

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF:

**ELECTRONIC APPLICATION OF DUKE ENERGY)
KENTUCKY, INC. TO BECOME A FULL)
PARTICIPANT IN THE PJM INTERCONNECTION)
LLC, BASE RESIDUAL AND INCREMENTAL)
AUCTION CONSTRUCT FOR THE 2027/2028)
DELIVERY YEAR AND FOR NECESSARY)
ACCOUNTING AND TARIFF CHANGES)**

Case No. 2024-00285

**DIRECT TESTIMONY
AND EXHIBITS
OF
PHILIP HAYET**

ON BEHALF OF

**OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF
KENTUCKY**

**J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA**

December 6, 2024

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DIRECT TESTIMONY OF PHILIP HAYET

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

2 A. My name is Philip Hayet. My business address is J. Kennedy and Associates, Inc.
3 (“Kennedy and Associates”), 570 Colonial Park Drive, Suite 305, Roswell, Georgia,
4 30075.

5 **Q. What is your occupation and by whom are you employed?**

6 A. I am an electric utility consultant, and Vice President and Principal of Kennedy and
7 Associates.

8 **Q. Describe the nature of the consulting services provided by Kennedy and**
9 **Associates.**

10 A. Kennedy and Associates provides consulting services in the electric and gas utility
11 industries. Our clients include state agencies and industrial electricity consumers. The
12 firm provides expertise in system planning, load forecasting, financial analysis, cost-
13 of-service, and rate design. Current clients include the Georgia and Louisiana Public

J. Kennedy and Associates, Inc.

1 Service Commissions, the South Carolina Office of Regulatory Staff, the Utah Office
2 of Consumer Services, as well as industrial and commercial customers throughout the
3 United States.

4 **Q. Describe your education and professional experience.**

5 A. I earned a Bachelor of Science degree in Electrical Engineering from Purdue
6 University, and a Master of Science degree in Electrical Engineering from the Georgia
7 Institute of Technology, with a specialization in Power Systems Analysis.

8 I was employed from 1979 to 1996 by Energy Management Associates
9 (“EMA,” now known as Hitachi Energy), and I supported clients in their use of the
10 PROMOD and STRATEGIST software models. In 1996, I founded Hayet Power
11 Systems Consulting (“HPSC”) and offered consulting services to United States and
12 international-based clients. In addition to working for HPSC, in 2000, I began working
13 for Kennedy. In 2015, HPSC and Kennedy combined, and I became a principal of the
14 merged company.

15 I have over 40 years of experience in the electric utility industry, and have
16 worked in the areas of resource planning, economic analysis, generation operations,
17 rate analysis, and utility policy analysis. I have testified as an expert witness on
18 planning, ratemaking and utility policy related issues in proceedings before regulatory
19 commissions and courts at the federal and state levels. A summary of my education,
20 work experience, and expert testimony appearances is included in Exhibit PMH-1.

1 **Q. Have you previously presented testimony before the Kentucky Public Service**
2 **Commission (“KPSC” or the “Commission”)?**

3 A. Yes. I have testified before the Commission on matters regarding KPSC jurisdictional
4 electric utilities, including a Big Rivers Environmental Upgrade Proceeding (Case No.
5 2012-00063), a Big Rivers Rate Case Proceeding (Case No. 2013-00199), a
6 Kentucky Power Company Certificate of Public Convenience and Necessity
7 (“CPCN”) Proceeding for Mitchell (Case No. 2012-00578), and a Kentucky Power
8 Fuel Adjustment Clause Proceeding (Case No. 2014-00225). I have also testified as
9 an expert witness in other states, including Louisiana, Georgia, Indiana, South
10 Carolina, Minnesota, Utah, West Virginia, Wisconsin, and Wyoming. Finally, I have
11 testified on several occasions at the Federal Energy Regulatory Commission
12 (“FERC”).

13 **Q. Who are you testifying for in this proceeding?**

14 A. I am testifying for the Office of the Attorney General of the Commonwealth of
15 Kentucky (“AG”)

16 **Q. What is the purpose of your testimony?**

17 A. The purpose of my testimony is to evaluate and offer recommendations regarding
18 Duke Energy Kentucky, Inc.’s (“DEK”) request to move from the PJM capacity
19 market construct as a Fixed Resource Requirement (“FRR”) entity to begin
20 participating in the auction-based Reliability Pricing Model (“RPM”) Base
21 Residual Auction (“BRA”) and Incremental Auction (“IA”) capacity market

1 construct beginning with the 2027/2028 delivery year. My associate, Mr. Lane
2 Kollen, will address additional issues including DEK’s requests to modify the Rider
3 Profit Sharing Mechanism (“PSM”) to include additional capacity-related revenues
4 and expenses from PJM Billing Line Items (“BLI”). He will also address DEK’s
5 request to change the currently approved 90% ratepayer/10% Company PSM
6 sharing allocations.

7 **Q. Please summarize your recommendations and conclusions**

8 A. DEK’s proposal to transition to an RPM entity would provide DEK another avenue to
9 satisfy capacity requirements and could provide DEK with capacity risk mitigation
10 benefits. This would be particularly beneficial to customers if DEK, like other utilities,
11 experiences significant load growth over a short period of time. However, utility
12 ownership of capacity or bilateral contracts for capacity are important to ensure that
13 customers are not overly exposed to market capacity or energy prices over the long
14 term. The Commission has expressed similar concerns in other proceedings. For
15 example, in an Order in an East Kentucky Power Cooperative, Inc. (“EKPC”) avoided
16 cost proceeding, the KPSC stated:

17 This Commission has no interest in allowing our regulated, vertically-
18 integrated utilities to effectively depend on the market for generation
19 or capacity for any sustained period of time.¹

¹ KPSC Order in Case No. 2021-00198, Electronic Tariff Filing of East Kentucky Power Cooperative, Inc. and its Member Distribution Cooperatives for Approval of Proposed Changes to their Qualified Cogeneration and Small Power Production Facilities Tariffs, October 26, 2021, p. 5, fn. 10.

1 Should the Commission be inclined to authorize DEK to transition from an
2 FRR to an RPM entity, I recommend the Commission consider imposing the
3 following conditions on DEK to ensure the Company continues to perform least cost
4 planning and does not shift capacity related cost risk to customers. Mr. Kollen
5 supports additional conditions that he discusses in his testimony. The recommended
6 conditions I support are:

- 7 1) DEK should be required to replace any retiring dispatchable capacity
8 with owned or purchased pursuant to bilateral agreement, in-zone
9 (preferably located in Kentucky), dispatchable capacity prior to the
10 retirement of the capacity.
- 11 2) Purchases through the BRA auction should be limited so that DEK
12 does not overly rely on the auction to satisfy capacity requirements.
13 DEK should be limited to purchase no more than nine percent of its
14 annual capacity requirement through the BRA auction, and it should
15 be required to bring its long-term capacity imbalance back into
16 balance within a period of six years.
- 17 3) As an alternative to the two conditions above, the Commission could
18 consider approving DEK's request to become an RPM entity, but also
19 open a new docket to establish minimum capacity obligations for
20 Kentucky based RPM entities and set a goal for the new obligations to
21 be in effect within one year of issuing its order in this docket.
22 23

24 **Q. Please describe the Company's current participation in the PJM capacity**
25 **construct.**

26 A. The Commission's Order in Case No. 2010-00203 ("PJM Realignment Order"),
27 which approved DEK's request to join PJM, required DEK to participate under the

1 FRR option for meeting PJM resource adequacy requirements. The Commission
2 explained its reason for imposing this requirement as follows:

3 Since Duke Kentucky has not demonstrated that its customers will
4 be protected against market-based prices under the RPM option, the
5 Commission will require Duke Kentucky to commit that it will
6 participate in PJM only under an FRR capacity plan until it requests
7 and receives our approval to participate in the RPM market.²

8 As an FRR participant, DEK is required to supply its own resources and
9 reserves to meet its load obligations, and DEK cannot rely on PJM's RPM capacity
10 auctions to satisfy its capacity requirements. Under this capacity construct, DEK is
11 limited to satisfying capacity requirements by building new resources or entering
12 in bilateral contracts, and DEK is required to submit annual self-supply plans to
13 demonstrate how it intends to meet its PJM defined customer capacity obligation.
14 Also as an FRR entity, DEK is permitted to sell excess capacity into the RPM
15 auction; however, there is a holdback provision that limits the amount of capacity
16 that DEK can sell in the capacity auction.³

17 **Q. Please describe how DEK would participate in the PJM capacity construct if**
18 **it were allowed to become an RPM entity.**

19 A. As an RPM participant, DEK would have an additional option to satisfy capacity
20 requirements through the RPM capacity market, which operates as an auction

² KPSC Order in Case No. 2010-00203, Application of Duke Energy Kentucky, Inc. for Approval to Transfer Functional Control of its Transmission Assets from the Midwest Independent Transmission System Operator to the PJM Interconnection Regional Transmission Organization and Request for Expedited Treatment, December 22, 2010, p. 14.

