

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

DIRECT TESTIMONY OF

JOHN R CARLSON

**ON BEHALF OF EVERGY METRO, INC., EVERGY KANSAS
CENTRAL, INC. AND EVERGY KANSAS SOUTH, INC.**

**IN THE MATTER OF THE PETITION OF EVERGY KANSAS CENTRAL, INC.,
EVERGY KANSAS SOUTH, INC., AND EVERGY METRO, INC. FOR
DETERMINATION OF THE RATEMAKING PRINCIPLES AND TREATMENT
THAT WILL APPLY TO THE RECOVERY IN RATES OF THE COST TO BE
INCURRED FOR CERTAIN ELECTRIC GENERATION FACILITIES UNDER
K.S.A. 66-117.**

Docket No. 25-EKCE-207-PRE

November 6, 2024

1 **I. INTRODUCTION AND OVERVIEW**

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

3 A. My name is John R. Carlson. My business address is 1200 Main, Kansas City, Missouri
4 64105.

5 **Q. By whom and in what capacity are you employed?**

6 A. I am employed by Evergy Metro, Inc. and serve as Director, Project Management & Controls
7 for Evergy Metro, Inc. d/b/a as Evergy Missouri Metro (“Evergy Missouri Metro”), Evergy
8 Missouri West, Inc. d/b/a Evergy Missouri West (“Evergy Missouri West”), Evergy Metro,
9 Inc. d/b/a Evergy Kansas Metro (“Evergy Kansas Metro”), and Evergy Kansas Central, Inc.
10 and Evergy Kansas South, Inc., collectively d/b/a as Evergy Kansas Central (“Evergy Kansas
11 Central”) the operating utilities of Evergy, Inc. (“Evergy”).

12 **Q. Who are you testifying for?**

13 A. I am testifying on behalf of Evergy Kansas Central (“EKC” or “Company”).

14 **Q. What are your responsibilities?**

15 A. My responsibilities include oversight of a team responsible for the project management
16 and delivery of renewable generating assets for the Company. Additionally, I oversee the
17 team responsible for project controls, namely scope, cost and schedule tracking for both
18 conventional and renewable generation additions across Evergy’s companies.

19 **Q. Please describe your education, experience and employment history.**

20 A. I received a Bachelor of Science degree in Architectural Engineering from the University of
21 Kansas in 1997. In 2004, I received a Master of Business Administration from the University
22 of Chicago Booth School of Business. I joined KCP&L in 2006 as an Energy Consultant in
23 the Delivery Division, managing all facets of the customer relationship for KCP&L’s large

1 industrial customers. In 2007, I became Manager of Market Competitiveness where I was
2 responsible for developing and implementing non-regulated products and services for
3 residential, commercial, and industrial customers. In 2010, I moved to the Supply Division
4 at KCP&L and started work as an Originator of wholesale power transactions. In 2017, I
5 started working in market operations and managed the group responsible for submitting
6 assets and load to the SPP daily. In early 2024 I moved into the Company's Development
7 group where I manage a team responsible for project management for renewable generation
8 projects and for project controls for new conventional and renewable generation.

9 **Q. Have you previously testified in a proceeding at the Kansas Corporation Commission**
10 **(“Commission” or “KCC”) or before any other utility regulatory agency?**

11 A. I have previously filed testimony before the KCC in the last rate review for EKC and
12 Evergy Kansas Metro in Docket 23-EKCE-775-RTS. Also, I have previously testified
13 before the Missouri Public Service Commission.

14 **Q. What is the purpose of your direct testimony?**

15 A. The purpose of my direct testimony is to:

- 16 • provide a detailed overview of the Kansas Sky solar generating resource (“Kansas
17 Sky” or “Project” or “Asset”),
- 18 • describe the rationale behind the purchase of the development Asset,
- 19 • review the transaction that will allow EKC to acquire the development Asset,
- 20 • describe EKC's plans for construction and operation of the Asset and
- 21 • detail the economics of the project and how it compares to alternatives

1 **Q. Are you sponsoring any schedules with your direct testimony?**

2 A. Yes, I am sponsoring the following schedules:

- 3 • Schedule JC-1 – Kansas Sky Layout
- 4 • Confidential Schedule JC-2 – Kansas Sky PSA Agreement
- 5 • Confidential Schedule JC-3 – 23 All-Source RFP Short-List LCOE Summary
- 6 • Confidential Schedule JC-4 – Kansas Sky LCOE Model

7 **Q. Please describe your role specific to the Asset.**

8 A. My team has been involved with term sheet and contract negotiations with the developer
9 of Kansas Sky, Savion, LLC (“Savion”), and will manage the remaining development and
10 construction efforts of the Project once the transaction of the development asset sale closes.
11 In general, the role of the Development team is to seek out and execute on generation
12 options necessary to help meet the generation needs of Evergy’s operating companies as
13 stated in its annual and triennial integrated resource plan (“IRP”) updates.

14 **Q. Please provide a summary of the key points for your testimony.**

15 A. A summary of my testimony can be broken down into the following main areas:

- 16 • Description of the Project – Kansas Sky will be a 159 MWac solar facility
17 developed by Savion and built by an engineering, procurement and construction
18 (“EPC”) contractor hired by Evergy. Kansas Sky has a mature generation
19 interconnection request (“GIR”) queue position with the SPP and has an expected
20 commercial operation date (“COD”) of December 2026.
- 21 • The Process Leading to the Kansas Sky Agreement – Including a description of how
22 Evergy was first presented with the opportunity to purchase its interest in the Kansas

