MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT ON

EVERGY METRO, INC.,
d/b/a Evergy Missouri Metro

ELECTRIC UTILITY RESOURCE PLANNING
COMPLIANCE FILING

CASE NO. EO-2021-0035

Jefferson City, Missouri
September 27, 2021

** Denotes Confidential Information **

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Executive Summary

On April 30, 2021, Evergy Metro, Inc., d/b/a Evergy Missouri Metro ("Evergy Metro" or "Company"), filed its 2021 Integrated Resource Plan ("IRP") triennial compliance filing ("Filing") in File No. EO-2021-0035, as required by 20 CSR 4240-22 Electric Utility Resource Planning.

Commission Rule 20 CSR 4240-22.080(7) provides that:

> (7) The staff shall conduct a limited review of each triennial compliance filing required by this rule and shall file a report not later than one hundred fifty (150) days after each utility's scheduled triennial compliance filing date. The report shall identify any deficiencies in the electric utility's compliance with the provisions of this chapter, any major deficiencies in the methodologies or analyses required to be performed by this chapter, and any other deficiencies and shall provide at least one (1) suggested remedy for each identified deficiency. Staff may also identify concerns with the utility's triennial compliance filing, may identify concerns related to the substantive reasonableness of the preferred resource plan or resource acquisition strategy, and shall provide at least one (1) suggested remedy for each identified concern.

As a result of its limited review, and as more fully discussed throughout this report, Staff identified no deficiencies and three concerns regarding Evergy Metro's 2021 IRP Filing:

List of Staff's Identified Concerns

Concern A – Evergy Metro's avoided capacity cost is overstated due to its move to CONE in 2025.

Concern B – Evergy Metro's significant shift toward new renewable and solar generation potentially creates greater risk to be borne by ratepayers.

Concern C – Staff echoes its past comments in regards to Evergy Metro and Power Purchase Agreements (PPA), and that ratepayers should not have to bear all of the risk of PPAs which are entered into when there is not a need for capacity to meet minimum capacity requirements.

20 CSR 4240-22.010 Policy Objectives

20 CSR 4240-22.010 Policy Objectives, has a stated purpose that "This rule states the public policy goal that this chapter is designed to achieve and identifies the objectives that the electric utility resource planning process must serve."

20 CSR 4240-22.010(1) and (2) state:

> (1) The commission's policy goal in promulgating this chapter is to set minimum standards to govern the scope and objectives of the resource planning process that is required of electric utilities subject to its jurisdiction in order to ensure that the public interest is adequately served. Compliance with these rules shall not be construed to result in commission approval of the utility's resource plans, resource acquisition strategies, or investment decisions.
>
> (2) The fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that serves the public interest and is consistent with state energy and environment policies…

Staff performed its review of Evergy Metro's 2021 IRP Filing using the Commission's policy goal in promulgating this chapter and the fundamental objective of the resource planning process as the foundation of its review.

Staff Expert/Witness: Brad J. Fortson

20 CSR 4240-22.030 Load Analysis and Forecasting

Section 20 CSR 4240-22.030, Load Analysis and Forecasting, has a stated purpose of setting the,

> Minimum standards for the maintenance and updating of historical data, the level of detail required in analyzing loads, and the purposes to be accomplished by load analysis and by load forecast models. The load analysis discussed in this rule is intended to support both demand-side management efforts of 20 CSR 4240-22.050 and the load forecast models of this rule. This rule also sets the minimum standards for the documentation of the inputs, components, and methods used to derive the load forecasts. This rule also includes why the selected load analysis methods best fulfill those purposes, and how the load analysis methods are consistent with one another and with the end-use consumption data used in the demand-side analysis as described in 20 CSR 4240-22.050.

Accurate models for electric power load forecasting are essential to the operation and planning of a utility company. Load forecasting helps an electric utility to make important decisions including decision on purchasing and generating electric power, load switching, and infrastructure development. The Load Analysis and Load Forecasting Rule allows the utility to use multiple analytical methods for performing its load analysis and develop its forecasts, leaving it to the utility's discretion to choose the methods by which it achieves the stated purpose of the rule.

Accurate models for electric power load forecasting are essential to the operation and planning of a utility company. Load forecasting helps an electric utility to make important decisions such as purchasing and generating electric power, load switching, and infrastructure development. The Load Analysis and Load Forecasting Rule allows the utility to use multiple analytical methods for performing its load analysis and develop its forecasts, leaving it to the utility's discretion to choose the methods by which it achieves the stated purpose of the rule.