³ The holdback provision limits DEK to be allowed to sell any remaining excess beyond the lesser of 450 MW or 3% of DEK's unforced capacity obligation.

1 conducted three years in advance of the actual delivery year. The goal of the RPM
2 is to allow load-serving entities to secure power supply reliably and cost-effectively
3 in advance of the power delivery year. Another goal of the RPM is to allow
4 generation owners to sell their excess existing capacity resources into the market,
5 and to send signals to help generation developers decide when to build new capacity
6 resources. Market capacity prices differ by location; therefore, generation
7 developers can use the market capacity price signals to decide where to construct
8 new resources.

9 The BRA is the first and most significant auction conducted three years in
10 advance of the delivery year. Three incremental auctions are also held leading up
11 to the delivery year to allow for adjustments to capacity commitments due to
12 changes in reliability needs, such as if peak load increases unexpectedly.

13 **Q. Why is DEK seeking to move from the FRR to the RPM construct?**

14 A. As discussed above, when the Commission approved DEK's entry into PJM, it
15 required DEK to become an FRR entity, as the Commission stated DEK had not
16 demonstrated that customers would be better off as an RPM entity. DEK now
17 asserts that "... although the FRR arrangement has historically benefited customers,
18 the Company believes that continuing to remain in the FRR will cost customers in
19 the future and that FRR participation will no longer be a savings to customers. Thus,
20 full RPM auction participant is now in the customer's best interest."⁴ Company

⁴ DEK response to AG-DR-2-1.

1 witness Swez describes in his testimony DEK's reasons that customers would be
2 better off under the RPM construct, which include:⁵

- 3 1) Load Increases – The RPM construct would eliminate the risk of shortfall
4 penalties DEK would incur by not being able to meet its FRR plan obligation
5 from the potential of large and sudden load growth occurring faster than the
6 Company could construct or acquire additional bilateral capacity.
- 7 2) Additional Purchasing Option – As an RPM entity, an additional purchasing
8 option would be available for DEK to use. In addition to building and
9 purchasing capacity bilaterally, RPM entities are entitled to satisfy capacity
10 requirements through the RPM auctions.
- 11 3) Higher Market Capacity Price Impacts – DEK's analysis shows that under
12 most cases of higher market capacity prices, when DEK has excess capacity,
13 it would earn greater revenue as an RPM entity than as an FRR entity. Also,
14 under higher market capacity prices, when DEK is short on capacity, its
15 purchase costs as an RPM entity would be lower than the costs it would incur
16 as an FRR entity. This is important as DEK has stated that it now expects
17 higher market capacity prices than existed in the past.⁶
- 18 4) FRR Zonal Capacity Requirement – As an FRR entity DEK has a minimum
19 internal zonal capacity requirement that would not be imposed on it as an
20 RPM entity.
- 21 5) Shortage of Bilateral Contract Capacity – The RPM construct would protect
22 customers from a lack of bilateral capacity in the DEOK zone, particularly
23 due to retirements such as the Miami Fort unit. This could cause the DEOK
24 zone to clear at a higher price than the remainder of PJM (referred to as “zonal
25 separation”). Zonal separation has happened in three of the last six years in
26 the DEOK zone.⁷
- 27 6) Change in Deficiency Penalty - Protects DEK customers from the change in
28 the PJM FRR shortfall penalty, which DEK states changed “to the greater of
29 1.75 x Net Cost of New Entry (Net Cone) or Gross CONE.” Furthermore, if
30 an FRR becomes deficient, PJM could also require deficient companies to

⁵ For example, see the Q&A in Witness Swez's testimony beginning at p. 9, l. 20.

⁶ DEK response to AG-DR-2-6a.

⁷ Direct Testimony of John Swez, p. 26, l. 11.

1 acquire additional capacity going forward, and could force those companies
2 to become RPM entities.

3 7) Future FRR Rule Changes - Protects DEK customers from anticipated future
4 PJM rule changes to the FRR construct that could potentially harm customers.

5 8) Excess Capacity - Provides the benefit of allowing more excess capacity to
6 be sold to the market. In other words, RPM entities do not have to abide by
7 the three percent capacity holdback limitation that applies to FRR entities
8 (presently, approximately 30 MW).

9 9) Variable Capacity Resource Requirement - As an RPM entity, the target
10 reserve margin declines as market capacity costs increase, or increases as
11 market capacity costs decrease. Target reserve margin requirements for FRR
12 entities remain constant regardless of market capacity costs. Thus, the target
13 reserve margin requirement can be lower for an RPM entity when market
14 capacity costs are high.

15 **Q. Has DEK indicated there would be a timing benefit if the Commission were to**
16 **issue an approval Order by April 1, 2025?**

17 A. Yes. DEK is seeking a Commission Order by April 1, 2025 because it states it has
18 the unique opportunity to become an RPM entity on a compressed timeline instead
19 of about a 54-month timeline. The timeline difference has to do with the fact that
20 FERC suspended PJM's 2025/2026 BRA auction that should have been completed
21 in May 2022, while it considered changes to PJM's capacity construct. FERC
22 issued its approval for PJM's proposed capacity market changes in early 2024, and
23 on July 30, 2024, PJM completed the capacity auction for the 2025/2026 delivery
24 year. To catch up with the auctions, PJM will conduct the next two BRA auctions
25 in December 2024 and June 2025 to procure capacity for the 2026/2027 and
26 2027/2028 delivery years.

1 DEK concluded that had there been no change to the BRA auction schedule,
2 the transition to become an RPM entity would have required about 54 months, since
3 two months would have been needed for a notification period, 36 months would
4 have been needed between when an auction is normally held and when the delivery
5 year occurs, and 16 months would have been needed for the regulatory approval
6 process to approve DEK's transition request.⁸ However, because of the change in
7 the BRA auction schedules, if the Commission were to agree to a more compressed
8 regulatory process such that DEK would receive approval by April 2025, DEK
9 could give 60 day notice and be ready to participate in the 2027/2028 BRA auction
10 in June 2025. DEK's request would cut the regulatory approval process from about
11 16 months to a little over seven months. Alternatively, if the Commission's
12 approval were delayed and DEK gave notice by October 2025, it would then be
13 eligible to participate in the BRA auction in December 2025 for the 2028/2029
14 delivery year.

15 **Q. Please describe the economic analysis the Company performed to support**
16 **becoming an RPM entity.**

17 A. Witness Swez presented the results of the cost benefit analysis the Company
18 conducted in his exhibit JDS-1, which he described as a "Heat Map" analysis
19 showing the benefit of remaining an FRR entity versus becoming an RPM entity.
20 The Heat Map is a matrix that identifies the benefit depending on what the BRA

⁸ Direct Testimony of John Swez, p. 48, l. 1.