- 1 Sky Project, and why the Project was selected to begin commercial negotiations,
2 and how those negotiations were conducted.
- 3 • Overview of the Transaction to Acquire Kansas Sky – Kansas Sky is structured as
4 a development asset sale (“DAS”) with negotiations that started in December 2021
5 and completed with a signed agreement on February 7, 2023. For Evergy to close
6 on the Asset, Savion must achieve several conditions precedent, further detailed in
7 Section III of this testimony, and including the acquisition of a
8 Condition Use Permit (“CUP”) from Douglas County, Kansas with conditions
9 acceptable to Evergy.
 - 10 • EKC’s Plans for Construction and Operation of the Asset – Evergy will utilize its
11 experience in constructing large, complex capital projects to manage the
12 construction of the Asset. Through appropriate risk mitigation measures, discussed
13 in more detail in Section V of this testimony, Evergy has limited the foreseeable
14 risk to project schedule and cost. Upon commissioning and commercial operation
15 of the asset, Evergy will incorporate operations and maintenance of the Project into
16 our existing generation portfolio, consisting of over 11 GW of owned generation
17 resources including coal, nuclear, natural gas, wind, and solar.
 - 18 • How Kansas Sky Compares to Other Available Projects – Including a discussion
19 of some of the other available projects other than the Kansas Sky Project, how those
20 projects compare with the Kansas Sky Project from various perspectives, including
21 from a levelized cost of energy standpoint, and how Evergy utilized market
22 indicators and data to assure it was obtaining competitive value and pricing for the
23 goods and services used in construction of the Kansas Sky Solar Project.

1 **II. DESCRIPTION OF THE PROJECT**

2 **Q. Please provide a detailed overview of Kansas Sky.**

3 A. Kansas Sky Solar is a 200 MW_{DC} / 159 MW_{AC} single-axis tracking photovoltaic solar
4 facility located in Douglas County, Kansas. The project is being developed by Savion and
5 is projected to go into commercial operation in December of 2026. The project maintains a
6 mature GIR queue position, study number GEN-2021-101, with the SPP and interconnects
7 to the transmission grid at the 115kV Midland Junction substation, owned by Evergy Kansas
8 Central, Inc. A layout of Kansas Sky is contained in Schedule JC-1.

9 **III. THE PROCESS LEADING TO THE KANSAS SKY AGREEMENT**

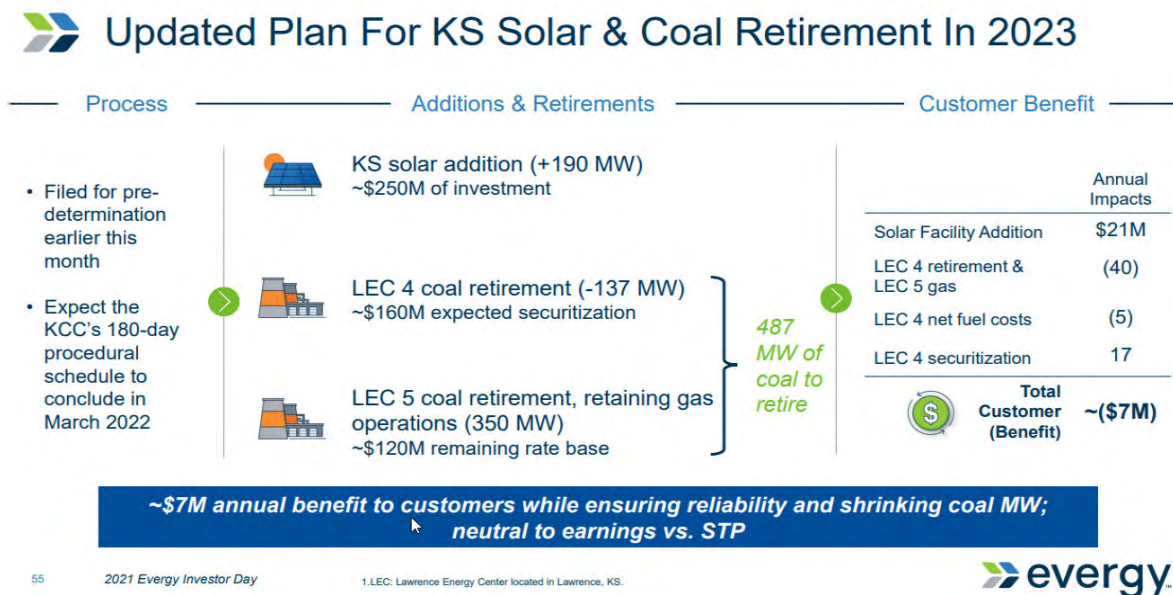
10 **Q. What process did Evergy pursue to identify energy resources to serve the needs of**
11 **EKC customers?**

12 A. As more thoroughly described in Mr. VandeVelde's testimony, Evergy identified the need
13 for these projects through the annual IRP process. Both the 2021 Investor Day slides and
14 2022 IRP updates indicated significant need for solar in the late 2020's. Furthermore, the
15 2023 IRP preferred plan identified a 150 MW solar need for EKC by the Summer of 2027,
16 which was confirmed in the 2024 IRP update. The Kansas Sky project is an ideal resource
17 to fill this 150 MW solar need.

18 **Q. When and how was Evergy first offered this Project?**

19 A. In late 2021, Evergy was approached by Savion with an offer to purchase the early-stage
20 development asset. Savion offered this development to Evergy in response to Evergy's
21 2021 Investor Day slides, which contemplated the retirement of the ~137 MW coal fired
22 Unit #4 at the Lawrence Energy Center ("LEC 4").

Figure 1: 2021 Investor Day Slide #55



1 With Kansas Sky's unique siting across the river from the Lawrence Energy Center,
2 Savion's proposal contemplated the utilization of LEC 4's interconnection as an expedited
3 path to the grid and one only Evergy could make use of.

