

BEFORE THE CORPORATION COMMISSION OF OKLAHOMA

COURT CLERK'S OFFICE - OKC
CORPORATION COMMISSION
OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR AN ORDER OF THE COMMISSION)
AUTHORIZING APPLICANT TO MODIFY ITS)
RATES, CHARGES, AND TARIFFS FOR RETAIL)
ELECTRIC SERVICE IN OKLAHOMA)

CAUSE NO. PUD 201700496

Rebuttal Testimony
of

Jeffrey T. Kopp

Manager, Business Consulting for Burns and McDonnell

on behalf of

Oklahoma Gas and Electric Company

May 29, 2018

Jeffrey T. Kopp
Direct Testimony

1 Q. **Please state your name and address.**

2 A. My name is Jeffrey (Jeff) T. Kopp, and my business address is 9400 Ward Parkway, Kansas
3 City, Missouri 64114.

4

5 Q. **Are you the same Jeffrey T. Kopp that previously filed direct testimony in this
6 proceeding?**

7 A. Yes.

8

9 Q. **What is the purpose of your testimony in this proceeding?**

10 A. My rebuttal testimony addresses Oklahoma Industrial Energy Consumers and Oklahoma
11 Energy Results witness Mr. David J. Garrett's testimony regarding terminal net salvage
12 (decommissioning costs) as determined in the Fleet Decommissioning Cost Estimate Study
13 (Decommissioning Study) prepared by BMcD. Mr. Garrett recommends removing the 20%
14 contingency factors from the decommissioning cost estimates, and removing the escalation
15 factors applied to each decommissioning cost estimate. I will address these
16 recommendations in this rebuttal testimony.

17 My rebuttal testimony also addresses Oklahoma Attorney General witness Mr.
18 William W. Dunkel's testimony regarding Production Plant Demolition Estimates and his
19 recommendation for removing contingency from the estimates. Finally, my rebuttal
20 testimony addresses Federal Executive Agencies witness Brian C. Andrews's testimony
21 regarding Production Dismantlement Costs.

22

23 Q. **What contingency factor do Mr. Garrett, Mr. Dunkel, and Mr. Andrews recommend be
24 included in lieu of a 20% contingency factor?**

25 A. Mr. Garrett, Mr. Dunkel, and Mr. Andrews all recommend the application of a zero percent
26 contingency.

27

1 Q. **What escalation rate do Mr. Garrett and Mr. Dunkel recommend be included in lieu of**
2 **a 2.5% annual escalation rate?**

3 A. Mr. Garrett and Mr. Dunkel both recommend the application of an escalation rate of zero
4 percent per year.

5
6 Q. **Does Mr. Garrett provide reasons for including zero contingency?**

7 A. Mr. Garrett argues that contingency costs are “speculative” and that there is a possibility that
8 OG&E’s proposed decommissioning costs might be overestimated. He states that “the issue
9 the Commission should consider is not whether contingency factors are standard industry
10 practice among contractors, but rather whether contingency factors should be charged to
11 ratepayers.”¹

12

13 Q. **Do you agree that contingency costs are speculative costs?**

14 A. No. First, the Decommissioning Study includes site specific cost estimates for each of the
15 Plants which were developed using a “bottom-up” cost estimating approach, where cost
16 estimates are developed from scratch through the development of site-specific quantity
17 estimates and the application of unit pricing to the quantity estimates. These estimates
18 include significant amounts of measurable data, and have been developed with the intent of
19 most accurately representing what BMcD would anticipate contractors bidding for
20 decommissioning tasks. These estimates, inclusive of contingency, are the most reasonable
21 estimates of decommissioning costs for each of the Plants. Mr. Garrett acknowledges this
22 when he states ““decommissioning studies provide some measurable basis upon which to
23 estimate the utility’s terminal net salvage, and should be viewed as a minimum prerequisite
24 for any recovery of such costs.” Therefore, decommission costs themselves are measurable
25 and valid costs that should be recoverable by a utility.

26 A contingency cost includes unspecified but reasonably expected additional costs to
27 be incurred during the execution of decommissioning and demolition activities. For
28 decommissioning projects, there is some uncertainty associated with work conditions, the
29 scope of work and how the work will be performed. There also is some uncertainty

1 Garrett Responsive at p. 22, ln. 15-17.

1 associated with estimating the quantities for dismantlement of facilities. These uncertainties
2 result from the age and limits on drawings available, as well as the absence of testing results
3 for environmental contamination prior to preparation of these types of studies. These
4 uncertainties also include issues related to weather delays, unknown environmental
5 contamination, discovering equipment or materials not shown on drawings, or additional
6 dewatering requirements. Contingency costs account for these unspecified but expected
7 costs and are in addition to the direct costs associated with the base decommissioning costs
8 for known scope items. Contingency is not being applied simply because the costs might
9 exceed the direct costs; they are applied to determine the most likely total cost of completing
10 the project. The Commission should consider the total costs to be incurred to complete
11 decommissioning activities. Furthermore, the inclusion of contingency has been approved by
12 Utility Commissions in multiple jurisdictions, including Florida, North Carolina, Colorado,
13 and Illinois, to name a few. In fact, Florida Administrative Code 25-6.04364 for Electric
14 Utilities Dismantlement Studies includes in Subsection (2)(a) “Contingency Costs” which it
15 defines as “a specific provision for unforeseeable elements of cost within the defined project
16 scope.”