Evergy Metro has developed a range of load forecasts deploying the Statistically Adjusted End-use ("SAE") forecasting tools and methods used to develop the forecasts that provide an analytical basis for testing and refining the assumptions used in the development of the potential demand-side resource portfolios. End-use level forecasts are developed using both primary data collected by Evergy Metro and secondary data and projections produced by the U.S. Department of Energy ("DOE") for the West North Central region of the U.S. In the models of residential use per customer, the independent variables were appliance saturation, appliance unit energy consumption ("UEC"), real price of electricity, real per capita income, and persons per household. In the models of commercial sales and use per customer, the independent variables were equipment saturations, energy use per square foot ("EUI"), the real price of electricity, and economic variables. In the models of industrial sales, the independent variables were EUIs on an industry and employment basis, the real price of electricity, and economic variables. Economic variables were manufacturing employment or manufacturing gross-metro products (GMP). In the models of commercial sales and use per customer, economic variables were non-manufacturing employment or non-manufacturing GMP. Residential forecast models use the real price of electricity and real per capita income as an economic variables. Pursuant to subsection (3)(A)[1], Evergy Metro in its forecasting models incorporates the most important drivers of energy use. These drivers are energy

[1] The utility shall assess the applicability of the historical explanatory variables to its selected forecast model.

standards, building standards, trends in saturations and equipment efficiency, economic growth at the sector level, and existing company energy efficiency and demand-side management ("DSM") programs.

Evergy Metro expects energy consumption and peak demand will grow by 0.65% and 0.56% annually from 2020-2040 respectively. Residential energy consumption is expected to provide the most growth over the next 20 years assuming 0.4% customer growth per annum from 2020-2040. Residential MWh use per customer reveals a downward trend in both summer usage (-0.7%) and non-summer usage (-1.1%) over the last decade following a period of modest growth in non-summer use per customer in the years 2000-2009. Key forecast uncertainties include the impact of rising prices, technological advancement in renewable energy sector, adoption of new consumer products, and energy efficiency. Most of the independent variables used in the models are significant.

End-use data availability for Industry class would be an asset to achieve more robust prediction scenario and thus instrumental in demand-side management. Weather, end-use trends, and economic trends are critical in developing the energy models.

Staff has not identified any deficiencies and/or concerns based on its review of Evergy Metro's load analysis and energy and demand forecasts. In Staff's opinion, the Integrated Resource analysis filing meets the Load Analysis and Load Forecasting requirements of 20 CSR 4240-22.030.

Staff Expert/Witness: Krishna L. Poudel, PhD

20 CSR 4240-22.040 Supply-Side Resource Analysis

Rule 20 CSR 4240-22.040 Supply-Side Resource Analysis requires Evergy Metro to review existing resources for opportunities to upgrade or retire existing resources and also review a wide variety of supply-side resource options to determine cost estimates for each type of resource.

Resource options are to be ranked based upon their relative levelized annual costs,[2] including installed capital costs, fixed and variable operation and maintenance costs, and probable environmental costs levelized over the useful life of the potential supply-side resource option using

[2] 4 CSR 4240-22.020(29) Levelized cost means the dollar amount of a fixed annual payment for which a stream of those payments over a specified period of time is equal to a specified present value based on a specified rate of interest.

the utility discount rate.[3] Resources which do not have significant disadvantages and pass the pre-screening process are to be included in the integrated resource analysis process used to select a preferred resource plan.

Over twenty different generating technologies were analyzed and screened for potential supply side resources. Evergy Metro selected combustion turbines (CT), combined cycle (CC), wind, and solar as candidate generation resources that passed the screening in the integrated analysis.

Staff has not identified any deficiencies or concerns related to Evergy Metro's supply-side resource analysis.

Staff Expert/Witness: Jordan T. Hull

20 CSR 4240-22.045 Transmission and Distribution Analysis

Rule 20 CSR 4240-22.045 Transmission and Distribution Analysis specifies minimum standards for the scope and level of detail required for transmission and distribution network analysis and reporting. Rule 20 CSR 4240-22.045 does not prescribe how analyses are to be done, but rather allows a utility to conduct its own analysis or adopt the regional transmission operator ("RTO") or Independent Transmission System Operator ("ISO") transmission plans. Rule 20 CSR 4240-22.045 requires analysis and documentation of the RTO/ISO transmission projects and requires the electric utility to review transmission and distribution for the reduction of power losses, interconnection of new generation facilities, facilitation of sales and purchases, and incorporation of advance technologies for the optimization of investment in transmission and distribution resources.

Staff has not identified any deficiencies or concerns related to Evergy Metro's transmission and distribution analysis.