1 auction price is and what amount of excess or shortfall in capacity DEK has. The
2 benefit of being an FRR entity is calculated at each assumed value of those two
3 variables (BRA auction price and capacity situation). The results of the Heat Map
4 analysis can be evaluated in terms of four different sections, or quadrants, of the
5 table:

- 6 • Low BRA market capacity price, high excess capacity
- 7 • High BRA market capacity price, high excess capacity
- 8 • Low BRA market capacity price, low excess capacity
- 9 • High BRA market capacity price, low excess capacity

10 The results indicate that the only quadrant it is economic to be an FRR entity is
11 when BRA market capacity price is low and DEK has excess capacity. Three out
12 of four quadrants indicate that it would be more economic to be an RPM entity. The
13 Heat Map analysis shows that even when market prices are low, the benefit of being
14 an FRR entity is small, especially compared to the harm that could be caused to
15 customers when market prices are high.

16 **Q. Have market capacity prices been increasing?**

17 A. Yes, Witness Swez provides Table 4 in his testimony, which indicates that in the
18 2023/2024, 2024/2025 and 2025/2026 BRA auctions, the DEOK zone auction
19 prices increased each year, and were \$34.13/MW-day, \$96.24/MW-day, and
20 \$269.92/MW-day, respectively. Furthermore, in a presentation in KU/LGE's most
21 recent IRP (2024 IRP), an RTO evaluation was provided, and for the 2026/2027

1 delivery year KU/LGE asserted that “.... it is uncertain whether new generation can
2 be built in time to participate in that delivery year. Additionally, the auction
3 parameters used in the 2026/2027 BRA could result in capacity prices jumping
4 again from \$269.92/MW-day to as high as \$695/MW-day.”⁹

5 Whether the prices will go as high as \$695/MW-day in the 2026/2027 BRA
6 auctions remains to be seen; however, it is clear that both DEK and KU/LGE do
7 believe that market capacity prices are increasing and regardless of whether DEK
8 is in an excess or shortage of capacity situation, DEK’s Heat Map analysis indicates
9 that it would be more beneficial for DEK to be an RPM entity rather than an FRR
10 entity.

11 **Q. Previously you mentioned that by becoming an RPM entity, DEK would be**
12 **able to satisfy capacity requirements in three ways, including through the BRA**
13 **auction. Did DEK perform any analysis to determine whether becoming an**
14 **RPM entity and relying on the BRA auction would be the best way to satisfy**
15 **capacity requirements?**

16 A. No. DEK’s analysis only compared whether becoming an RPM entity or remaining
17 an FRR entity would be best for customers. DEK did not discuss whether, as an
18 RPM entity, it would be better for DEK to own or acquire bilateral capacity versus
19 relying on the BRA auction to satisfy capacity requirements.

⁹ 2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities, Case No. 2024-00326, October 18, 2024, Volume III, 2024 RTO Membership Analysis Chapter, p. 9.

1 **Q. Did you conduct any analysis to consider whether becoming an RPM entity**
2 **and relying on the BRA auction would be the best way to satisfy capacity**
3 **requirements?**

4 A. Yes. I performed a limited analysis, depicted on the following page at Table 1, that
5 compared the cost of remaining an FRR entity to becoming an RPM entity, and I
6 examined two separate RPM cases. The analysis was limited in that I only
7 considered a case that assumed a high market capacity cost for the BRA auction
8 (\$525/MW-day), and that assumed DEK would have a need to acquire 114 MW to
9 satisfy capacity obligations. Because of the high market capacity price, the amount
10 of capacity required to satisfy DEK's capacity obligation would essentially be the
11 same, regardless of whether DEK was an RPM or an FRR entity, similar to the
12 analysis presented in JDS-1. The following describes the three cases that I
13 performed.

- 14 • **FRR Case:** This case was consistent with the Company's assumptions that any
15 capacity shortfall would be met through bi-lateral purchases and FRR penalty
16 payments, both assessed at costs above the BRA price. This assumption may
17 be aggressive, since the Company as an FRR entity could possibly negotiate a
18 bi-lateral market agreement at a more competitive price or build sufficient
19 generation to avoid penalties, but nonetheless, this case, exactly as the
20 Company defined it, is provided in the left-most column.
- 21 • **RPM Case:** This case (in the middle column) was consistent with the
22 Company's assumption that any capacity shortfall would be met through a
23 BRA purchase. This case was also included exactly as the Company defined it.
- 24 • **RPM Build Case:** This case (in the right-most column) assumed that while the
25 Company would have the option to acquire capacity through the BRA auction,

1 instead the Company could build Company-owned capacity at a price of Net
2 CONE, which is lower than the assumed BRA auction price.

3 The results are as follows:

4 **Table 1: Illustrative Capacity Strategies Under a High Market Price Scenario**

High Market Capacity Cost and 114 MW Capacity Need				
		FRR	RPM	RPM - build
Capacity Pricing Assumptions				
BRA Clearing Price	\$/MW-Day	\$525	\$525	
Bi-lateral Market Purchase (1.25 x BRA)	\$/MW-Day	\$656		
FRR Penalty (1.75 x CONE)	\$/MW-Day	\$525		
Net Cost of New Entry (CONE)	\$/MW-Day	\$300		\$300
Capacity Needs				
BRA Purchase/Sale			114	
Bi-lateral Purchase (1.25 x BRA)		85		
FRR Penalty (1.75 x CONE)		28		
Build New Capacity @ Net CONE				114
Total Capacity Need		114	114	114
Revenues/(Costs)				
BRA Purchase/Sale			(\$21,768,600)	
Bi-lateral Purchase (1.25 x BRA)		(\$20,408,063)		
FRR Penalty (1.75 x CONE)		(\$5,442,150)		
Build New Capacity @ CONE				(\$12,439,200)
Total Revenues (Costs)		(\$25,850,213)	(\$21,768,600)	(\$12,439,200)

5
6 The first two columns contain identical results to the cases the Company
7 presented (Swez Exhibit JDS-1, page 2, bottom righthand corner), and support the
8 notion that customers would be better off as an RPM entity if high market capacity
9 prices were to prevail at a time when the Company had a capacity deficit. However,
10 if the Company could build capacity at a cost below the BRA auction price, for
11 example, at the cost of Net CONE (\$300/MW-day), then the rightmost column
12 shows that customers would be better off if DEK were to become an RPM entity

1 and build capacity to satisfy its capacity obligation. Not only would acquisition of
2 capacity be better for customers from a capacity cost perspective, but depending on
3 the type of capacity, it could also provide an energy hedge as well.

4 **Q. In the right-most column of Table 1 above, is it true that customers were better**
5 **off because the CONE price was well below the BRA Auction price? In other**
6 **words, would it still be reasonable for the Company to build capacity to avoid**
7 **purchasing capacity through the BRA auction if the CONE price was above**
8 **the BRA Auction price?**

9 A. It is true that in the example shown (rightmost column) that the cost to acquire
10 owned capacity to satisfy requirements was lower than the cost of purchasing in the
11 BRA auction (middle column). That may not always be the case, in fact the BRA
12 auction was well lower than the cost of CONE for many years. However, owning
13 capacity would be a hedge to both capacity and energy costs, and it would provide
14 long-term certainty to the costs borne by the Company's customers. It would also
15 support investment and could provide good paying jobs in Kentucky, while
16 contributing to local zonal reliability. Furthermore, these results are based on an
17 analysis for just a single year. Utilities must plan their systems for long-term
18 reliability and make long-term resource acquisition decisions.

19 **Q. Does Kentucky statute support the notion that building long-term reliable**
20 **capacity is an important consideration for the Commonwealth of Kentucky?**

1 A. Yes, KRS 164.2807 created the Kentucky Energy Planning and Inventory
2 Commission (“EPI Commission”) and gave it the authority to study issues related
3 to “[t]he adequacy of the Commonwealth’s existing and anticipated future electric
4 generation and transmission resources and the existing and anticipated future
5 electric demand,”¹⁰ to study “[t]he Commonwealth’s ability to participate in energy
6 markets...,”¹¹ and to submit annual reports with recommendations for statutory
7 changes or budgetary proposals to the Legislative Research Commission, the
8 Governor, and the Public Service Commission.¹² In carrying out its examination
9 and studies, the EPI Commission was instructed to take all necessary measures to
10 effectuate certain “public purposes,” some of which are summarized as follows:¹³

11 (1)(a) The availability of reliable sources of energy is important to the economic
12 health of the Commonwealth.