17
18 **Q. Can you address Mr. Garrett’s statement that contingency factors “arbitrarily increase**
19 **the cost estimate”²?**

20 **A.** The contingency factor applied to the Decommissioning Study is not arbitrary. As stated in
21 my direct testimony, the contingency cost includes unspecified but reasonably expected
22 additional costs to be incurred during the execution of decommissioning and demolition
23 activities. I discuss further how my contingency cost estimate is not arbitrary below in my
24 rebuttal to FEA Witness Andrews.

25
26 **Q. Please explain how an appropriate level of contingency costs is determined and why a**
27 **20 percent contingency factor is reasonable on these decommissioning estimates.**

28 **A.** The percentage of contingency applied to any cost estimate is directly related to the level of
29 unknowns associated with the project. When preparing construction cost estimates for a new

2 Garrett Responsive Testimony at p. 18, ln. 20.

1 fossil-fuel generation facility on a greenfield site, we would typically determine the level of
2 contingency based on the stage of planning or execution that we are in, which impacts the
3 level of unknowns. We would apply higher contingency, typically between 10 percent and
4 15 percent, at early stages of planning when there are more potential unknowns. These
5 would include potential scope changes as well as weather delays and other factors. As
6 engineering design progresses and some of these unknowns can be reduced through
7 subsurface investigations, engineering design drawings, and engineering specifications, the
8 amount of contingency may be reduced, and a lower level of contingency would be applied.
9 However, contingency would never be completely eliminated, even after full detailed design
10 is completed, since some unknowns, as common as weather delays, cannot be completely
11 eliminated.

12 The decommissioning cost estimates prepared as part of this filing are most similar to
13 the cost estimates developed in the early stages of planning for a new fossil-fuel generation
14 facility on a greenfield site. However, when preparing a decommissioning cost estimate,
15 there is a greater level of unknowns than new construction which cannot be eliminated at this
16 stage of the planning process. For example, decommissioning activities occur on sites where
17 power generation has been ongoing for many years and environmental remediation is more
18 likely required than at a greenfield site. In addition, no on-site testing for hazardous
19 materials and potential environmental issues have been performed during these planning
20 stages to fully identify all of these items. No subsurface investigations or groundwater
21 sampling has been performed to identify and define remediation requirements. And some
22 unknowns, such as below grade storage tanks or piping, which may contain hazardous
23 materials, may not be uncovered until the decommissioning process is underway.

24 In general, it is reasonably expected that changes to the scope of decommissioning
25 that could occur at the time of execution of the decommissioning project would result in cost
26 increases, over the base cost estimates. For example, Burns & McDonnell's cost estimates
27 include minimal levels of environmental remediation, so contingency is required to cover the
28 risk that additional environmental issues exists.

29 In addition, other factors that impact risk include changes to market conditions,
30 weather delays, scrap price changes, etc. The further out in the future that the

1 decommissioning activities will occur, the greater the risk that pricing could exceed the
2 current baseline estimates. In conclusion, a 20 percent contingency on these costs is
3 reasonable and warranted based on the level of risk associated with the decommissioning
4 projects.

5
6 **Q. Can you explain the relationship between the decommissioning cost estimates and**
7 **contingencies?**

8 A. Yes. It is important to understand how the decommissioning cost estimates are developed
9 and the relationship of contingency to those costs. The estimate of direct decommissioning
10 costs is prepared with the intent of accurately representing what contractors would bid to
11 decommission and demolish the equipment, address environmental issues, and restore the
12 site through a competitive bidding process, based on performing known decommissioning
13 tasks under ideal conditions (Emphasis added). Excluding contingency costs does not
14 provide a complete estimate of decommissioning costs. Contingency is added to account for
15 unknown, but reasonably expected to be incurred costs. The application of contingency is a
16 common and prudent practice in the construction industry and it is included in order to
17 recognize the likely increases in cost due to the unknowns as described above. Importantly,
18 contingency is a cost that is typically included by owners throughout all stages of planning
19 and through execution of the project.

20
21 **Q. Are contingency costs standard industry practice?**

22 A. Yes. The application of contingency is not only appropriate, but also standard industry
23 practice. Even on a project where firm pricing has been agreed upon with a successful
24 bidder, it is typical that a client carry some level of contingency to cover potential change
25 orders. It is even more important to carry contingency on planning level cost estimates such
26 as those presented in the Decommissioning Study.

