July 16, 2025

Vistra Corp.'s Responses to Resource Adequacy Study
Post-Workshop Stakeholder Questions

Vistra Corp. (Vistra) is submitting the responses below to the Resource Adequacy Study (RA Study) Post-Workshop Stakeholder Questions (Questions) issued on June 18, 2025, by the Illinois Power Agency (IPA), Illinois Commerce Commission (ICC), and Illinois Environmental Protection Agency (IEPA) (collectively, the Agencies). As noted below, some of Vistra's responses are applicable to more than one of the Questions.

Vistra is a leading Fortune 500 integrated retail electricity and power generation company that provides essential power resources to customers, businesses, and communities from California to Maine. Vistra is the largest competitive power generator in the U.S., with a capacity of approximately 41,000 megawatts, or enough to power 20 million homes, operating in all of the major competitive wholesale markets in the U.S. Vistra is a leader in transforming the energy landscape, with an unyielding focus on reliability, affordability, and sustainability, powered by a diverse portfolio that includes natural gas, nuclear, coal, solar, and battery energy storage facilities. Vistra continues to grow its zero-carbon resources, operating the second-largest fleet of competitive nuclear power plants in the U.S., substantial battery energy storage capacity, and a growing number of solar facilities.

In Illinois, Vistra operates a diverse fleet of seven generating plants and two storage sites with a combined capacity of over 4,600 MW. Plants comprising 2,776 MW of this capacity are located in the PJM ComEd Zone and the remaining plants are located in MISO Zone 4. Approximately 2,900 MW of the Illinois capacity is scheduled to retire by the end of 2027 and an additional 380 MW is scheduled to retire by the end of 2030. Vistra has two renewable generation sites and one storage site presently under construction with a combined capacity of 459 MW expected to come online in 2025 and 2026, respectively. Vistra serves approximately 400,000 retail customers in the PJM and MISO regions. Vistra is actively working to develop several former, or to be retired, power plants sites in MISO and PJM into solar and/or energy storage sites, has sites with final interconnection, or pending agreements, and has participated in IPA renewable energy procurements and supported legislative efforts to develop an energy storage procurement process.

Vistra appreciates the opportunity being provided by the Agencies to provide input into the conduct of the RA Study through responses to the Agencies' Questions. As an owner and operator of solar energy, coal-fueled, and natural gas-fueled generation in Illinois, and as a significant load-serving entity, in Illinois and in other states within the PJM and MISO regional transmission organizations' footprints (as well as in regions outside PJM and MISO), Vistra is well-positioned to provide information and perspective to the Agencies relevant to the issues the Agencies must address in conducting the RA Study.

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TOPIC 1: **Resource Adequacy Study goals and scenario analysis considerations.**

Question 1: The Agencies recognize this study process is purposefully targeted in its nature, with Section 9.15(o) providing clear goals and expectations of the resource adequacy study and resulting report. What additional goals, objectives, or evaluation metrics should be considered, either as part of this study process or future resource adequacy study efforts?

Vistra comments: Vistra's overriding comments are that (1) the RA Study should not be limited solely to conditions in Illinois (and more specifically, to conditions separately in the MISO and PJM Zones within Illinois), but must also consider demand growth and resource availability in nearby states that may impact resource adequacy in Illinois, and (2) the Agencies need to use the best available information to develop a range of plausible resource adequacy scenarios.

With respect to the first major point above, the RA Study cannot be limited to demand growth and resource availability solely within Illinois. Illinois can and should appropriately manage customer costs by avoiding a process that plans for the worst case scenario. The Agencies should balance the consequences of over- and under-reacting to the resource adequacy challenge. The consequences of having insufficient resources for Illinois to meets its load are significant – degradation of reliability up to and including loss of load events that may disrupt the Illinois economy and its residents' daily lives. That said, over-reacting to the resource adequacy challenge could result in significant stranded costs and could drive premature retirements of existing resources that will further drive increased consumer costs.

Rather, the RA Study should consider resource adequacy in the context of the broader regional (at least) electricity markets, at a minimum the PJM and MISO serving areas, and whether Illinois is leaning on the regional markets for resources to serve Illinois customers, or is helping to supply (or being called upon to supply) customers in the broader market areas. Increasing load growth and the difficulties in retaining and developing new high-capacity resources are challenges across different jurisdictions and the broader electricity markets. MISO's and PJM's responses to these challenges will impact and inform the decisions Illinois policymakers need to make.