13 (1)(c) The energy needs of the Commonwealth are best met by continuing to engage
14 in an all-of-the-above approach to electric generation resources.

15 (1)(d) The current economy and future economic development of the
16 Commonwealth requires reliable, resilient, dependable, and abundant supplies
17 of electrical power.

18 (1)(e) The demand for reliable, resilient, dispatchable electrical power is anticipated
19 to significantly increase in the coming decades.

20 (1)(f) It is in the interest of the Commonwealth that it be able to generate sufficient
21 electricity within its borders to power its own economy.

22 (1)(g) The electrification of the United States' economy combined with
23 unprecedented federal regulatory pressures have created an electric generation
24 resource crisis in the Commonwealth.

¹⁰ KRS 164.2807, effective April 12, 2024, paragraph 6(c)(1).

¹¹ Id. at 6(c)(5).

¹² Id. at 6(d).

¹³ <https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=54588>.

1 (1)(i) Current policies at the state and federal level do not adequately assess
2 capacity, availability, reliability, or resilience attributes of existing and new
3 fossil fuel-fired, nuclear, or other emerging dispatchable electric generating
4 resources.

5 (1)(j) It is the policy of the Commonwealth to maintain adequate capacity of
6 available, reliable, dispatchable, and resilient electric generation in the
7 Commonwealth.

8 (1)(k) Further retirement of fossil fuel-fired electric generating resources is not
9 necessary for the protection of the environment or the health, safety, and
10 welfare of the citizens of the Commonwealth.

11 (1)(l) The interests of the Commonwealth would be harmed by premature
12 retirement of those generating resources.

13 (1)(m) The Commonwealth can be a national leader in the production of energy in
14 all forms.

15 (1)(o) Local economic development is important to the Commonwealth and
16 requires an adequate supply of electricity to support industry and is enhanced by
17 robust employment in the coal and natural gas industries and at electric generating
18 facilities.

19 When considering these public purpose factors, we are concerned that an
20 over-reliance on the PJM BRA auction could be inconsistent with the goals of the
21 statute. Furthermore, we are concerned that the Company's testimony does not
22 emphasize its intention to construct new owned capacity resources or acquire
23 bilateral contract capacity, particularly when large dispatchable resources are
24 retired. However, while not a commitment, the Company did state in a discovery
25 response regarding the East Bend unit, "Additionally, if retired, the assumption is
26 that the unit would be replaced by a similar sized capacity and [would] not have a
27 material impact on the DEOK zone capacity clearing price."¹⁴ Also, while not a

¹⁴ Response to AG-DR-2-6c.

1 commitment, DEK stated in another discovery response it does not plan to rely on
2 the RPM capacity auction to satisfy capacity needs “.... except for potentially a
3 short time frame under a situation such as additional customer demand entering the
4 Duke Energy Kentucky service territory at a rate faster than a resource can be
5 added.”¹⁵

6 **Q. Why is it important for utilities in Kentucky to commit to add capacity to meet**
7 **their long-term load obligations?**

8 A. Vertically integrated utilities retain the primary obligation to plan for and acquire
9 the capacity resources necessary to serve their customers, subject to regulatory
10 oversight, even with the existence of organized markets like PJM. The EPI
11 Commission was instructed to take all necessary measures to effectuate certain
12 public purposes including ensuring abundant supplies of power of all types are
13 available, ensuring dispatchable generation is developed within Kentucky’s
14 borders, and recognizing that premature retirement of generating resources is not
15 in the best interests of customers. PJM has also expressed concern about reliability
16 in PJM, as it stated:

17 For the first time in recent history, PJM could face decreasing
18 reserve margins should these trends continue. The amount of
19 generation retirements appears to be more certain than the timely
20 arrival of replacement generation resources and demand response,
21 given that the quantity of retirements is codified in various policy
22 objectives, while the impacts to the pace of new entry of the Inflation

¹⁵ DEK Response to AG-DR-2-9b.

1 Reduction Act, post-pandemic supply chain issues, and other
2 externalities are still not fully understood.¹⁶

3 PJM has projected that between 2022 and 2030, around 40,000 MW of
4 generation capacity could retire in the PJM,¹⁷ and that is on top of 47,000 MW of
5 generation that has already retired in PJM.¹⁸ There is a considerable amount of
6 replacement capacity in the PJM Interconnection Queue (290,000 MW); however,
7 only 6% of the total amount is dispatchable natural gas-fired resources.¹⁹ PJM
8 determined that while low levels of capacity additions have been observed in recent
9 times, a much higher level of new additions will be necessary to be able to reliably
10 cover peak demand requirements by 2030.²⁰ To avoid reliability problems, PJM
11 has called upon all stakeholders, including state agencies to do their part “.... to
12 ensure PJM has the tools and resources to maintain reliability.”²¹

13 Finally, in a recent article²² about PJM’s capacity needs, Brian Tierny,
14 FirstEnergy president and CEO of the Ohio based utility, expressed concern about
15 a future in which PJM will lack the capacity necessary to satisfy the demand caused
16 by a surge in data center requests. Even if PJM’s price signals could encourage
17 capacity resources to be constructed, Mr. Tierney explained that construction of

¹⁶ PJM Report, Energy Transition in PJM: Resource Retirements, Replacements & Risks, February 24, 2023, p. 3, <https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx>

¹⁷ *Id.* p. 5.

¹⁸ *Id.* p. 6

¹⁹ *Id.* p. 10.

²⁰ *Id.* p. 16.

²¹ *Id.* p. 17.

²² Utility Dive, “States Should Procure Power Supplies Outside PJM Capacity Auctions: First Energy CEO, by Ethan Howland, Senior Reporter, October 31, 2024.

1 data centers only requires three years to develop, while power plants require about
2 six years to build. One of Mr. Tierney’s messages was that some solutions may be
3 needed outside of the PJM capacity auction construct, and “[d]eregulated states in
4 the PJM Interconnection should consider taking a direct role in acquiring power
5 supplies to meet their needs.”²³

6 **Q. Based on the concerns you have expressed regarding over-reliance on the BRA**
7 **auction to acquire market capacity, what do you recommend?**

8 A. Should the Commission be inclined to authorize DEK to transition from an FRR to an
9 RPM entity, I recommend the following conditions be imposed to ensure the
10 Company does not overly rely on the BRA auction to acquire market capacity
11 resources, which could shift capacity related cost risk to customers. Mr. Kollen
12 supports additional conditions that he discusses in his testimony.

- 13 1) DEK should be required to replace any retiring dispatchable capacity
14 with owned or purchased pursuant to bilateral agreement, in-zone
15 (preferably located in Kentucky), dispatchable capacity prior to the
16 retirement of the capacity.
- 17
- 18 2) Purchases through the BRA auction should be limited so that DEK
19 does not overly rely on the auction to satisfy capacity requirements.
20 DEK should be limited to purchase no more than nine percent of its
21 annual capacity requirement through the BRA auction, and it should
22 be required to bring its long-term capacity imbalance back into
23 balance within a period of six years.
- 24
- 25 3) As an alternative to the two conditions above, the Commission could
26 consider approving DEK’s request to become an RPM entity, but also

²³ *Id.*

1 open a new docket to establish minimum capacity obligations for
2 Kentucky based RPM entities and set a goal for the new obligations to
3 be in effect within one year of issuing its order in this docket.