Staff Expert/Witness: Jordan T. Hull

20 CSR 4240-22.050 Demand-Side Resource Analysis

Rule 20 CSR 4240-22.050, Demand-Side Resource Analysis, specifies the methods by which end-use measures and demand-side programs shall be developed and screened for cost-effectiveness. It also requires the ongoing evaluation of end-use measures and programs, and the use of program evaluation, measurement, and verification ("EM&V") to improve program design and cost-effectiveness analysis.

[3] 4 CSR 4240-22.040(2)(A).

Evergy Metro continues to build on its DSM planning, implementation, and evaluation performance from its initial implementation of DSM programs in 2008 followed by MEEIA Cycle 1 from July 6, 2014, through December 31, 2015, MEEIA Cycle 2, which began April 1, 2016, and ended in December 31, 2019, and MEEIA Cycle 3, which began on January 1, 2020.

Evergy engaged ICF to conduct its 2020 DSM market potential study ("2020 potential study"). It assessed technical, economic and achievable potential in the residential, commercial, and industrial sectors within Evergy's service areas in Missouri. This 2020 potential study was used as the basis for the scenarios evaluated in this integrated analysis.

Based on its limited review, Staff has concerns that Evergy Metro's avoided capacity cost has been overstated due to its move to cost of new entry ("CONE")[4] of a Combustion Turbine ("CT") in 2025.

Concerns

Concern A: Evergy Metro's avoided capacity cost is overstated due to its move to CONE in 2025. Evergy Metro explained that a market-based avoided capacity cost approach derived from the Commission approved MEEIA 3 plan is being used while it is projected to be long on capacity. Evergy Metro also provided it has developed a probability-weighted approach to calculate the avoided capacity cost when the IRP forecasts that a capacity shortfall will occur. The approach models eight scenarios taking into account the possibility of unit retirements as well as two new potential large customer loads. Evergy Metro used its market-based avoided capacity cost approach for its avoided capacity cost when the scenario is long on capacity and the avoided capacity cost of a CT beginning in the year that the individual scenario becomes short on capacity.[5] Evergy Metro considers themselves long on capacity when its peak responsibility is less than the accredited capacity of its existing resources. Evergy Metro considers themselves short on capacity when its peak responsibility is greater than the accredited capacity of its existing resources.[6] Evergy Metro and Evergy West use the same avoided capacity costs for both

[4] "Cost of new entry" is the total annual net revenue per unit of de-rated capacity (net of variable costs) that a new capacity resource would need to receive over its economic lifetime in order to recover its capital costs and annual fixed costs;
[5] Case No. EO-2021-0035, Evergy Missouri Metro Letter of Transmittal and Integrated Resource Plan, volume 5 evergy metro demand side resource analysis, pages. 98 – 99.
[6] Evergy Metro response to Data Request 0003, Case No. EO-2021-0035.

jurisdictions: "Evergy Metro and Evergy West are viewed as one by the Southwest Power Pool ("SPP") due to the joint Network Integrated Transmission Service ("NITS"). Therefore, when the combined utility is long on capacity, the market-based equivalent cost is used, and when the combined utility is short on capacity the cost of a CT is assumed."[7]

However, according to the capacity balance sheets of the preferred resource plans, when looking at both jurisdictions (Evergy Metro and Evergy West) jointly, there is not a year that the company is short on capacity throughout the 20-year planning horizon. Confidential Addendum A illustrates this. Therefore, there should not be a time when the cost of a CT is used as the avoided capacity cost.

Further, the market-based approach drawn from the Commission approved MEEIA 3 plan that Evergy Metro is using while it is projected to be long on capacity is not the appropriate avoided capacity cost to use either. In its *Amended Report and Order* in Case No. EO-2019-0132, the Commission stated, "The Commission determines that a market-based approach is the most appropriate way to calculate avoided costs **for this MEEIA application**… Therefore, the Commission will direct the parties to use the average of bids Evergy Missouri West received for capacity in 2017 for purposes of calculating avoided costs." The Commission found that using the average of bids Evergy Missouri West received for capacity in 2017 for purpose of calculating avoided costs was appropriate for that case, and that case only. However, using the average of bids received for capacity in 2017 is not appropriate to use in this Evergy Metro 2021 IRP or for demand-side resource cost-effectiveness analysis past year 2022.[8] The bids received for capacity in 2017 are outdated and the most recent bids received for capacity should be used in a market-based approach. Further, to be the most accurate, the lowest bid received for capacity should be used in a market-based approach.

