the 2012 to 2018 time period) is currently expected to be approximately $370 million (CES segment of $178 million and Regulated Distribution segment of $192 million), of which $133 million has been spent through 2014* ($56 million at CES and $77 million at Regulated Distribution). -- [2014 10-K, p. 16](https://www.firstenergycorp.com/content/dam/investor/files/10-K/2014-10K.pdf)*We’re investing $370 million in upgrades to comply with MATS*. *Most of [the investments] will have been made by the time the Supreme Court rules*. – First Energy spokeswoman Stephanie Walton in [March 30, 2015 in RTO Insider article](http://www.rtoinsider.com/epa-mats-coal-plants-14043/)  |
| **Southern Company** | As you'll recall, we previously provided a MATS compliance capital projection of up to $2.7 billion for the 2012 through 2014 time frame. We also indicated that this amount could be reduced by $500 million to $1 billion, depending primarily on the number of baghouses in our final compliance strategy, bringing the final number to between $1.7 billion and $2.2 billion….*Based on our current analysis, our projection for MATS compliance for 2012 through 2014 now totals $1.8 billion, representing a reduction of $900 million from our previous estimates.* While the number of baghouses has been reduced to 4 or 5 from a high of as many as 17, other costs have been added to our plan to reflect the need for additive injection systems and related plant modifications. As before, this plan also includes significant investment in transmission projects as well as fuel switching to natural gas. – [2012 Q2 Earnings Call, Art Beattie, CFO](http://seekingalpha.com/article/749651-southern-management-discusses-q2-2012-results-earnings-call-transcript)So it's -- so at least in terms of kind of what we said before with respect to MATS, we said $2.7 billion. And then we -- as we got kind of the new rule, not the proposed rule, we said it could be between *$0.5 billion or $1 billion less, and therefore, we said $1.7 billion to $2.2 billion. Well, sure enough, it ended up at $1.8 billion. When you think about the total amount of CapEx, it was $18.2 billion or $18.3 billion, and now we kind of think it's going to be $16.4 billion, $16.3 billion, somewhere in that realm.* -- [2012 Q2 Earnings Call, Thomas Fanning, CEO](http://seekingalpha.com/article/749651-southern-management-discusses-q2-2012-results-earnings-call-transcript)With respect to the impact of the MATS rule on capital spending from 2012 through 2014, the Southern Company system’s preliminary analysis anticipates that potential incremental environmental compliance capital expenditures to comply with the MATS rule are likely to be substantial and could be up to *$2.7 billion from 2012 through 2014*. – [2012 10-K p. II-22](http://d1lge852tjjqow.cloudfront.net/CIK-0000092122/a445b706-9094-436c-8bf3-b7509452a739.pdf) | The Company has developed a compliance plan for the MATS rule which includes reliance on existing emission control technologies, the construction of baghouses to provide an additional level of control on the emissions of mercury and particulates from certain generating units, the use of additives or other injection technology, the use of existing or additional natural gas capability, and unit retirements. Additionally, certain transmission system upgrades are required. [2015 10-K p II-134](http://d1lge852tjjqow.cloudfront.net/CIK-0000092122/3650e044-b8f2-45b9-b7ab-b73a5fbeb11a.pdf)The Southern Company system expects that capital expenditures to comply with environmental statutes and regulations will total approximately *$2.1 billion from 2015 through 2017, with annual totals of approximately $1.0 billion, $0.5 billion, and $0.6 billion for 2015, 2016, and 2017*, respectively. -- [2015 10-K p. II-22](http://d1lge852tjjqow.cloudfront.net/CIK-0000092122/3650e044-b8f2-45b9-b7ab-b73a5fbeb11a.pdf)Southern Company has made about *$9 billion in investments in environmental control technology and anticipates spending an additional $2.1 billion over the next three years to comply with MATS* and other environmental regulations – [Southern Company spokesman Jack Bonnikson to Bloomberg BNA via e-mail](http://www.bna.com/supreme-court-mats-n17179925278/) for April 2015 article |