4 **Q. Please explain further your first recommendation regarding replacement**
5 **capacity.**

6 A. While allowing DEK to transition to the RPM would offer the Company an
7 additional option to be able to acquire capacity resources on behalf of customers, I
8 believe guardrails need to be established to set proper expectations from the start.
9 The first recommendation above appears to be consistent with what the Company
10 stated in response to discovery, which was that if capacity is retired, the Company
11 would replace that with similar sized capacity.²⁴ The first recommendation is
12 intended to strengthen that statement by requiring DEK to replace dispatchable
13 capacity with dispatchable capacity, in zone (preferably in Kentucky), and prior to
14 when the existing resource retires. This recommendation will ensure that going
15 forward DEK will conduct planning in a manner consistent with the public policies
16 established by the EPI Commission statute, and as required by KRS 278.264.

17 **Q. Please explain further your second recommendation regarding annual**
18 **limitations on market reliance.**

19 A. Other than in the years when significant resource additions are made, DEK will
20 either have excess capacity that it sells to the BRA auction, or a shortage of capacity
21 that it purchases from the BRA auction. In the years when a shortage of capacity

²⁴ Response to AG-DR-2-6c.

1 occurs, I recommend the Company conduct advanced planning to limit the
2 purchases to ensure it will not overly rely on the BRA auction, which in some years
3 could require costs being paid well above CONE. I selected nine percent as the limit
4 because the Company asserted that it has never been short of capacity by more than
5 nine percent at any time over the 12 years it has been a part of PJM,²⁵ and I selected
6 six years as the period for which DEK should be required to bring its long-term
7 capacity imbalance back into balance because that is the approximate length of time
8 necessary to construct a new capacity resource.

9 **Q. Please explain further your third recommendation, which you offer as an**
10 **alternative to your first two recommendations, which is a minimum capacity**
11 **obligation rulemaking process.**

12 A. As an alternative to the first two recommendations, I offer a third recommendation,
13 which is that the Commission open a new docket to establish minimum capacity
14 obligations for Kentucky RPM entities, with the goal of those obligations going
15 into effect within one year of issuing an order in this docket. The reason for this
16 alternative is that the Commission may want to consider additional factors prior to
17 establishing capacity requirements and may want to hear from other stakeholders
18 before establishing a precedent that could ultimately affect other utilities in
19 Kentucky that are PJM RPM entities.

²⁵ DEK Response to AG-DR-1-1c.

1 **Q. Can you provide an example of another state commission that considered**
2 **minimum capacity obligations in a rulemaking proceeding?**

3 A. Yes, the Louisiana Public Service Commission (“LPSC”) established a rulemaking
4 proceeding in February 2022 to consider whether minimum physical capacity
5 threshold requirements should be adopted for Louisiana utilities that are members
6 of RTOs such as the Midcontinent Independent System Operator (“MISO”). In that
7 docket, the LPSC opined on whether it “.... should establish a capacity obligation
8 policy containing requirements that go beyond those that have already been
9 established by MISO....”²⁶ The LPSC approved an Order on June 19, 2024 that
10 requires all Louisiana load serving entities to annually report that they have
11 sufficiently planned to procure 90% of their capacity requirements for each applicable
12 planning year in MISO.²⁷ This is similar to the first and second recommendations I
13 have proposed, though as I mentioned, there may be additional considerations that
14 stakeholders may want to discuss in a rulemaking proceeding.

15 **Q. Does that complete your testimony?**

16 A. Yes.

²⁶ LPSC Docket No. R-36263, In re: Consideration of Whether the Commission Should Adopt Minimum Physical Capacity Threshold Requirements for Load Serving Entities, decided June 19, 2024, FN 3, p. 2, <https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/ViewFile?fileId=IwpiOd5Si7Y%3D>.

²⁷ *Id.* at p. 4.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF:

**ELECTRONIC APPLICATION OF DUKE ENERGY)
KENTUCKY, INC. TO BECOME A FULL PARTICIPANT)
IN THE PJM INTERCONNECTION LLC, BASE RESIDUAL)
AND INCREMENTAL AUCTION CONSTRUCT FOR THE)
2027/2028 DELIVERY YEAR AND FOR NECESSARY)
ACCOUNTING AND TARIFF CHANGES)**

**Case No.
2024-00285**

**EXHIBITS
OF
PHILIP HAYET**

ON BEHALF OF

**OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF
KENTUCKY**

**J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA**

November 2024

RESUME OF PHILIP HAYET, VICE PRESIDENT

EDUCATION/CERTIFICATION

M.S., Electrical Engineering, Georgia Institute of Technology, 1980

B.S., Electrical Engineering, Purdue University, 1979

Cooperative Education Certificate, Purdue University, 1979

PROFESSIONAL AFFILIATIONS

National Society of Professional Engineers

Georgia Society of Professional Engineers

Institute of Electrical and Electronic Engineers

EXPERIENCE

Since completing his Master's program, Mr. Hayet worked for fifteen years at Energy Management Associates, now Ventyx, providing consulting services and client service support to electric utility companies for the widely used planning models, PROMOD IV and STRATEGIST. Mr. Hayet had an instrumental role in designing some of the modeling features of those tools including the competitive market modeling logic in STRATEGIST.

In 1995, Mr. Hayet formed the utility consulting firm, Hayet Power Systems Consulting ("HPSC"), and worked for customers in the United States, and internationally in Australia, Japan, Singapore, Malaysia, the United Kingdom, and Vietnam. Mr. Hayet provided consulting services to Public Utility Commissions, Regional Power Pools, State Energy Offices, Consumer Advocate Offices, Electric Utilities, Global Power Developers, and Industrial Companies. Mr. Hayet's expertise covers a number of areas including utility system planning and operations, RTO analysis, market price forecasting, Integrated Resource Planning, renewable resource evaluation, transmission planning, demand-side analysis, and economic analysis.

In 2000, Mr. Hayet also joined the consulting firm of J. Kennedy & Associates, Inc. ("Kennedy and Associates") and assisted on projects that required utility resource planning, analysis, and software modeling expertise. Mr. Hayet merged his firm and became a Vice-President and Principal of Kennedy and Associates in 2015.

Mr. Hayet has conducted numerous consulting studies in the areas of RTO Cost/Benefit Analysis, Renewable Resource Evaluation, Renewable Portfolio Standards Evaluation, Electric Market Price Forecasting, Generating Unit Cost/Benefit Analysis, Integrated Resource Planning, Demand-Side Management, Load Forecasting, Rate Case Analysis and Regulatory Support.

2000 to **J. Kennedy and Associates, Inc.**
Present: **Vice President and Principal as of 2015**

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

- Began in 2000 as Director of Consulting, became Vice President and Principal in 2015
- Managed electric related consulting projects.
- Responsible for business development.
- Clients include Staffs of Public Utility Commissions and other State Agencies, State Energy Offices, Global Power Developers, and Industrial Groups, and large energy users.

**1996 to Hayet Power Systems Consulting
2015: President and Principal**

- Managed electric utility related consulting projects.
- Clients include Staffs of Public Utility Commissions and other State Agencies, State Energy Offices, Global Power Developers, and Industrial Groups, and large energy users.
- Merged with J. Kennedy and Associates, Inc. in 2015.

**1991 to EDS Utilities Division, Atlanta, GA (Now Ventyx)
1996: Lead Consultant, PROSCREEN (Now STRATEGIST) Department**

- Managed a client services software team that supported approximately 75 users of the STRATEGIST electric utility strategic planning software.
- Participated in the development of STRATEGIST's competitive market modeling features and the Network Economy Interchange Module
- Provided client management direction and support, and developed new consulting business opportunities.
- Performed system planning consulting studies including integrated resource planning, DSM analysis, marketing profitability studies, optimal reserve margin analyses, etc.
- Based on experience with PROMOD IV, converted numerous PROMOD IV databases to STRATEGIST, and performed benchmark analyses of the two models.

**1988 to Energy Management Associates (EMA), Atlanta, GA
1991: Manager, Production Analysis Department**

- Served as Project Manager of a database modeling effort to create an integrated utility operations and generation planning database. Database items were automatically fed into PROMOD IV.
- Supervised and directed a staff of five software developers working with a 4GL database programming language.