4 **Q. Why was the Project chosen to begin commercial negotiations?**

5 A. Due to solar resource needs being identified in the IRP and the unique siting and
6 interconnection characteristics of Kansas Sky, Evergy entered discussions with Savion to
7 procure the early- stage development. After further investigation, it was determined that
8 re-utilization of LEC 4's interconnection was not feasible for several reasons, including the
9 need to install an additional generator tie line crossing the Kansas River. The cost of that
10 interconnection became prohibitive, and Evergy began to focus on other strategies for
11 interconnection, including utilization of the existing GIR that Savion had submitted to the
12 Southwest Power Pool ("SPP"). Despite not being able to re-utilize the LEC 4
13 interconnection, the Kansas Sky Solar Project was and is still an ideal opportunity for

1 Evergy due to the Project's proximity to high load locations. Therefore, Evergy continued
2 negotiations with Savion with the intent to utilize the Project and its existing interconnection
3 queue position for a future IRP need.

4 **Q. What was the timeline for commercial negotiations with the developer of Kansas Sky?**

5 A. Kansas Sky term sheet negotiations, commenced in December 2021, and contract
6 negotiations started in May 2022. The Kansas Sky Purchase and Sale Agreement ("PSA"),
7 which effectuates the DAS, was finalized on February 7, 2023. A copy of the executed
8 contract is included as **Confidential Schedule JC-2**.

9 **Q. Are there certain aspects of the project that will be procured by Evergy through a**
10 **competitive bidding RFP process?**

11 A. Yes. Although Evergy's initial acquisition of the project was not subject to competitive bidding
12 or an RFP process, but instead was an opportunity presented to Evergy by Savion, the EPC
13 contractor will be selected by way of a broad RFP, which has already been executed. While the
14 EPC contractor has not yet been selected, Evergy is in short-list negotiations with two bidders
15 and intends to finalize the decision and execute the EPC contract by the end of 2024. This EPC
16 contractor will procure substantially all the equipment, materials and supplies to be used in
17 construction of the project, except for the solar modules, main power transformer, and the high-
18 voltage circuit breakers. The solar modules will be sourced by Evergy, through a broker, who
19 has existing relationships with module suppliers and executes a competitive bidding process
20 on our behalf. Evergy has used this broker on multiple occasions to supply modules for other
21 solar projects. The main power transformer and high voltage circuit breakers will be procured
22 by Evergy through existing supplier relationships and priced according to pre-negotiated
23 terms. Given that much of the Evergy supplied equipment has already been secured through

1 existing contracts and pricing arrangements, and the fact that the EPC bidder's responses to
2 the RFP have been reviewed, Evergy does not expect the costs included in this filing to
3 change substantially from what has been proposed.

4 **Q. What IRP need is Kansas Sky expected to fill?**

5 A. Upon release of the 2023 IRP, the Kansas Sky project was determined to be uniquely suited to
6 fill the 150 MW solar need in 2027. This is due to its total capacity of 159 MW, its location in
7 the EKC service territory near load, its relatively low permitting and environmental risk
8 profiles, and the levelized cost of energy ("LCOE") of the project as compared to others
9 available. Additionally, the asset had a mature SPP queue position, excellent solar resource
10 potential, nearby infrastructure and personnel, and with the structure of the purchase as a DAS,
11 EKC would be able to utilize its experience in constructing large and complex projects to self-
12 build the project. In addition, the 2024 IRP update solidified this 150 MW solar need for 2027.

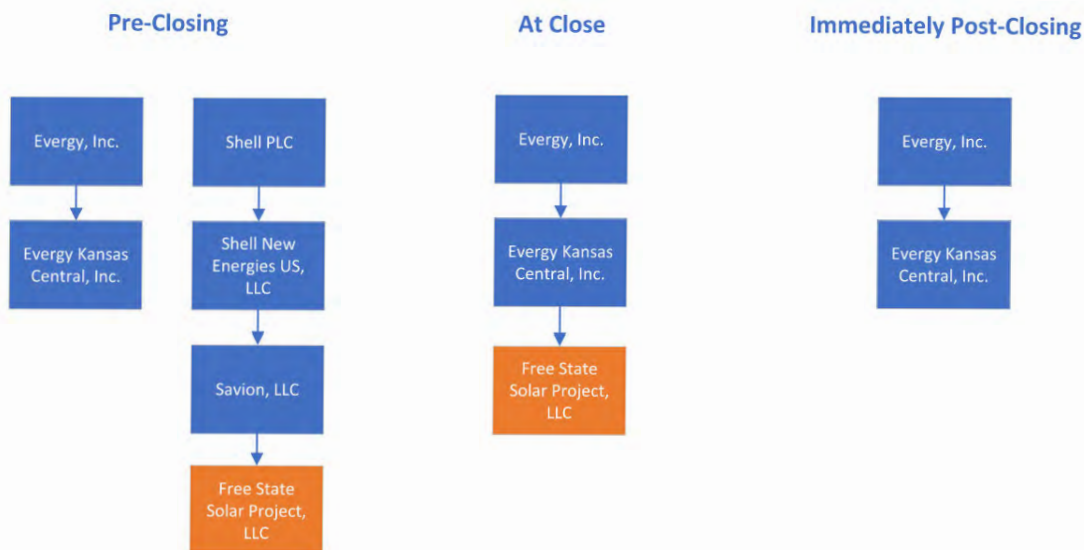
13 **IV. OVERVIEW OF THE TRANSACTION TO ACQUIRE KANSAS SKY**

14 **Q. How has the acquisition of Kansas Sky been structured?**

15 A. The Kansas Sky agreement is structured as a PSA for the development assets. In this
16 arrangement, Savion has set up a project company, Free State Solar Project, LLC ("FSSP"),
17 that is developing the Kansas Sky project. Savion's project company is responsible for
18 securing land rights, permits, interconnection rights and the development of a 30% design
19 and engineering, procurement and construction ("EPC") bid package. When the contractual
20 conditions to closing have been met, including final approval of the Conditional Use Permit
21 by Douglas County (discussed in additional detail below), the equity interests in the project
22 company will be transferred to EKC.