To remedy this concern, Evergy Metro should not use the cost of a CT as the avoided capacity cost at any point throughout the 20-year planning period of this IRP. If a market-based approach is used, it should be the lowest, most recent bid received for capacity by Evergy Missouri West. If Evergy Missouri West has not received bids for capacity since 2017, it should issue a request for proposal ("RFP") to update the bids. Evergy Metro may find it advantageous to issue

[7] Evergy Metro response to Data Request 0002, Case No. EO-2021-0036.
[8] 2022 is the final year of MEEIA Cycle 3 in which the Commission approved the use of the average of bids received for capacity in 2017.

an all-source RFP. Another alternative would be to use a third-party resource for calculating avoided capacity costs such as the most recent ABB Power Reference Case.

Staff Experts/Witnesses: Jordan T. Hull and Brad J. Fortson

20 CSR 4240-22.060 Integrated Resource Analysis

This Rule requires the utility to design alternative resource plans to meet the planning objectives identified in Rule 20 CSR 4240-22.010(2), and sets minimum standards for the scope and level of detail required in resource plan analysis and for the logically consistent and economically equivalent analysis of alternative resource plans. The utility is to identify the critical uncertain factors that affect the performance of alternative resource plans and establishes minimum standards for the methods used to assess the risks associated with these uncertainties.

Critical uncertain factors are any uncertain factor that is likely to materially affect the outcome of the resource planning decision. Evergy Metro's final probability tree consists of the following critical uncertain factors: 1) load growth; 2) natural gas prices; and 3) carbon dioxide credit prices.

The goal in developing alternative resource plans is to develop a set of alternative plans based on substantively different mixes of supply-side resources and demand-side resources and variations in the timing of resource acquisition to assess their relative performance under expected future conditions as well as their robustness under a broad range of future conditions.

Evergy Metro developed fifteen alternative resource plans for integrated resource analysis. Minimization of net present value of revenue requirements ("NPVRR") with probable environmental costs were used as the primary criteria for determining the ordinal preference of a particular plan. Risks associated with critical uncertain factors, and those associated with new or more stringent legal mandates, are included in the integrated analysis of the resource planning process. Rate increases associated with the alternative resource plans are determined in the analysis as well.

With respect to 20 CSR 4240-22.060 Integrated Resource Analysis, Staff has not identified any deficiencies or concerns related to Evergy Metro's integrated resource analysis.

Staff Experts/Witnesses: Krishna L. Poudel, PhD and Brad J. Fortson

20 CSR 4240-22.070 Risk Analysis and Strategy Selection

Rule 20 CSR 4240-22.070, Risk Analysis and Strategy Selection, requires the utility to select a preferred resource plan, develop an implementation plan, and officially adopt a resource acquisition strategy. The rule also requires the utility to prepare contingency plans and evaluate the demand-side resources that are included in the resource acquisition strategy. Resource acquisition strategy means a preferred resource plan, an implementation plan, a set of contingency resource plans, and the events or circumstances that would result in the utility moving to each contingency resource plan.

Confidential Addendum B includes Evergy Metro's preferred resource plan. The preferred plan includes 120 MW of wind in years 2025 and 2026, and 230 MW of solar in 2024 and 120 MW of solar in each year 2028 – 2032. Evergy Metro has detailed its implementation plan on pages 23 – 33 in volume 6[9] of its April 30, 2021, Evergy Missouri Metro Letter of Transmittal and Integrated Resource Plan filing. Confidential Addendum C includes Evergy Metro's contingency plans. These contingency plans were identified through evaluation of the relative cost performance of each alternative resource plan under different combinations of the critical uncertain factors. The critical uncertain factor conditions under which the contingency plans are projected to be lower cost than the preferred plan are low and high carbon dioxide costs. Confidential Addendum D includes Evergy Metro's planned DSM programs.

Based on its limited review, Staff has identified two concern for Evergy Metro's preferred resource plan and resource acquisition strategy.

Concerns

Concern B –Evergy Metro's significant shift toward new renewable wind and solar generation potentially creates risks to be borne by ratepayers. Adding large amounts of renewable generation that are not required to meet SPP resource adequacy requirements or Missouri statutory or rule requirements, including providing safe and adequate service, may place an undue level of risk on ratepayers based upon the speculation that the market revenues, which are inherently uncertain, will exceed the overall cost of the assets. Evergy Metro inherently benefits shareholders by adding large investments from which it can seek a return on the investments through rates throughout the life of the asset. Evergy Metro also decides which factors to consider within the

[9] Titled "volume 6 evergy metro integrated resource plan and risk analysis"

IRP process as well as the weight to apply to each critical uncertain factor. When a utility needs a generating asset to fulfill the needs of customers or to comply with mandated requirements, the IRP process provides a decision making tool to optimize the necessary generation additions and minimize the net present value of revenue requirements at a point in time when those assets are necessary to meet the expected retail load needs. However, when a utility does not need to build assets to fulfill the needs of customers or comply with mandated requirements, the results of the decision are inherently uncertain, which introduces risk to ratepayers, while the costs of the generation addition are much more certain.