| **AEP** | Estimating the capital spend for our environmental effort. *Originally, we started with a $6 billion to $8 billion anticipated capital outlay for these types of requirements. And that changed, from $5 billion to $7 billion, over a period of time when the EPA came up with the -- came out the rules, particularly on particulate matter.* We had one situation where, instead of achieving 99.7% removal rate, the proposed rule was saying you had to achieve 99.9%, and that 0.2% was costing us about $800 million. So the EPA did listen and made the adjustments, so that adjusted reduction down as a result. *And then now, we're saying the cost is going to be from $4 billion to $5 billion.* And we've looked at technologies. We believe from a compliance standpoint that we can achieve further compliance reductions as a result of technology improvements, but also how we run the generation. So those are the kinds of things that we're looking at as well. -- [2012 Q4 Earnings Call, Nicholas Akins, CEO](http://seekingalpha.com/article/1188551-american-electric-power-management-discusses-q4-2012-results-earnings-call-transcript)*So we believe it’s going to be $4 billion to $5 billion, and we’re committed to continuing down that process. But now, right now, it says $4 billion to $5 billion*.– [2012 Q4 Earnings Call, Nicholas Akins, CEO](http://seekingalpha.com/article/1188551-american-electric-power-management-discusses-q4-2012-results-earnings-call-transcript)“So we continue to also move forward on the EPA-related mandates, such as Mercury HAPs MACT and others, as we transition our fleet with the planned retirements of over 5,500 megawatts during 2015, 2016 timeframe, and retrofits and refueling of 11,000 megawatts at a cost of around $*4 billion to $5 billion over the 2012 to 2020 time period.*- [2013 Q1 Earnings Call, Nicholas Akins, CEO](https://mjbradley.sharepoint.com/Shared%20Documents/KB/EDF/So%20we%20continue%20to%20also%20move%20forward%20on%20the%20EPA-related%20mandates%2C%20such%20as%20Mercury%20HAPs%20MACT%20and%20others%2C%20as%20we%20transition%20our%20fleet%20with%20the%20planned%20retirements%20of%20over%205%2C500%20megawatts%20during%202015%2C%202016%20timeframe%2C%20and%20retrofits%20and%20refueling%20of%2011%2C000%20megawatts%20at%20a%20cost%20of%20around%20%244%20billion%20to%20%245%20billion%20over%20the%202012%20to%202020%20time%20period.) | Emissions of nitrogen and sulfur oxides, mercury and particulates from fossil fueled generation plants are subject to increased regulations, controls and mitigation expenses. Compliance with these legal requirements requires us to commit significant capital toward environmental monitoring, installation of pollution control equipment, emission fees and permits at all of our facilities and could cause us to retire generating capacity prior to the end of its estimated useful life. These expenditures have been significant in the past, and we expect that they will continue to be significant in order to comply with the current and proposed regulations. *Costs of compliance with environmental regulations could reduce future net income and impact financial condition, especially if emission and/or discharge limits are tightened, more extensive permitting requirements are imposed or additional substances become regulated. If we retire generation plants prior to the end of their estimated useful life, there can be no assurance that we will recover the remaining costs associated with such plants. We typically recover our expenditures for pollution control technologies, replacement generation, undepreciated plant balances and associated operating costs from customers through regulated rates in regulated jurisdictions.* -- [2014 10-K](https://www.aep.com/investors/FinancialFilingsAndReports/Filings/docs/AEP_10K_2014.pdf) p 41 (See table below as well)We continue to refine the cost estimates of complying with these rules and other impacts of the environmental proposals on our coal-fired generating facilities. *Based upon our estimates, additional investment to meet these proposed requirements ranges from approximately $2.8 billion to $3.3 billion through 2020. These amounts include investments to convert some of our coal generation to natural gas. If natural gas conversion is not completed, these units could be retired sooner than planned.* -- [2014 10-K](https://www.aep.com/investors/FinancialFilingsAndReports/Filings/docs/AEP_10K_2014.pdf) p 10 |