- 1 **Q. What will happen to the project company of Kansas Sky after the transaction closes?**
 2 A. The equity interests from FSSP, and associated development assets, will be owned by EKC
 3 upon closing at NTP. Immediately after closing, EKC plans to effect a short-form merger
 4 of the project company with and into EKC, with EKC surviving the merger, to consolidate
 5 the assets of the project company with those of EKC. Figure 2 below shows the pre and
 6 post-closing organizational charts of the transaction.

Figure 2: Kansas Sky Organizational Chart



1 **Q. What is the purchase price and plan for financing the purchase of Kansas Sky?**

2 A. The DAS purchase price for Kansas Sky is ****[REDACTED]****. This price includes
3 ****[REDACTED]**** for the development assets and approximately \$3,081,882 for reimbursement
4 of SPP transmission owner interconnection facilities (“TOIF”) and network upgrades which
5 are yet to be finalized by the SPP. The total construction cost of the asset is estimated to be
6 ****[REDACTED]****, which is inclusive of the DAS purchase, construction costs, allowance
7 for funds used during construction (“AFUDC”), and Evergy internal labor & fees. Company
8 witness John Grace addresses how the Company plans to finance the Assets.

9 **Q. Has the Kansas Sky transaction been evaluated from a technical standpoint?**

10 A. Yes, the Company’s internal engineering team has reviewed the technical data provided by
11 the developer of Kansas Sky. The initial proposal from Savion included limited technical
12 information due to the stage of development of the project but was sufficient for Evergy to
13 decide on the viability of the project. Evergy’s technical review primarily focused on
14 verification of the estimated production of the site using the equipment and high-level
15 design assumptions provided by the developer, as well as a review of the geotechnical
16 studies performed on each site. The Company’s engineering review found the developer’s
17 production estimate to be within reason, based on the preliminary design submitted and the
18 available solar resource for the location. A geotechnical and terrain analysis was performed,
19 and the site was found to be well suited for solar development. No other technical concerns
20 were noted by Evergy’s technical teams during this stage of review.

21 Following execution of the PSA, Savion continued to develop the project and hired
22 Westwood Professional Services (“Westwood”) to complete a 30% design package for the site.
23 The basis of design for this 30% package was developed in coordination with and approved by

1 Evergy. The 30% design package delivered by Savion and Westwood was determined to be
2 sufficient to meet the requirements outlined in the PSA and satisfied the 30% design condition
3 precedent for closing on the transaction. Remaining design and engineering considerations will
4 be developed by the EPC contractor and approved by Evergy after review.

5 **Q. Were there potential environmental or permitting concerns evaluated by Savion or**
6 **the Company?**

7 A. Yes, during the negotiation of the PSA contract, Savion was asked to provide detailed in-
8 formation on the status of local and environmental permitting. Through this Q&A process
9 and subsequent update calls with Savion, it was determined that Kansas Sky presented low
10 permitting and environmental risk. Savion has completed a Phase I Environmental Site
11 Assessment (ESA) for the project, which resulted in no recognized environmental condi-
12 tions on the site. Other environmental reviews have also been completed, including habitat
13 assessments, wetlands delineations, cultural resources studies. The 30% design has ac-
14 counted for the findings of these environmental reviews and includes appropriate setbacks
15 from noted features. The proposed site layout from the 30% design does not impact any
16 wetland features or cultural sites, and the habitat assessment indicates that adverse impacts
17 to any Federal or State Threatened or Endangered species are either non-existent or un-
18 likely. The site is well suited for solar development from an environmental perspective.
19 Kansas Sky is in Douglas County, Kansas and will require a CUP from the County to
20 construct the project. As a condition for closing on the sale of the development assets,
21 Savion must obtain an approved CUP with conditions satisfactory to the Company. The
22 status of this CUP is discussed later in my testimony.

1 **V. EKC'S PLANS FOR CONSTRUCTION OF THE ASSET**

2 **Q. How does Evergy plan to construct the asset?**

3 A. As referenced earlier in my testimony, the Kansas Sky agreement is structured as a
4 development asset sale. Once the contractual conditions precedent have been met by Savion
5 and the transaction closes, Evergy will take ownership of the development assets, such as the
6 interconnection and real estate agreements. Post-closing, Evergy will be responsible for all
7 remaining development efforts, including construction, commissioning and operation of the
8 Project. For construction, Evergy will hire an EPC contractor who will manage the final site
9 design, procure necessary equipment (save for long-lead items being procured by Evergy),
10 and either self-perform or hire sub-contractors to build the project. Evergy's standard practice
11 is to assign a dedicated project manager and construction supervisor to a project to provide
12 oversight of the engineering, contracting and construction being performed by an EPC
13 contractor and their subcontractors, and the same will happen with this project.

14 **Q. What does the EPC contracting and construction schedule look like?**

15 A. Evergy released an EPC RFP for the Kansas Sky project on August 15, 2024. The RFP
16 bid due date was October 16, 2024, and the responses are currently being evaluated and
17 short-listed. The short list was finalized on October 25, 2024, and Evergy will meet with
18 the shortlisted contractors to have more detailed discussions regarding their bids with any
19 final revisions being re-evaluated. The final EPC selection is planned for early November
20 2024. Figure 3 below details the milestones associated with the EPC selection process
21 and expected construction schedule.

Figure 3: EPC Contracting and Construction Schedule

| Milestone | Completion Date |
|--|------------------------|
| Issue RFP | August 15, 2024 |
| RFP Bids Received | October 16, 2024 |
| Shortlist Selected | October 25, 2024 |
| Expected Final EPC Selection | November 8, 2024 |
| Expected EPC Agreement Signed | December 6, 2024 |
| Expected EPC Full Notice to Proceed ("FNTTP") | September 1, 2025 |
| Expected Commercial Operation Date ("COD") | December 31, 2026 |

1 **Q. What are the overall project risks for Kansas Sky, and how does EKC intend to**
2 **mitigate those risks?**

3 A. As with all major construction, there are risks associated with the Project. The primary
4 risks associated with the Project are:

- 5 • Supply chain variability;
- 6 • Change in law/tariff;
- 7 • Permitting;
- 8 • Transmission interconnection; and
- 9 • Construction

10 **Q. Please expand on the supply chain risks and how Evergy plans to mitigate them.**

11 A. Global supply chains continue to be impacted by strong demand for solar modules,
12 inverters, and power equipment (e.g. transformers and breakers). In addition, some of the

1 raw materials used in manufacturing this equipment is also used in the electronics, battery
2 and artificial intelligence industries, which are seeing strong demand as well. These all
3 point to longer lead times and increased costs for equipment.