Staff's concern as it pertains to Evergy Metro's significant shift toward new renewable wind and solar generation is one of a general nature. However, as a Special Contemporary Issue (SCI) in Case No. EO-2022-0055, Staff suggested Evergy Metro provide detailed analysis comparing ratepayer risks and shareholder risks for additional generation resources which are not required to meet federal, state, or RTO requirements. This is consistent with the Commission's *Order Regarding 2020 Integrated Resource Plan* in Case No. EO-2021-0021 for Ameren Missouri. Since the Commission has yet to issue an Order establishing SCI's in Case No. EO-2022-0055, Staff recommends as a remedy to this concern that Evergy Metro provide the analysis in this case.

Concern C – Evergy Metro issued a RFP in February 2021 soliciting offers from interested parties with the intent of securing proposals for the acquisition of long-term dispatchable renewable energy resources with a minimum size of 50 MW together with all associated environmental and renewable energy attributes. The RFP offers two business structure options: 1) Ownership based on construction services and asset purchase agreements; and 2) Power Purchase Agreement ("PPA"). Staff echoes its past comments in regards to Evergy Metro and PPAs, and that ratepayers should not have to bear all of the risk of PPAs which are entered into when there is not a need for capacity to meet minimum capacity requirements.

To remedy this concern, Staff suggests as it has before, that ratepayer risk mitigation or risk sharing could be addressed fairly in the Commission-approved fuel adjustment clause of Evergy Metro.

Staff Experts/Witnesses: Krishna L. Poudel, PhD and Brad J. Fortson

20 CSR 4240-22.080 Filing Schedule and Requirements

This Rule specifies the requirements for electric utility filings to demonstrate compliance with the provisions of Chapter 22. The purpose of the compliance review required by Chapter 22 is not Commission approval of the substantive findings, determinations, or analyses contained in the filing. The purpose of the compliance review required by Chapter 22 is to determine whether the utility's resource acquisition strategy meets the requirements of Chapter 22. However, if the Commission determines that the filing substantially meets these requirements, the Commission may further acknowledge that the preferred resource plan or resource acquisition strategy is reasonable in whole, or in part, at the time of the finding. This Rule also establishes a mechanism for the utility to solicit and receive stakeholder input to its resource planning process.

The Filing Schedule, Filing Requirements, and Stakeholder Process Rule establish a filing deadline for all electric utilities on April 1 of each year. A triennial compliance filing is due every third year with more informal annual update filings during the years between the full triennial compliance filings. The annual updates are coupled with a stakeholder workshop to communicate changing conditions and utility plans and to seek comments and suggestions from stakeholders during the planning process. Preliminary plans are reviewed with stakeholders to receive input regarding potential concerns and deficiencies. However, once plans are filed, stakeholders again have the opportunity to identify potential concerns and deficiencies. The Commission, with input from stakeholders, will identify special contemporary issues each year for each utility to analyze during its planning process. To make the resource planning process more meaningful, the Rule requires action from the utility if its business plan or acquisition strategy becomes inconsistent with the latest adopted preferred resource plan filed by the utility. The Rule also requires certification that any request of action from the Commission is consistent with the utility's adopted preferred resource plan.

Staff has not identified any deficiencies or concerns related to 20 CSR 4240-22.080 Filing Schedule and Requirements.

Staff Expert/Witness: Brad J. Fortson

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's 2021 Triennial Compliance Filing Pursuant to 20 CSR 4240-22	))))	Case No. EO-2021-0035

AFFIDAVIT OF BRAD J. FORSTON

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW BRAD J. FORSTON and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

BRAD J. FORSTON

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27th day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's 2021 Triennial Compliance Filing Pursuant to 20 CSR 4240-22	))))	Case No. EO-2021-0035

AFFIDAVIT OF JORDAN T. HULL

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW JORDAN T. HULL and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Jordan Hull
JORDAN T. HULL

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27th day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's 2021 Triennial Compliance Filing Pursuant to 20 CSR 4240-22	))))	Case No. EO-2021-0035

AFFIDAVIT OF KRISHNA L. POUDEL, PhD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW KRISHNA L. POUDEL, PhD and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Report*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Poudel

KRISHNA L. POUDEL, PhD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27th day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin

Notary Public

ADDENDUM A

ADDENDUM B

ADDENDUM C

ADDENDUM D

HAVE BEEN DEEMED

CONFIDENTIAL

IN THEIR ENTIRETY