| **DTE** | These rules have led to additional controls on fossil-fueled power plants to reduce nitrogen oxide, sulfur dioxide, mercury and other emissions. To comply with these requirements, DTE Electric has spent approximately $1.9 billion through 2012. *The Company estimates DTE Electric will make capital expenditures of approximately $335 million in 2013 and up to approximately $1.6 billion of additional capital expenditures through 2020 based on current regulation* – [2012 10-K p 90](http://www.sec.gov/Archives/edgar/data/936340/000093634013000028/dteenergy2012123110k.htm) | DTE Electric is subject to the EPA ozone and fine particulate transport and acid rain regulations that limit power plant emissions of sulfur dioxide and nitrogen oxides. The EPA and the State of Michigan have issued emission reduction regulations relating to ozone, fine particulate, regional haze, mercury, and other air pollution. These rules have led to controls on fossil-fueled power plants to reduce nitrogen oxide, sulfur dioxide, mercury and other emissions. *To comply with these requirements, DTE Electric spent approximately $2.2 billion through 2014.* *The Company estimates DTE Electric will make capital expenditures of approximately $100 million in 2015 and up to approximately $30 million of additional capital expenditures through 2019 based on current regulations.* -- [2014 10-K p 25](https://www.sec.gov/Archives/edgar/data/936340/000093634015000014/dteenergy2014123110k.htm)Estimated $400 million capital investment for environmental compliance for the years 2015-2019 -- [August 2015 Business Update](http://phx.corporate-ir.net/phoenix.zhtml?c=68233&p=irol-presentations) |
| **PPL** | ...from an environmental perspective, I think you're aware that on a competitive fleet side, we're very well equipped to deal with the MATS and the CSAPR. *So we're not looking at any major new incremental investments on the environmental side.*- [2012 Q1 Earnings Call](http://seekingalpha.com/article/561001-ppls-ceo-discusses-q1-2012-results-earnings-call-transcript), William Spence, CEONow that we've signed contracts with various vendors, we've updated our estimate of capital spending necessary to complete our previously discussed environmental compliance projects [MATS and CSAPR]. *We now estimate these projects will come in closer to $2.5 billion, a reduction of $500 million from our original forecast.* We're able to deliver these savings to customers in Kentucky because we proactively addressed EPA regulations and were able to secure bids before others. - [2012 Q3 Earnings Call](http://seekingalpha.com/article/990701-ppl-management-discusses-q3-2012-results-earnings-call-transcript), William Spence, CEO“I think at this juncture, we don't see a lot of incremental CapEx required on the environmental front, for either Brunner Island or Montour stations in Pennsylvania. I think we are in fairly decent shape. There is some related to the math. Really, folks more around mercury control than it is around SOX or NOX. So at this point, I don't see any significant addition that we would need to make.” -- [Q1 2014 Earnings Call](http://seekingalpha.com/article/2182163-ppls-ceo-discusses-q1-2014-results-earnings-call-transcript), William Spence, CEO | LG&E, KU and PPL Energy Supply have received compliance extensions for certain plants. PPL, PPL Energy Supply, LKE, LG&E and KU are generally well-positioned to comply with MATS, primarily due to recent investments in environmental controls at PPL Energy Supply and approved ECR plans to install additional controls at some of LG&E's and KU's Kentucky plants. With respect to PPL Energy Supply's Pennsylvania plants, PPL Energy Supply believes that installation of chemical additive systems and other controls may be necessary at certain coal-fired plants, the capital cost of which is not expected to be significant. PPL Energy Supply continues to analyze the potential impact of MATS on operating costs. *PPL Energy Supply is retrofitting the scrubbers at its Colstrip, Montana plant, the cost of which is not expected to be significant.* PPL Energy Supply will suspend operations at the Corette plant by April 2015 and the plant is expected to be retired in August 2015 due to expected market conditions and costs to comply with the MATS requirements. The Corette plant asset group was determined to be impaired in December 2013. … *LG&E's and KU's anticipated retirement of certain coal-fired electricity generating units located at Cane Run and Green River is in response to MATS and other environmental regulations.  The retirement of these units is not expected to have a material impact on the financial condition or results of operations of PPL, LKE, LG&E or KU…*.– [2014 10-K p 102](http://pplweb.investorroom.com/index.php?o=75&s=127) |