With respect to the second major point, in terms of evaluation metrics, the RA Study should make full use of the multiple sources and resources concerning current and projected demand growth which are available, in order to develop and utilize robust load forecasts for both Illinois and nearby connected states. This includes load forecasts (and related resource adequacy analyses) available and accessible from the regional transmission organizations, the North American Electric Reliability Corporation, individual utilities as available, and publicly available studies by third party, independent experts who analyze recent and projected growth in electricity demand.[1]

Eventually, the Agencies will need to develop a "most likely" load forecast (and, Vistra recommends, a range of plausible load forecasts), for Illinois (and nearby states), but these determinations should be made based on the best information available, which for load forecasts is readily available for the period to be studied. The conclusions of the RA Study should be based

[1] For example, the recent study and report published by London Economics, available at: https://www.selc.org/wp-content/uploads/2025/07/LEI-Data-Center-Final-Report-07072025-2.pdf.

on realistic load forecasts which consider available data and information on national load growth forecasts and then allocate that information down to the PJM and MISO levels. At the very least, the Agencies should attempt to calibrate the regional load forecasts against a reasonable estimate of national demand growth from data centers.

Question 2: Which variables are the highest priority to explore? Further, are there important policies or drivers missing in addition to those outlined in the preceding stakeholder workshop that could help shape scenario development?

Vistra comment: Load growth is the single highest-priority variable to analyze, and will have the greatest influence on the RA Study's conclusions on resource adequacy in Illinois during and at the end of the study period. See Vistra's response to Question 3, below, for more extensive discussion on key drivers of resource adequacy in Illinois. In the context of load growth, the RA Study should also consider the degree to which new large loads can be flexible, including through the voluntary use of back-up generation.

Question 3: Which of the following drivers ae most critical to explore in the resource adequacy modeling scenarios and why? (a) Extreme weather, (b) Demand growth; (c) Thermal retirements; (d) Transmission build and future needs; (e) Generation resource diversity; (f) Out-of-state reliance on generation resources; (g) Some other driver not described above?

Vistra comments: Of the above list, the most critical drivers to explore (including through multiple modeling scenarios using multiple values of the drivers) are demand growth, thermal retirements (in particular, the timing and sequence of the retirements of individual thermal generating plants within the time period(s) being analyzed, as specified by the Climate and Equitable Jobs Act (CEJA)), and out-of-state reliance on generation resources (again, through modeling multiple scenarios of the availability for load-serving entities in Illinois of capacity and energy from out-of-state generation). Of these three drivers/variables, the most significant is demand growth over the study period (and beyond).

The analysis of thermal retirements should put particular focus on the thermal generating units which are or may be required to retire during or soon after the study period in accordance with Section 9.15 of the Environmental Protection Act as amended by CEJA. These are the marginal resources, still in operation and potentially capable of having their retirement dates extended. The timing of retirement of these units may be the most important factor in determining whether or not Illinois maintains resource adequacy in the study period and beyond. As noted, the operation of these units could be extended, or they could be converted from coal to natural gas, or if they are existing natural gas units, could add capacity, or other efficiencies, likely more quickly and at lesser cost to consumers than new generation resources. Further, the RA Study's modeling of demand growth and resource availability should extend beyond 2030, far enough into the future to enable policymakers to see the impacts of thermal retirements in accordance with CEJA on resource adequacy beyond 2030.

While extreme weather is often a "headline event," the impacts of individual instances of extreme weather on resource adequacy may be short-lived, whereas demand growth better represents the ongoing, long-term effects of load growth and the sufficiency of resources to serve the growing demand.

Transmission build should be given lesser priority in terms of modeling analyses because experience has shown that the ability to obtain approval to construct large-scale transmission projects and then to actually complete the projects and place them into service has been extremely erratic in recent years.[2]

Generation diversity is of lesser importance, at least initially (compared to demand growth, thermal retirements, and out-of-state generation resources) because the RA Study should initially identify the amounts of generation capacity and energy necessary to maintain adequacy, and then evaluate and determine the cost-effective mix of dispatchable and non-dispatchable resources to support the capacity and energy needs.

Vistra also emphasizes that, given the multi-state nature of the transmission grids that serve Illinois, resource adequacy modeling must take into account potential future demand growth and thermal and non-dispatchable retirements (and additions) in other states that are interconnected with Illinois markets.

Question 4: Are there known or expected developments in federal or state policy that should be integrated into scenario development? Please explain in detail and provide references where possible.

Vistra comments: CEJA is a known provision of Illinois policy which provides for retirements of multiple coal-and natural gas-fueled generating stations, some of which would occur after 2030. As Vistra notes in response to Question 3, the RA Study's modeling should extend beyond 2030 to capture the impacts on resource adequacy of both pre-2030 and post-2030 CEJA-driven thermal retirements.

The RA Study should also take into account the implementation of the PJM Reliability Resource Initiative (PJM RRI), which is designed to accelerate the interconnection of specific generating facilities and bring them into service at a faster pace to address potential capacity shortfalls, and thereby enhance grid reliability in PJM. Successful implementation of the PJM RRI can result in additional resources some of which may help improve resource adequacy in Illinois.