4 The Kansas Sky project will utilize an engineering, procurement, and construction
5 (“EPC”) contractor for project completion. Evergy will procure modules through its existing
6 vendor relationships and is utilizing its internal expertise to supply transformers and breakers
7 for the project, which represent the primary long-lead items needed for construction.

8 **Q. Please elaborate on the change in law/tariff risks and how the Company has responded.**

9 A. With the ability to purchase domestic panels being limited, there is a reliance on
10 manufacturing primarily in Southeast Asia. Concerns around purchasing from Chinese
11 suppliers and/or utilizing parts manufactured in China for panels manufactured elsewhere
12 is increasing risk around changes in law that could increase the costs of procurement. In
13 addition, there is risk that tariffs imposed on solar panels manufactured in countries shown
14 to be circumventing federal law on the use of Chinese parts could vary dramatically. Tariffs
15 by supplier could vary by year as calculations are updated annually. Also, there is risk that
16 if a supplier has manufacturing in a country found to be circumventing regulations and
17 utilizing parts from China, even if modules from other countries, by the same supplier,
18 adhere to regulations, all modules from that supplier could be subject to increased tariffs.

19 Although the Kansas Sky project will be designed and constructed ** [REDACTED]
20 [REDACTED]**, Evergy will procure the solar modules, the main power
21 transformer, and the high-voltage circuit breakers. Evergy has already been in contact with
22 a broker used to purchase panels for previous projects. We will purchase from suppliers

1 who manufacture in countries that have not been identified as circumventing regulations
2 around Chinese parts and manufacturing.

3 **Q. What permitting risks exist with this Project, and how is Evergy mitigating them?**

4 A. As a condition for closing, Savion must obtain a CUP with Douglas County, Kansas that is
5 acceptable in all respects to Evergy. The Douglas County Commissioners approved a CUP
6 for the Project on April 13, 2024. However, litigation has been filed by certain citizens of
7 Douglas County challenging the CUP. Upon favorable completion of the litigation affirming
8 the CUP, the sale of the development assets will close, the merger of the project company
9 into EKC will be initiated, and construction of the Project can commence. If, however, the
10 CUP is overturned during the litigation, the transaction will not close, and the Project will
11 not progress. The overwhelming majority of the costs of the Project, however, will not be
12 incurred until after final approval and affirmance of the CUP and closing of the transaction.
13 Savion is working with their counsel to address questions and concerns coming from the
14 litigation. Other environmental risks have been discussed previously in my testimony.

15 **Q. Please describe transmission interconnection risk with the Project and how the
16 Company is addressing this risk.**

17 A. The risk around transmission interconnection has both financial and timing aspects.
18 Interconnection of new generation to the SPP transmission system requires a Generator
19 Interconnection Agreement (“GIA”). The study process for a GIA can take years, and
20 interconnection dates are dependent on the study timeline and prior studies in the queue
21 and/or system upgrades that might be necessary. The financial impact (potential transmission
22 system upgrades needed to grant interconnection) is also an unknown until a GIA is granted.
23 The Project has a mature GIR position, meaning that the Project has gone through multiple

1 study iterations with the SPP. With each study iteration the timing for completion of the GIA
2 and the variance around financial impact of upgrades is narrowed. Currently, as noted in
3 SPP's 2021-DISIS-001 Phase II study, Kansas Sky's interconnection costs are estimated to
4 be \$3,081,882 and ** [REDACTED] **. As an
5 additional measure to mitigate schedule risk of the interconnection facilities and network
6 upgrades, FSSP is entering into an Engineering & Procurement agreement with Evergy's
7 Transmission & Substation team. This is a common practice between developers and
8 transmission owners to expedite the construction schedule of the interconnection ahead of
9 having an executed GIA. Evergy's development team has ordered the required long-lead
10 equipment, high voltage breakers, which are necessary to facilitate this interconnection. With
11 these measures in place, the estimated backfeed date is September 1, 2026.

12 **Q. Please address construction risk and the measures taken by the Company to mitigate them.**

13 A. The Inflation Reduction Act from 2022 ("IRA") has improved the economics of, and
14 resulted in an increased demand for, new solar generation. The construction labor market
15 to build the solar farms is tight due to demand and is more expensive due to higher U.S.
16 inflation relative to historical averages. Additionally, the high demand for solar puts
17 schedule risk in play as more projects vie for less resources (labor). For Kansas Sky, the risk
18 will be mitigated through Evergy's selection and management of the EPC contractor. This
19 arrangement transfers the responsibility and obligation to the contractor to supply labor,
20 equipment, and manage construction activities to meet the Project's schedule milestones.

1 **VI. HOW KANSAS SKY COMPARES TO OTHER AVAILABLE PROJECTS**

2 **Q. Did Evergy evaluate other available generation projects as possible projects to fulfill**
3 **the IRP need for solar generation?**

4 A. Evergy, with the assistance of consultants from 1898 & Co., ran an all-source RFP process
5 in 2023 to source generation resources to meet the needs outlined in the IRP. Of the five
6 short-listed build-transfer solar projects that could achieve commercial operation by the
7 Summer of 2027, only two remain available as viable alternatives to Kansas Sky. The first
8 alternative, nearly double the capacity of Kansas Sky, would be too large to fill the required
9 IRP need for EKC, while the second alternative is only around half of the required capacity.
10 Therefore, Kansas Sky Solar was the most appropriate project to fulfill the IRP need.