| **Duke Energy** | One of the reasons that we were pursuing the variance from the Multi-Pollutant Standard with the Illinois Pollution Control Board was in fact that we were able to comply with the MATS rules without that scrubber. And it was really these Illinois rules that were imposing the need to construct that scrubber…*So, we do believe that the capital expenditure plans that we’ve laid out, will -- while as to comply with MATS.* And it’s really a function of a number of things. It’s a function of the investments that we’ve already made in our plans overtime. We’ve made significant investments in pollution control equipment…We also burned low sulfur coal, which helps with our overall emissions. And as a result of compliance with the Multi-Pollutant Standard Illinois we are already using significant amounts of activated carbon for control of mercury. *So, through the -- I’d say the compliance with the Multi-Pollutant Standard, we’ve actually built into our operations of those things that are needed to comply with the MATS rules*. -- [Q3 2012 Earnings Call](http://seekingalpha.com/article/996021-amerens-ceo-discusses-q3-2012-results-earnings-call-transcript), Marty Lyons, Senior Vice President and CFO “At the end of this year we expect to have retired more than 3800 megawatts of this capacity. *As a combined company we have already invested around $7 billion in control equipment for our existing coal plants positioning now for compliance with more stringent air emission regulations. However we estimate we will spend an additional $5 billion to $6 billion over the next decade to comply with pending environmental regulations on air, water and coal ash*.” -- [Q4 2012 Earnings Call](http://seekingalpha.com/article/1178351-duke-energys-ceo-discusses-q4-2012-results-earnings-call-transcript), Jim RogersAs a group, these non-GHG environmental regulations will require the Duke Energy Registrants to install additional environmental controls and accelerate retirement of some coal-fi red units. While the ultimate regulatory requirements for the Duke Energy Registrants from the group of EPA regulatory actions will not be known until all the rules have been finalized, for planning purposes, the Duke Energy Registrants *currently estimate the cost of new control equipment that may need to be installed to comply with this group of rules could total $5 billion to $6 billion, excluding AFUDC, over the next 10 years. This range includes estimated costs for new control equipment necessary to comply with the MATS of $650 million to $800 million.* The Duke Energy Registrants also expect to incur increased fuel, purchased power, operation and maintenance, and other expenses in conjunction with the non-GHG EPA regulations. In addition to the plant retirements associated with new generation the Duke Energy Registrants are constructing, the Duke Energy Registrants are planning to retire additional coal fired generating capacity that is not economic to bring into compliance with the EPA’s regulations. – [2012 10-K p 67](http://www.duke-energy.com/pdfs/2012_Duke_Energy_Form_10-K.pdf)*$1.4 billion in environmental capex from ‘13-’15 (Includes $600-$650 million for MATS compliance*) –[2013 Analyst Meeting](https://www.duke-energy.com/pdfs/3_Analyst_Day_2013_Regulated_Utilities_Operations_Trent.pdf)*Anticipated ~$5-6 billion in compliance costs for approved or pending air, water, and waste regulations over the next 10 years* – [Q2 2014 Earning Review and Business Update](http://www.duke-energy.com/pdfs/2Q2014Slides.pdf) | Duke Energy Registrants are on track to meet the requirements. Strategies to achieve compliance include installation of new air emission control equipment, development of monitoring processes, fuel switching and acceleration of retirement for some coal-fired electric-generation units. –[2015 Q2 10-Q p 116](http://www.duke-energy.com/pdfs/2Q2015-10Q.pdf)“As of June 30, we now have total ARO obligations of *$4.5 billion*, which represents our best estimate to comply with state and federal rules. These costs will be spent over the next several decades. We will continue to refine this estimated liability as plans are finalized.” [Q2 2015 Earnings call](http://www.thestreet.com/story/13247557/1/duke-energy-duk-earnings-report-q2-2015-conference-call-transcript.html), Steve Young, EVP, CFO"Duke Energy is currently reviewing today's ruling by the Supreme Court…*at this time, there will be no immediate effect on Duke Energy's MATS compliance program. All Duke Energy power plants will continue existing compliance activities."* – [June 29, 2015](http://www.platts.com/latest-news/electric-power/houston/us-power-industry-divided-over-importance-of-21705482) Spokesman Chad Eaton, via email for an article in Platts |

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