RESUME OF PHILIP HAYET, VICE PRESIDENT

- Interfaced with clients to determine system software specifications, and provide ongoing client training and support

1980 to **Energy Management Associates (EMA), Atlanta, GA**
1988: **Senior Consultant, PROMOD IV Department**

- Provided client service support to EMA's base of over 70 electric utility customers using the PROMOD IV probabilistic production cost simulation software.
- Provided consulting services in a number of areas including generation resource planning, regulatory support, and benchmarking.

RESUME OF PHILIP HAYET, VICE PRESIDENT

TESTIMONY AND EXPERT WITNESS APPEARANCES

Date	Case	Jurisdic	Party	Utility	Subject
09/98	97-035-01	UT	Utah Committee for Consumer Services	PacifiCorp	Utah jurisdictional Net Power Costs, PacifiCorp Rate Case Proceeding
07/01	01-035-01	UT	Utah Committee for Consumer Services	PacifiCorp	Utah Jurisdictional Net Power costs in General Rate Case
2001	ER00-2854-000	FERC	Louisiana Public Service Commission	Entergy	Proposed System Agreement Modifications
07/02	02-035-002	UT	Utah Committee for Consumer Services	PacifiCorp	Special contract for industrial consumer
2002/ 2003	U-25888	LA	Louisiana Public Service Commission	Entergy	Investigation of retail issues related to the System Agreement
2003	U-27136 Subdocket A	LA	Louisiana Public Service Commission Staff	Entergy	Aging gas steam-fired retirement study
07/03	EL01-88-000	FERC	Louisiana Public Service Commission	Entergy	Rough production cost equalization proceeding
05/04	03-035-14	UT	Utah Committee for Consumer Services	PacifiCorp	Development of a large QF avoided cost methodology
06/04	18687-U 18688-U	GA	Georgia Public Service Commission Staff	Georgia Power and Savannah Electric	2004 Integrated Resource Planning Studies
08/04	ER03-583-000	FERC	Louisiana Public Service Commission	Entergy	Affiliate power purchase agreements
11/04	03-035-19	UT	Utah Committee for Consumer Services	PacifiCorp	Industrial customer's request for a special economic development tariff
11/04	03-035-38	UT	Utah Committee for Consumer Services	PacifiCorp	Large QF proceeding.
03/05	03-035-14	UT	Utah Committee for Consumer	PacifiCorp	Concerning PacifiCorp's Schedule 38 avoided cost tariff and remaining

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
			Services		unsubscribed capacity
07/05	03-035-14	UT	Utah Committee for Consumer Services	PacifiCorp	Concerning PacifiCorp's Schedule 38 avoided cost proceeding
12/05	04-035-42	UT	Utah Committee for Consumer Services	PacifiCorp	Net power costs in General Rate Case
04/06	05-035-54	UT	Utah Committee for Consumer Services	PacifiCorp	Certification request to expand Blundell Geothermal Power Station. Related to Mid-American Energy Holding's Acquisition of PacifiCorp
05/06	22403-U	GA	Georgia Public Service Commission Staff	Georgia Power and Savannah Electric	March 2006 fuel cost recovery filing
2006	06-35-01	UT	Utah Committee for Consumer Services	PacifiCorp	2006 rate case, net power costs
08/06	U-21453	LA	Louisiana Public Service Commission Staff	Entergy Gulf States	Jurisdictional separation.
11/06	U-25116	LA	Louisiana Public Service Commission Staff	Entergy Louisiana	Fuel adjustment clause filings
01/07	23540-U	GA	Georgia Public Service Commission Staff	Georgia Power	November 2005 fuel cost recovery filing
04/07	07-035-93	UT	Utah Committee for Consumer Services	PacifiCorp	General Rate Case
06/07	24505-U	GA	Georgia Public Service Commission Staff	Georgia Power	2007 Integrated Resource Planning
10/07	U-30334	LA	Louisiana Public Service Commission Staff	Cleco Power	2008 Short-Term RFP
04/08	26794-U (FCR-20)	GA	Georgia Public Service Commission Staff	Georgia Power	Fuel cost recovery filing

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Date	Case	Jurisdic	Party	Utility	Subject
2008	6630-CE-299	WI	Wisconsin Industrial Energy Group, Inc.	WEPCO	Certification Proceeding for environmental upgrades at Oak Creek power plant
07/08	ER07-956	FERC	Louisiana Public Service Commission	Entergy	2006 rough production cost equalization compliance filing in the System Agreement case
09/08	6680-CE-180	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light	Certification proceeding concerning Nelson-Dewey coal-fired generating unit
11/08	08-1511-E-GI	WV	West Virginia Energy Users Group	Allegheny Power	Fuel cost recovery filing
12/08	27800-U	GA	Georgia Public Service Commission Staff	Georgia Power	Vogtle 3 and 4 nuclear unit certification proceeding
2008	08-035-35	UT	Utah Committee for Consumer Services	PacifiCorp	Chehalis Combine Cycle Power Plant based on a waiver of the RFP solicitation process certification proceeding
07/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy	2007 rough production cost equalization compliance filing in the System Agreement case
07/09	U-30975	LA	Louisiana Public Service Commission Staff	SWEPCO and Cleco	Application to acquire the Oxbow Mine to supply Dolet Hills Power Station certification proceeding
09/09	E015/PA-09-526	MN	Large Power Intervenor	Minnesota Power	Request for approval to purchase Square Butte's 500 kV DC transmission line, restructure a coal based power purchase agreement
09/09	09-035-23 Direct	UT	Utah Office of Consumer Services	PacifiCorp	2009 rate case, net power costs
10/09	09A-415E	CO	Public Utilities Commission of Colorado	Black Hills/Colorado	CPCN application to construct two LMS 100 natural gas combustion turbine units
10/09	09-035-23 Surrebuttal	UT	Utah Office of Consumer Services	PacifiCorp	2009 rate case, net power costs
12/09	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	First Semi-Annual Vogtle Construction Monitoring Report

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
12/09	ER08-1224	FERC	Louisiana Public Service Commission	Entergy	2008 production costs used to develop bandwidth payments
2009	09-2035-01	UT	Utah Office of Consumer Services	PacifiCorp	2008 IRP
01/10	28945-U	GA	Georgia Public Service Commission Staff	Georgia Power	Fuel cost recovery filing
2010	EL09-61	FERC	Louisiana Public Service Commission	Entergy	System Agreement, individual operating company sales
06/10	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Second Semi-Annual Vogtle Construction Monitoring Report
12/10	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Third Semi-Annual Vogtle Construction Monitoring Report
01/11	ER09-1350 Direct	FERC	Louisiana Public Service Commission	Entergy	2008 production costs used to develop bandwidth payments
02/11	ER09-1350 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy	2008 production costs used to develop bandwidth payments
04/11	33302-U (FCR-22)	GA	Georgia Public Service Commission Staff	Georgia Power	Fuel cost recovery filing
06/11	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Fourth Semi-Annual Vogtle Construction Monitoring Report
09/11	U-31892	LA	Louisiana Public Service Commission Staff	Cleco Power	Settlement agreement, CPCN to upgrade Madison 3 coal unit to accommodate biomass fuel
11/11	26550-U	GA	Georgia Public Service Commission Staff	Georgia Power	Reacquisition of wholesale block capacity
11/11	34218-U	GA	Georgia Public Service Commission Staff	Georgia Power	Decertification of two aging coal units, acquire PPA resources, approve IRP update