11 **Q. How was Kansas Sky evaluated against these other projects?**

12 A. Kansas Sky was compared both qualitatively and quantitatively to the other available projects.
13 From a qualitative standpoint, Kansas Sky exhibits low environmental risk, maintains a mature
14 SPP GIR position, and is in an ideal location from both a technical and transmission
15 perspective. Quantitatively, Kansas Sky's levelized cost of energy ("LCOE") was compared to
16 the alternatives and the results indicated that Kansas Sky was the lowest cost option.

17 **Q. How were the LCOEs calculated?**

18 A. For the 2023 all-source RFP short-listed projects, full levelized revenue requirements
19 models were calculated and divided by the expected annual MWhs to generate a \$/MWh
20 LCOE value for each project. A summary of the short-listed LCOE's, calculated using
21 Evergy's full revenue requirements model, along with a comparison of those LCOE's to
22 1898 & Co.'s original preliminary evaluation can be found in Confidential Schedule JC-3.
23 Kansas Sky's LCOE model is attached as Confidential Schedule JC-4.

1 **Q. You mentioned previously that Evergy was offered the opportunity by Savion to**
2 **purchase its interest in the Kansas Sky Project and did not select the project overall**
3 **through a competitive RFP. What measures has Evergy taken to assure that its costs**
4 **incurred in the project are competitive and reasonable in the market?**

5 A. Evergy has utilized at least three factors or markers to assure that its total costs for the
6 project are reasonable and consistent with competitive market prices. First, the cost
7 measures in its most recent IRP provide estimated costs for generation facilities per kW of
8 generation capacity. Those estimates are based on data received from Evergy in response
9 to broad RFP solicitations, and in comparable projects represent cost levels that would
10 result from a competitive RFP process. Evergy's proposed costs for the Kansas Sky Solar
11 project are very consistent with, and in fact are approximately 20% lower than, the cost
12 estimates for the 2024 IRP based on the data returned from competitive RFP responses.
13 Therefore, the costs appear competitive with these market indicators. Second, as discussed
14 above, substantial portions of the project, including the cost for EPC services, and for major
15 on-site equipment, such as modules, were subject to or selected by a competitive RFP
16 process. These costs make up over 85% of the total costs of the construction and acquisition
17 of the project and are all derived from a competitive bidding process. Finally, Evergy has
18 compared the overall costs of this project with specific bids supplied in response to more
19 recent RFP solicitations as well as general market indicators available in the public domain,
20 and the costs of the Kansas Sky Project are very competitive with the proposals and projects
21 Evergy has been able to obtain. Therefore, these indicators show that Evergy's costs over-
22 all for the project are reasonable and competitive.

1 **Q. Did Evergy compare the cost estimates it has received for the Kansas Sky Solar**
2 **project with other available cost indicators in the market?**

3 A. Due to confidentiality with commercial negotiations, and counterparties not releasing
4 installed cost data, finding direct comparisons with recently constructed solar projects is
5 not possible. That said, Evergy has compared the Kansas Sky cost estimates and LCOE to
6 recent IRPs from regulated utilities and purchase power agreement (“PPA”) pricing,
7 respectively. For example, the Public Service Company of Oklahoma’s 2024 IRP, released
8 October 1, 2024, showed costs for single-axis tracking solar facilities of approximately
9 \$2,000/kW installed.ⁱ Similarly, the Louisville Gas & Electric Company and Kentucky
10 Utility Company’s (“LGE/KU”) 2024 IRP, filed on October 18, 2024, showed capital costs
11 for solar are in the range of \$1,462/kW to \$1,902/kW.ⁱⁱ Kansas Sky compares favorably to
12 these at approximately ****[REDACTED]**** installed.

13 Kansas Sky also compares favorably when comparing its LCOE to publicly available
14 information on solar purchase power agreements (“PPA”). According to LevelTen Energy,
15 who runs a PPA marketplace, PPA prices rose 5.4% during the 3rd quarter of 2024 and have
16 increased 14.1% year-over-year. As of the 3rd quarter of 2024, the typical solar PPA was
17 priced at \$56.58/MWh.ⁱⁱⁱ Ascend Analytics indicates that the upward trend is likely to
18 continue, with PPA pricing potentially easing in the 2030s.^{iv} Similar to the installed cost
19 comparison, with an LCOE of ****[REDACTED]****, Kansas Sky compares favorably to typical
20 PPA pricing in the market.

21 **Q. Are there production tax credit (“PTC”) or investment tax credit (“ITC”) benefits**
22 **available for the Projects?**

1 A. Yes. Company witness Grace describes these tax credits and how the Company is accounting
2 for them with these Projects.

3 **Q. Please summarize your testimony.**

4 A. After being presented the project by Savion and performing quantitative and qualitative
5 analyses and internal and external due diligence, including comparing to projects from the
6 Company's 2024 IRP, the Kansas Sky project was selected as an option to pursue. From a
7 contract structure perspective, Kansas Sky is a DAS with Savion having responsibility for
8 securing land leases and permitting and the Company having responsibility for hiring an
9 EPC for final design, procurement of equipment and construction of the project. Identified
10 project risks of supply chain variability, change in law/tariff, permitting, transmission in-
11 terconnection, and construction have been mitigated through contract provisions, through
12 procurement strategies, and through the location of the project. Lastly, the Project is highly
13 competitive from both installed \$/kW and LCOE \$MWh perspectives.