Correspondingly, the RA Study must also take into account implementation of MISO's Expedited Resource Addition Study (MISO ERAS) proposal (assuming approval by FERC). The MISO ERAS is presently before FERC for approval in FERC Docket No. ER25-2424-000. The MISO ERAS proposal seeks to accelerate the approval of new generation needed to address MISO's resource adequacy needs; specifically, it seeks to expedite the interconnection process for up to 68 generation projects in MISO by August 31, 2027. If the MISO ERAS is approved by

[2] Consider the Grain Belt Express high voltage direct current transmission project, which originally filed an application with the ICC for a certificate for the project in 2015, but now (in 2025), having twice been granted a certificate by the ICC which were reversed on appeal, is currently on its second trip to the courts seeking revival of the certificate granted by the ICC. Vistra here expresses no opinion on the outcomes of the Grain Belt Express case at the ICC and in the courts, but notes that 10 years after its original certificate filing, this transmission project is (at best) several years from being placed into service and actually helping to support the resource adequacy needs of Illinois and nearby states.

FERC, the RA Study should analyze the impact on resource adequacy and reliability in the MISO region, including Illinois.

The RA Study should also review and consider potentially useful information in the recently (July 7, 2025) released report from the U.S. Department of Energy, *Report on Evaluating U.S. Grid Reliability and Security* (DOE Report).[3] The DOE Report has collected data and information from a number of recognized sources, and has conducted modeling using several different sets of assumptions, which may be useful to the Agencies in their conduct of the RA Study. Additionally, the DOE Report uses certain methods or metrics for evaluating and determining resource adequacy which may be considered non-traditional or non-standard in the electric utility industry. It is possible that the methodologies and metrics used in the DOE Report could become the principal methods of evaluating and determining resource adequacy from the federal perspective. At a minimum, the Agencies should consider the methodologies and metrics in the DOE Report for possible application to the RA Study.

Finally, to reiterate an earlier comment, the RA Study should study not just resource adequacy within Illinois, but rather should study the broader market served via the interconnected grid, including at a minimum the PJM and MISO regions, to evaluate whether demand and resources in the broader market area are supporting or diminishing resource adequacy in Illinois (and will be doing so in 2030 and beyond).

Question 6: What blind spots or gaps in the RA Study process do you worry might be overlooked or otherwise not addressed? (a) Are the identified blind spots or gaps unique to customer segments, modeling scenarios, market conditions or other targeted parameters? (b) How could the identified blind spots or gaps be addressed? (e.g. through additional scenarios, targeted data inputs, utilizing specific modeling, etc.)

Vistra comments: As stated in earlier comments, particularly to Questions 1, 3, and 4, the RA Study cannot focus on load and resources solely in Illinois (and more specifically, on load and resources separately in the PJM zone and the MISO zone) but must also consider demand and resources in the broader market area, including at a minimum the broader PJM and MISO regions that are connected into Illinois. The RA Study should analyze how load growth and the addition and removal of resources in the broader market regions are supporting or diminishing resource adequacy in Illinois. Limiting the scope of the RA Study to activities in Illinois and failing to consider activities in the broader market area would be a significant blind spot in the RA Study's analyses and conclusions. Finally, the RA Study should consider the degree to which market-based mechanisms can encourage voluntary load flexibility.

TOPIC 2: Analytical approach to analysis and data assumptions.

Question 10: Are there specific assumption that should be considered concerning generation resources, including buildout (queue, pace, technology availability), or retirements, both in-state and regionally in the RTO markets? (a) Which proposed assumptions should be considered as part of the base case and which are best considered as part of a prospective scenario? Provide any

[3] Available at: DOE Final EO Report (FINAL JULY 7).pdf.

available references to RA studies, IRPs, or comparable assessments and reports to support your recommendation. (b) Which assumptions are contingent upon specific policy and/or legislative conditions being met or otherwise enacted? Please explain in detail.

Vistra comments: In addition to modeling the impacts on resource adequacy of closing thermal generating facilities in the years or within the time periods specified by CEJA, the RA Study should take into account (1) extensions of the CEJA-specified retirement dates for coal and natural gas-fueled generation as needed to maintain resource adequacy, and (2) the possibilities that some coal-fueled generation scheduled to be retired per CEJA could be converted to natural gas fueling in order to maintain resource adequacy, which likely could be accomplished more quickly (whether pre-or post-2030) and at lower cost than installing new generation, while reducing carbon emissions as compared to their operation as coal-fueled generating units, or that existing gas-fueled units could be allowed to run more frequently and add needed capacity.[4]

Finally, the RA Study should assume and take into account the continued development of renewable energy generation resources and the development of programs to add battery energy storage to the resources available in Illinois. However, the RA Study must use realistic assumptions (including a range of assumptions) as to the timing, amount and costs (as cost bears on the amount of these resources likely to be added) of future additions of renewable energy generation and battery energy storage, in both the PJM and MISO regions, and the impacts on consumer costs.

[4] These options could require adjustments to natural-gas unit emission caps for CO2e and Co-Pollutants specified in CEJA, and/or adjustments to heat-rate standards applicable to units that have historically, or may in the future, cause curtailment of needed generation and increase operational inefficiencies and costs.