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RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
12/11	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Fifth Semi-Annual Vogtle Construction Monitoring Report
03/12	U-32148	LA	Louisiana Public Service Commission Staff	Entergy	Change of Control Proceeding to move to Midwest ISO
2012	20000-EA-400-11	WY	Wyoming Industrial Energy Consumers	Rocky Mountain Power	Certification of environmental upgrades at Naughton 3
05/12	35277-U (FCR-23)	GA	Georgia Public Service Commission Staff	Georgia Power	Fuel cost recovery filing
05/12	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Sixth Semi-Annual Vogtle Construction Monitoring Report
07/12	2012-00063	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers	Environmental upgrades in compliance with MATS and CSAPR
09/12	U-32275	LA	Louisiana Public Service Commission Staff	Dixie Electric Member Cooperative	Ten year power supply acquisition certification proceeding
12/12	EL09-61-002 Direct	FERC	Louisiana Public Service Commission	Entergy	Harm calculation, violation of System Agreement
12/12	U-32557	LA	Louisiana Public Service Commission Staff	Entergy	Certification of 28 MW PPA for renewable energy capacity (RAIN waste heat) in accordance with LPSC's Renewable Energy Pilot
12/12	U-29764	LA	Louisiana Public Service Commission Staff	Entergy	Retail proceeding regarding termination of cross-PPAs
12/12	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Seventh Semi-Annual Vogtle Construction Monitoring Report
03/13	EL09-61-002 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy	Harm calculation, violation of System Agreement
04/13	2012-00578	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Mitchell Certificate of Public Convenience and Necessity

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RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
05/13	36498-U	GA	Georgia Public Service Commission Staff	Georgia Power	2013 IRP and request to decertify over 2,000 MW of coal-fired capacity
07/13	U-32785	LA	Louisiana Public Service Commission Staff	Entergy	8.5 MW PPA for renewable energy capacity (Agrilectric rice hull) in accordance with LPSC's Renewable Energy Pilot
08/13	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Eighth Semi-Annual Vogtle Construction Monitoring Report
10/13	2013-00199	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers	Base rate case
05/14	13-035-184	UT	Utah Office of Consumer Services	PacifiCorp	2014 General Rate Case, net power cost
06/14	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Ninth/Tenth Semi-Annual Vogtle Construction Monitoring Report
07/14	20000-446-EA-14	WY	Wyoming Industrial Energy Consumers	PacifiCorp	2014 General Rate Case, net power cost
08/14	2000-447-EA-14	WY	Wyoming Industrial Energy Consumers	PacifiCorp	2014 Energy Cost Adjustment Mechanism application
08/14	14-035-31	UT	Utah Office of Consumer Services	PacifiCorp	2014 Energy Balancing Adjustment application
09/14	ER13-432	FERC	Louisiana Public Service Commission	Entergy	Allocation of Union Pacific Settlement Agreement benefits
10/14	2014-00225	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power	Kentucky Power Company's Fuel Adjustment Clause
12/14	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Eleventh Semi-Annual Vogtle Construction Monitoring Report
05/15	14-035-140	UT	Utah Office of Consumer Services	PacifiCorp	Solar and wind capacity contribution avoided cost proceeding.
06/15	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twelfth Semi-Annual Vogtle Construction Monitoring Report

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RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
08/15	15-035-03	UT	Utah Office of Consumer Services	PacifiCorp	2015 Energy Balancing Adjustment application
09/15	14-035-114	UT	Utah Office of Consumer Services	PacifiCorp	Cost and Benefits of PacifiCorp's Net Metering Program
11/15	39638-U	GA	Georgia Public Service Commission Staff	Georgia Power	FCR-24 Fuel Cost Recovery Proceeding
11/15	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Thirteenth Semi-Annual Vogtle Construction Monitoring Report
5/16	40161	GA	Georgia Public Service Commission Staff	Georgia Power	Georgia Power Company's 2016 IRP and Application for Decertification of Plant Mitchell Units 3, 4A, and 4B, Kraft Unit 1 CT, and Intercession City CT
6/16	29849	GA	Georgia Public Service Commission Staff	Georgia Power	Fourteenth Semi-Annual Vogtle Construction Monitoring Report
8/16	16-035-27	UT	Utah Office of Consumer Services	PacifiCorp	Renewable Energy Services Contract between Rocky Mountain Power and Facebook, Inc
8/16	16-035-01	UT	Utah Office of Consumer Services	PacifiCorp	2016 Energy Balancing Adjustment application
9/16	09-035-15	UT	Utah Office of Consumer Services	PacifiCorp	EBA Pilot Evaluation Direct Testimony
11/16	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Fifteenth Semi-Annual Vogtle Construction Monitoring Report
11/16	09-035-15	UT	Utah Office of Consumer Services	PacifiCorp	EBA Pilot Evaluation Rebuttal Testimony
11/16	EL09-61-04	FERC	Louisiana Public Service Commission	Entergy	Violation of System Agreement, Phase III, Harm Calculation, Direct
3/17	EL09-61-04	FERC	Louisiana Public Service Commission	Entergy	Violation of System Agreement, Phase III, Harm Calculation, Rebuttal
6/17	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Sixteenth Semi-Annual Vogtle Construction Monitoring Report
9/17	17-035-39	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision to Repower Wind Facilities, Direct

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdic	Party	Utility	Subject
11/17	17-035-39	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision to Repower Wind Facilities, Surrebuttal
4/18	17-035-39	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision to Repower Wind Facilities, Response
4/18	17-035-39	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision to Repower Wind Facilities, Rebuttal to Response
12/17	17-035-40	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision for New Wind and New Transmission, Direct
1/18	17-035-40	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision for New Wind and New Transmission, Rebuttal
4/18	17-035-40	UT	Utah Office of Consumer Services	PacifiCorp	Approval of Resource Decision for New Wind and New Transmission, Second Rebuttal
6/18	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Eighteenth Semi-Annual Vogtle Construction Monitoring Report
8/18	Cause 45052	IN	Indiana Coal Council	Vectren Energy Delivery of Indiana	Request for Approval of an 850 MW CCGT Plant
9/18	U-34836	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, LLC	Authorization to Participate in a 50 MW Solar PPA
11/18	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Nineteenth Semi-Annual Vogtle Construction Monitoring Report
1/19	U-35019	LA	Louisiana Public Service Commission Staff	Entergy Louisiana	Authorization to Make Available Experimental Renewable Option and Rate Schedule RTO
4/19	42310-U	GA	Georgia Public Service Commission Staff	Georgia Power	Georgia Power's 2019 IRP Proceeding
11/19	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty/Twenty-First Semi-Annual Vogtle Construction Monitoring Report
5/20	43011-U	GA	Georgia Public Service Commission Staff	Georgia Power	Georgia Power Fuel Cost Recovery Application (FCR-25)

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdiction	Party	Utility	Subject
6/20	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Second Semi-Annual Vogtle Construction Monitoring Report
7/20	17-035-61	UT	Utah Office of Consumer Services	Rocky Mountain Power	Approval of an Export Credit Rate for Customer Generators (Primarily Rooftop Solar)
9/20	20-035-04	UT	Utah Office of Consumer Services	Rocky Mountain Power	Utah Rate Case
10/20	2019-226-E	SC	South Carolina Office of Regulatory Services	Dominion Energy South Carolina	Review of DESC's 2020 IRP
10/20	2019-227-E	SC	South Carolina Office of Regulatory Services	Lockhart Power Company	Review of Lockhart Power Company's 2020 IRP
11/20	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Third Semi-Annual Vogtle Construction Monitoring Report
12/20	20-035-01	UT	Utah Office of Consumer Services	Rocky Mountain Power	Application for Approval of the 2020 Energy Balancing Account
2/21	2019-224 and 225-E	SC	South Carolina Office of Regulatory Services	Duke Energy Carolinas and Duke Energy Progress	Review of Duke Energy's 2020 IRP
6/21	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Fourth Semi-Annual Vogtle Construction Monitoring Report
9/21	U-35927	LA	Louisiana Public Service Commission	1803 Electric Cooperative	Compliance with MBM Order in Conducting RFP and Acquiring Resources
12/21	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Fifth Semi-Annual Vogtle Construction Monitoring Report
5/22	44160-U	GA	Georgia Public Service Commission Staff	Georgia Power	Georgia Power's 2022 IRP Proceeding