27
28 **Q. Does BMcD have direct experience with contingency costs being incurred?**

29 A. Yes. BMcD prepared a decommissioning cost estimate study for Progress Energy that was
30 issued in 2012. Subsequent to that, Duke Energy Progress, LLC (DEP) decommissioned and

1 demolished the Cape Fear, H.F. Lee, Sutton, Robinson, and Weatherspoon plants. The costs
2 incurred by Duke Energy Progress, LLC for the decommissioning and demolition of those
3 five facilities were actually approximately 11 percent higher than the BMcD estimates,
4 inclusive of contingency.

5
6 **Q. Do you wish to respond to any other statements made by Witness Garrett?**

7 A. Yes. Mr. Garrett makes the statement that “decommissioning studies are often
8 overestimated, as they usually do not contemplate less expensive alternatives to complete
9 demolition.”³ Mr. Garrett later states that “we also do not know whether each facility will be
10 completely dismantled at those retirement dates under the assumptions inherent in the
11 decommissioning studies.”⁴ Mr. Garrett suggests that “[s]ome plants might be sold,
12 converted, or otherwise reused in such a way that would be less costly and not require a
13 complete brownfield demolition.”⁵ These suggestions are significantly flawed. When a plant
14 is determined to reach its retirement date, it will be very unlikely that it has any market value
15 for sale. Mr. Garrett suggests that each plant may be converted or otherwise reused, but
16 again ignores the fact that at this point the equipment will be at the end of useful life. The
17 plant site might be reused, but demolition would still be an applicable cost to make the site
18 useable.

19
20 **Q. Do you have any response to AG Witness Dunkel regarding contingency costs?**

21 A. Yes. Mr. Dunkel states that “in the Mustang CT decommissioning cost estimate, the
22 Contingency costs are actually 38% of the claimed Total net Project Cost Estimate.”⁶ Mr.
23 Dunkel has misrepresented the contingency percentage and calculation. As stated in
24 Decommissioning Study, the 20 percent contingency is calculated on the direct costs (i.e., the
25 costs for decommissioning and demolition activities, prior to scrap credits) not as a
26 percentage of net costs. Mr. Dunkel is calculating his percentage based on both direct and
27 indirect costs less scrap credits, which is inappropriate. As stated in my Direct Testimony,

3 Garrett Responsive Testimony at p. 18, ln. 18-19.

4 *Id.* at p. 24, ln. 10-12.

5 *Id.* at p. 24, ln. 12-13.

6 Dunkel Responsive Testimony at p. 50, ln. 15-16.

1 indirect costs are internal administrative costs (e.g., permitting, fees, Company employee
2 allocated expense) or costs associated with third party project managers or engineers
3 providing oversight during demolition activities, inspections, and testing to confirm that
4 remediation has been completed. Contingency costs should only be based on a percentage of
5 direct costs because direct costs are the estimated costs that contractors would bid to
6 demolish the equipment, address environmental issues, and restore the site to a condition
7 suitable for industrial use. It is those contractor based direct costs that are subject to cost
8 increases that would be covered by contingencies and therefore those costs that should form
9 the basis of contingency costs. Mr. Dunkel’s attempt to calculate contingency based on net
10 costs, inclusive of direct costs, indirect costs, and scrap credits shows a lack of understanding
11 of what contingency costs are and how they are calculated.
12

13 **Q. Do you agree with Mr. Dunkel’s statement that “[r]equesting recovery of unknown**
14 **costs is highly speculative”⁷ as it refers to contingency costs?**

15 A. No. Again, Mr. Dunkel is mischaracterizing contingency costs. Although specific categories
16 of costs that will be incurred as part of contingency are not known today, the types of cost
17 that are likely to be required to be covered by contingency can be identified. This includes
18 items such as issues related to weather delays, unknown environmental remediation,
19 discovering equipment or materials not shown on drawings, or additional dewatering
20 requirements, all of which BMcD has experience with occurring during the decommissioning
21 and demolition process. There are so many potential issues that occur during
22 decommissioning and demolition activities that it is expected that additional costs will be
23 incurred.
24

25 **Q. What about Mr. Dunkel’s statement that “it is also possible that something might occur**
26 **that would result in costs that are lower than otherwise estimated by Mr. Kopp”⁸**

27 A. Although it is *possible*, it is much more likely that the costs would increase over the direct
28 decommissioning and demolition costs outlined in the estimates. The estimates were
29 prepared with intent of providing a reasonable estimate of the total cost for decommissioning

7 Dunkel Responsive Testimony at p. 51, ln. 3-4.

1 and demolition, based on what we know today. While there are other *possible* scenarios,
2 they are less reasonable values than those presented in the Decommissioning Study.