14 **Q. Does that conclude your testimony?**

15 A: Yes, it does.

i See Public Service Company of Oklahoma, An AEP Company, 2024 IRP October 1, 2024; available at: https://www.psooklahoma.com/lib/docs/community/projects/PSO_2024_IRP_Report.pdf;

See p. 65, Figure 31.

ii See 2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company, Case No. 2024-00326, Volume III, available at https://psc.ky.gov/pscecf/2024-00326/rick.lovekamp%40lge-ku.com/10182024014139/08-LGE_KU_2024_IRP_Volume_III.pdf; see pg. 7, Table 4.


iii See, Penrod, Emma, Renewable PPA prices continue to rise – and may do so through 2030, say LevelTen, Ascend analysts; available at https://www.utilitydive.com/news/ppa-power-purchase-prices-wind-solar-levelten-ascend-analytics/730245/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202024-10-24%20Utility%20Dive%20Renewable%20Energy%20%5Bissue:67173%5D&utm_term=Utility%20Dive:%20Renewable%20Energy.

iv Id.

STATE OF KANSAS)
) ss:
COUNTY OF SHAWNEE)


VERIFICATION

John Carlson, being duly sworn upon his oath deposes and states that he is the Director Project Management and Controls, for Evergy, Inc., that he has read and is familiar with the foregoing Testimony, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief



John Carlson

Subscribed and sworn to before me this 6th day of November 2024.



Notary Public

My Appointment Expires: May 30, 2026



PREPARED FOR:
FREE STATE SOLAR PROJECT, LLC.

422 Admiral Blvd,
Kansas City, MO 64106

REVISIONS:

| # | DATE | COMMENT | BY | CHK | APR |
|---|----------|-----------------------|-----|-----|-----|
| A | 08/14/23 | Permitting Site Plans | SJM | EFE | RJG |
| B | 11/02/23 | Permitting Site Plans | SJM | EFE | RJG |
| C | 11/10/23 | Permitting Site Plans | CRS | EFE | RJG |
| D | 11/13/23 | Permitting Site Plans | CRS | EFE | RJG |

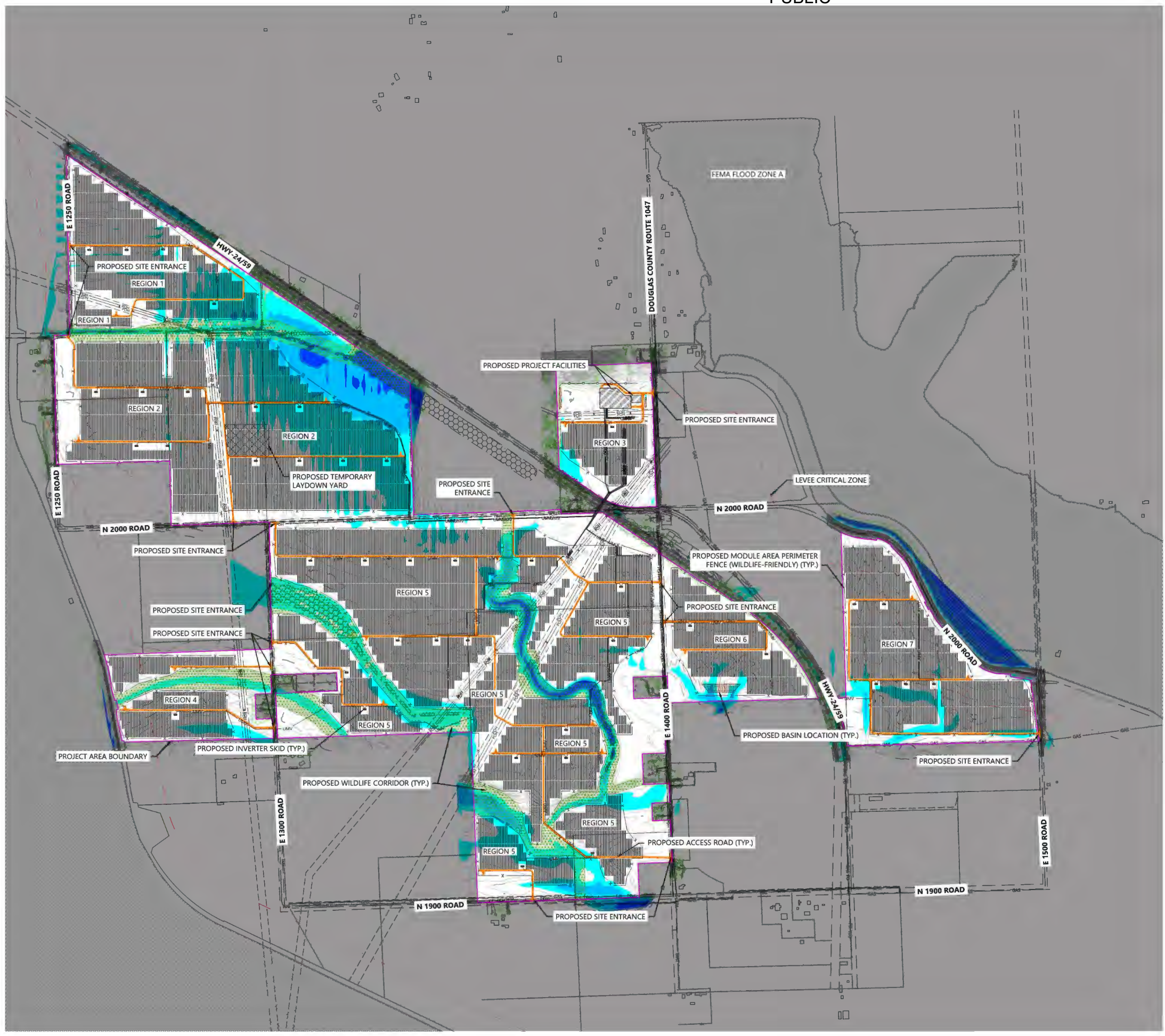
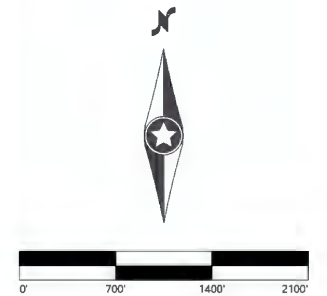
LEGEND:

- PROJECT AREA BOUNDARY
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. 5' INDEX CONTOUR
- EX. 1' INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- EX. RAIL LINE
- EX. FENCE
- EX. OVERHEAD POWER
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. WETLAND
- LEVEE CRITICAL ZONE
- FEMA FLOOD ZONE A
- PROPOSED MODULE AREA PERIMETER FENCE
- PROPOSED SUBSTATION SECURITY FENCE
- PROPOSED UNDERGROUND COLLECTION
- PROPOSED MODULE AREA BOUNDARIES
- PROPOSED ACCESS ROAD
- PROPOSED INVERTER SKID
- PROPOSED PROJECT FACILITIES
- PROPOSED TEMPORARY LAYDOWN YARD
- PROPOSED WILDLIFE CORRIDOR
- PROPOSED TRACKING SOLAR ARRAY
- FLOOD DEPTH: 1'-2'
- FLOOD DEPTH: 2'-3'
- FLOOD DEPTH: 3'+

- NOTES:**
- FLOOD MODELING OF EXISTING 100 YR. 24-HR STORM PROVIDED BY WESTWOOD.
 - TOTAL SITE AREA: 631 ACRES
 - MV ROUTING SHOWN FOR REFERENCE ONLY

PRELIMINARY ELECTRICAL DATA

| | |
|--------------------|-------------------------------------|
| MODULES PER STRING | 29 |
| NUMBER OF STRINGS | 10,565 |
| NUMBER OF MODULES | 306,385 |
| MODULE TYPE | CANADIAN SOLAR CS7N-670TB-AG MODULE |
| MODULE SIZE | 670 W |
| RACKING TYPE | NEXTRACKER |

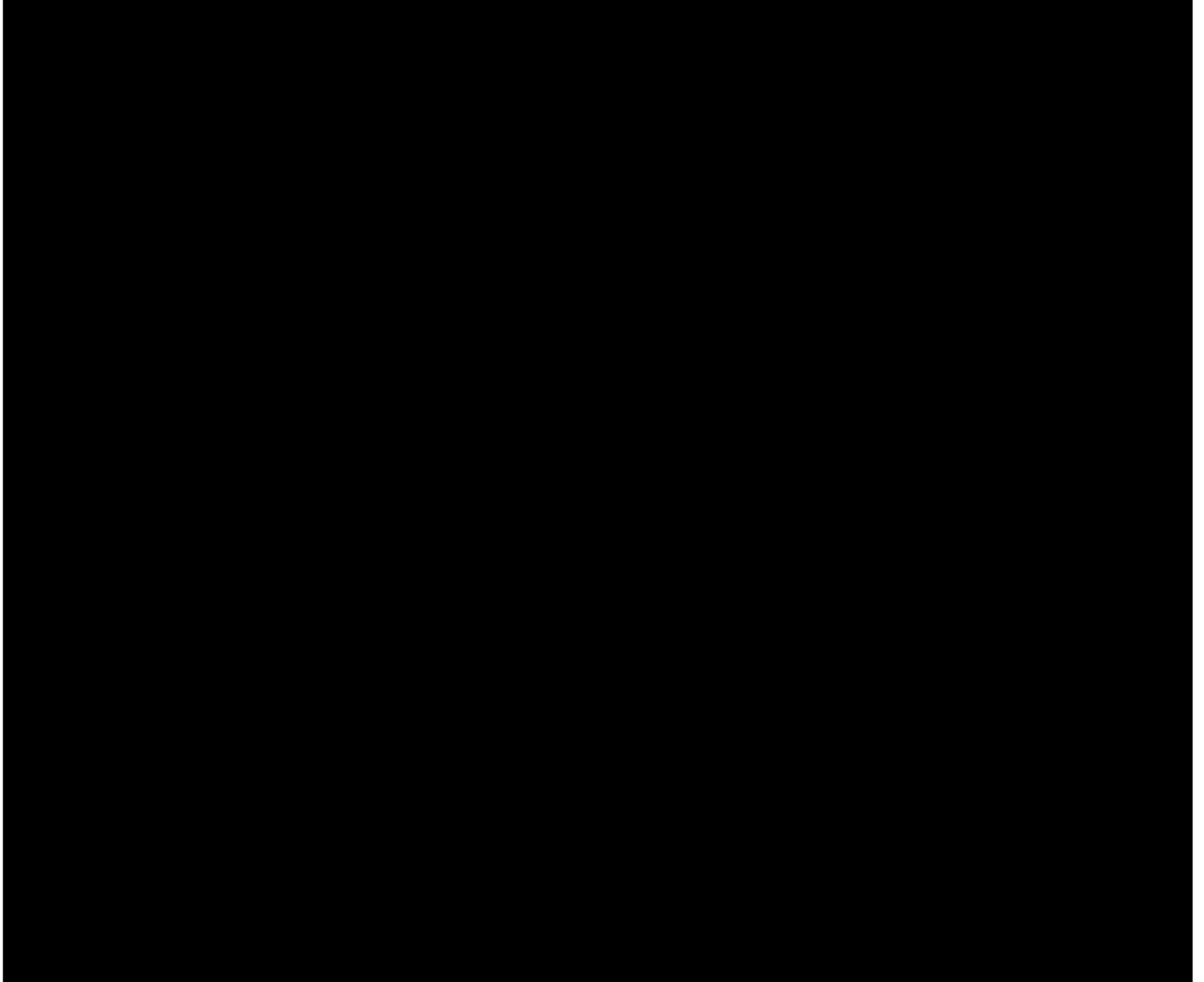


Kansas Sky Energy Center
Douglas County, Kansas

Overall Site Plan of Proposed Conditions

FOR CONDITIONAL USE PERMIT

| | | |
|--------|------------|------|
| DATE: | 11/13/2023 | REV: |
| SHEET: | C201 | D |



PUBLIC