J. KENNEDY AND ASSOCIATES, INC.

RESUME OF PHILIP HAYET, VICE PRESIDENT

Date	Case	Jurisdiction	Party	Utility	Subject
6/22	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Sixth Semi-Annual Vogtle Construction Monitoring Report
12/22	22-035-01	UT	Utah Office of Consumer Services	Rocky Mountain Power	Application for Approval of the 2022 Energy Balancing Account
12/22	2022-259-E	SC	South Carolina Office of Regulatory Services	Dominion Energy South Carolina, Inc.	Mid-Period Adjustment to Increase Base Rates for the Recovery of Electric Fuel Costs
1/23	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Seventh Semi-Annual Vogtle Construction Monitoring Report
06/23	2023-9-E	SC	South Carolina Office of Regulatory Services	Dominion Energy South Carolina, Inc.	Review of DESC's 2023 IRP
7/23	29849-U	GA	Georgia Public Service Commission Staff	Georgia Power	Twenty-Eighth Semi-Annual Vogtle Construction Monitoring Report
09/23	2023-154-E	SC	South Carolina Office of Regulatory Services	South Carolina Public Service Authority	Review of Santee Cooper's 2023 IRP
11/23	23-0735-E	WV	West Virginia Energy Users Group	Mon Power and Potomac Edison	Expanded Net Energy Cost proceeding.
12/23	U-36974	LA	Louisiana Public Service Commission Staff	1803	Calpine Capacity PPA Certification Proceeding.
2/24	55378	GA	Georgia Public Service Commission Staff	Georgia Power	2023 Integrated Resource Plan Update
6/24	U-37134	LA	Louisiana Public Service Commission Staff	1803	Transmission Asset Transfer
9/24	2023-8-E 2023-10-E	SC	South Carolina Office of Regulatory Services	Duke Energy Progress and Duke Energy Carolinas	2023 Integrated Resource Plan

J. KENNEDY AND ASSOCIATES, INC.

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ADDITIONAL JUDICIAL PROCEEDINGS AND OTHER PROJECT INFORMATION

- 1995 – 2000 - Modeled the Singapore Power Electricity System and analyzed the benefits of dispatching a new oil-fired unit within the system, BHP Power
- 1995 – 2000 - Modeled the Australian National Energy Market to develop market based energy price forecasts on behalf of an Independent Power Producer in Australia, BHP Power
- 1995 – 2000 - Analyzed the benefit of purchasing existing gas-fired steam turbine units within the Australian market, BHP Power
- 1995 – 2000 Developed market price forecasts for South Australia as part of the evaluation of a new gas fired combined cycle unit, BHP Power
- 1995 – 2000 - Modeled the Vietnam Electricity System as part of a project to develop Least Cost Expansion plans for Vietnam, EVN State Utility
- 1995 – 2000 - Assisted in the evaluation of Phu My CCGT power plant in Vietnam, BHP Power
- 1995 – 2000 - Assisted in the development of Market Price Forecasts in several regions of the US. These forecasts were used as the basis for stranded cost estimates, which were filed in testimony in a number of jurisdictions across the country.
- 1995 – 2000 - Conducted research regarding ISO Tariffs and Operations for the PJM Power Pool, the California ISO, and the Midwest ISO on behalf of a Japanese Research.
- 1995 – 2000 - Performed research on numerous electric utility issues for 3 Japanese research organizations. This was primarily related to deregulation issues in the US in anticipation of deregulation being introduced in Japan.
- 1995 – 2000 - Critiqued the IRP filings of 5 utilities in South Carolina on behalf of the South Carolina State Energy Office
- 1999 - Helped to analyze the rate structure and develop an electricity price forecast for the Metropolitan Atlanta Rapid Transit Authority (MARTA) in Atlanta, Georgia
- August 2002 – Expert Report, Civil Action No. 1:00-cv-1262 in the United States District Court for the Middle District of North Carolina, United States v. Duke Energy Corporation, Department of Justice
- 2002 - Worked on behalf of the Utah Committee of Consumer Services to provide guidance and assist in the analysis of PacifiCorp's 2002 Integrated Resource Plan.
- July 2003 - Worked on behalf of the Oregon Public Utility Commission to Audit PacifiCorp's Net Power Costs per a Settlement Agreement accepted by the Public Utility Commission of Oregon in its Order No. 01-787. Audit report in Docket No. UE-116 filed July 2003.
- 2003 - Regulatory support to the Utah Committee of Consumer Services regarding PacifiCorp's 2003 Utah General Rate Case Docket # 03-2035-02.

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- 2004 – Assistance to the Utah Committee of Consumer Services to analyze a series of power purchase agreements and special contracts between PacifiCorp and several of its industrial customers.
- 2005 - Worked on behalf of the Utah Committee of Consumer Services to help analyze PacifiCorp’s restructuring proposals.
- 2005 - Assisted the Utah Committee of Consumer Services by evaluating PacifiCorp’s 2005 IRP and assisted in writing comments that were filed with the Commission.
- 2007 - Assisted the Utah Committee of Consumer Services to evaluate PacifiCorp’s 2007 IRP.
- 2007 - Conducted an investigation of the Southern Company interchange accounting and fuel accounting practices on behalf of the Georgia Public Service Commission Staff (Docket 21162-U).
- 2008 - Assisted the Louisiana Public Service Commission Staff with the review and evaluation of Cleco Power’s 2008 Short Term RFP and its 2010 Long-Term RFP.
- 2008 - Assisted the Utah Committee of Consumer Services by participating in a collaborative process to develop an avoided cost tariff for large QFs.
- 2008 - Assisted the Louisiana Public Service Commission Staff with a rulemaking for the opportunity to implement a Renewable Portfolio Standard in Louisiana. (Docket No. R-28271 Sub-Docket B)
- April 2011 – Initial Expert Report, Civil Action No. 2:10-cv-13101-BAF-RSW, on behalf of the Department of Justice in US District Court, United States v. Detroit Edison
- June 2011 – Rebuttal Expert Report, Civil Action No. 2:10-cv-13101-BAF-RSW, on behalf of the Department of Justice in US District Court, United States v. Detroit Edison
- 2011 - Assisted the Georgia Public Service Commission Staff to investigate the acquisition of additional coal and combustion turbine capacity currently wholesale capacity (Docket 26550).
- 2012 - Assisted the Louisiana Public Service Commission Staff with a rulemaking to design Integrated Resource Planning (“IRP”) rules. (Docket No. R-30021)
- December 2013 – Expert Report, Civil action no. 4:11-cv-00077-RWS, on behalf of the Department of Justice in US District Court, United States v. Ameren Missouri.

PUBLICATIONS AND PRESENTATIONS

Co-authored “Review of EPA’s Section 111 May 23, 2023 Proposed Rule for the State of South Carolina”, on behalf of South Carolina Office of Regulatory Staff, August 2023.

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Co-authored “Review of EPA’s Section 111(d) CO₂ Emission Rate Goals for the State of Montana, on behalf of the Montana Large Customer Group, October 2014.

Authored “Singapore’s Developing Power Market”, which appeared in the July/August 1999 edition of Power Value Magazine

Co-authored “The New Energy Services Industry – Part 1”, which appeared in the January/February 1999 edition of Power Value Magazine.

Co-authored and Presented “Evaluation of a Large Number of Demand-Side Measures in the IRP Process: Florida Power Corporation’s Experience”, Presented at the 3rd International Energy and DSM Conference, Vancouver British Columbia, November 1994

Co-authored “Impact of DSM Program on Delmarva’s Integrated Resource Plan”, Published in the 4th International Energy and DSM Conference Proceedings, held in Berlin, Germany, 1995

Presentation – Law Seminars International, Electric Utility Rate Cases, Case Study of the Louisiana Public Service Commission’s Quick Start Energy Efficiency Program, March 2015.

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

PHILIP HAYET, being duly sworn, deposes and states: that the attached is his sworn testimony and that it is true and correct to the best of his knowledge, information and belief.


Philip Hayet

Sworn to and subscribed before me on this
6th day of December 2024.

Notary Public