3
4 **Q. Mr. Dunkel states that “If in the future, any used equipment actually has a value
5 greater than the ‘scrap value alone’ that would result in actual net decommissioning
6 cost lower than estimated.”⁹ Is this a reasonable scenario to consider?**

7 **A.** No. Again, Mr. Dunkel is suggesting something that is possible, but unlikely. In BMcD’s
8 recent experience with power plant retirements, it has been difficult to find buyers of used
9 equipment willing to pay more than the scrap value of the equipment. This is because a
10 specific buyer with a need for the specific equipment being retired at the Plants would need
11 to be identified at the time of decommissioning, and the market of potential buyers is very
12 limited. And with anywhere from 50 gigawatts to 100 gigawatts of coal plant retirements
13 expected to occur by 2025, the market for buyers of used equipment is even further reduced.
14 With all of these plants retiring, the market will be flooded with used equipment, putting
15 downward pressure on used equipment pricing. Therefore, the expected value of the
16 equipment should be scrap value alone.

17 As another point of reference, for the five DEP decommissioned and demolished
18 facilities referred to earlier in my testimony, DEP did not salvage any of the equipment
19 themselves. They received approximately \$28.4 million in credit on the project cost from the
20 demolition contractor, who was free to salvage or scrap the equipment as they deemed
21 appropriate. The BMcD decommissioning estimates for those five facilities included \$38.7
22 million in scrap credit based on scrap value alone. The difference in total credit between the
23 BMcD estimates and actual costs credited to the Company by the demolition contractor was
24 consistent with changes in the scrap market over the time between the development of the
25 cost estimates and the actual decommissioning and demolition, i.e., scrap steel prices fell
26 approximately 25 percent during that time.

8 *Id.* at p. 51, ln. 8-10.

9 *Id.* at p. 52, ln. 3-4.

1 Q. **Does Mr. Andrews provide additional reasons for the application of a zero percent**
2 **contingency?**

3 A. Yes. Mr. Andrews bases his recommendation of the application of a zero percent
4 contingency on the fact that he believes the decommissioning costs are overestimated since
5 “these sites have significant value to OG&E since they can be reused for the next generation
6 of power plants.”¹⁰

7
8 Q. **Does the value of the sites indicate that the decommissioning costs are overestimated?**

9 A. No. The value of the sites for reuse for the next generation of power plants comes from the
10 value of the land, adjacent infrastructure, and electrical interconnection facilities
11 (transmission switchyards). As stated in the Decommissioning Study, the value of land is
12 excluded from the study, and the transmission switchyards are excluded from the demolition
13 scope.

14 Mr. Andrews further goes on to use the modernization of the Mustang Power Plant as
15 an example of this value.¹¹ He cites a savings of \$45 million by utilizing the existing
16 infrastructure at the Mustang site. However, the savings from utilizing the existing Mustang
17 site does not come from the old Mustang units or the old Mustang Power Plant building. The
18 savings come from reusing the existing switchyard, transmission lines to the site, water lines
19 to the site, reduced earthwork requirements, and reusing the Mustang Units 1 and 2 generator
20 step-up transformers. Additionally, reusing the Mustang site resulted in savings from not
21 requiring a generator interconnection study or any upgrades to the transmission system
22 network. None of this savings changes the fact that the existing Mustang facility (the units
23 themselves and old power plant building) still needs to be decommissioned and demolished.
24 In other words, OG&E will realize all of these savings from infrastructure around the old
25 Mustang facility, but will still need to decommission the old Mustang units and building
26 itself at a cost of \$14.7 million. Mr. Andrews is comparing unrelated costs.

10 Andrews Responsive Testimony at p. 22, ln. 18-20.
11 *Id.* at 23.

1 Q. **Mr. Andrews asserts that my 20% contingency cost estimate is “arbitrary.”¹² Do you**
2 **agree that the application of 20 percent contingency is arbitrary?**

3 A. No. This is a mischaracterization of the calculation of contingency in the Decommissioning
4 Study. The 20 percent contingency factor was not selected arbitrarily. As stated earlier in
5 my rebuttal testimony, the 20 percent contingency factor was selected based on the level of
6 unknowns, and their likely impact on costs. Additionally, a 20 percent contingency level has
7 been demonstrated as reasonable, based on actual costs incurred compared to estimated costs,
8 as shown by the DEP example. Finally, Burns & McDonnell has consistently recommended
9 the application of a 20 percent contingency factor on decommissioning costs.

10

11 Q. **Are the estimated costs reflected in the Decommissioning Study, inclusive of**
12 **contingency, reasonably reflective of the actual costs necessary to decommission the**
13 **Plants?**

14 A. Yes, they are.

15

16 Q. **Does this conclude your direct testimony?**

17 A. Yes.

12 *Id.* at 22, ln. 11.