**BEFORE THE UTAH PUBLIC SERVICE COMMISSION**

| | |
|---|---|
| In the Matter of the Application of CORIX UTAH CITY HEATING AND COOLING LLC for a Certificate of Public Convenience and Necessity for a Heat Corporation to Provide Heating and Cooling Services within the State of Utah | Docket No. 25-2666-01 |

# DIRECT TESTIMONY OF JASON OWEN

**Q. Please state your name, business address, and position with Corix.**

A. Jason Michael Owen, Vice President, Project Development. 1188 W Georgia St #1160, Vancouver, BC V6E 4A2.

**Q. Please describe the responsibilities of your current position.**

A. I am responsible for leading the advancement of new district energy opportunities through from early concept to investment approvals, executed definitive agreements, and regulatory applications. I lead cross-functional collaboration across commercial development, business development, finance, operations, and technical teams. I oversee the development of project economics, technical solutions, regulatory strategies, and contract negotiations.

**Q. Please describe your professional experience and education.**

A. I am a registered professional engineer and registered professional planner. I have a master's degree from the School Community and Regional Planning, at the University of British Columbia and a bachelor’s degree in civil engineering from McGill University. I have over 20 years of professional experience in the fields of utility engineering, low-carbon energy systems development and building science.

**Q. Have you testified in previous regulatory proceedings?**

A. No.

## PURPOSE AND SUMMARY OF TESTIMONY

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

A. I present and explain the Project details that support Corix's decision to develop and construct the Utah City District Energy Utility ("UCDEU") project ("Utility Project").

**Q. Please summarize your direct testimony regarding the Utility Project.**

A. Section I of my testimony provides a description of the utility project including the customer benefits, support for the project, its necessity, and satisfaction of the public convenience and interest. Section II provides a more detailed description of the project including technology deployed, alternatives, and a detailed account of the phasing and strategic deployment of assets.

## I. PROJECT DESCRIPTION

**Q. Please describe the UCDEU.**

A. The UCDEU is a proposed thermal energy utility system that will provide centralized heating and cooling services to the Utah City development in Vineyard, Utah. This development is a transformative, master-planned, mixed-use community being constructed on a 350-acre site that was formerly home to the Geneva Steel mill. The site is undergoing a major revitalization to become a high-density, transit-oriented urban center, featuring residential, commercial, institutional, and civic buildings.

UCDEU will serve approximately 16 million square feet of residential gross floor area and 1.6 million square feet of commercial space in Utah City. The system is designed to be built over several phases through a 15-20 year period, aligning with the development's

construction schedule. At full build-out, the system will deliver up to 197,905 MBH (58 MW) of heating capacity and 276,384 MBH (81 MW) of cooling capacity.

Unlike traditional building-by-building HVAC systems, UCDEU will use a centralized approach. Energy will be generated at central energy plants and distributed to buildings via a network of underground pipes. Each building will be equipped with an Energy Transfer Station (ETS) that connects to the distribution system and transfers thermal energy to the building's internal systems for space heating, cooling, and domestic hot water.

**Q. What will the UCDEU include?**

A. The system will include:

- Two interim and three permanent energy centers.
- A four-pipe distribution piping system (DPS) for separate heating and cooling supply and return. Approximately 11.1 miles of buried piping.
- ETS units in each connected building.

UCDEU will be the first regulated district energy utility in Utah to provide both heating and cooling services under the jurisdiction of the Utah Public Service Commission ("PSC"), following recent legislative changes that expanded the definition of a "heat corporation" to include combined heating and cooling systems.

**Q. Please describe the Interim and Permanent Energy Centers.**

A. Two interim and three permanent energy centers are being designed, constructed and commissioned for this project. For the initial stage of Phase 1, a modular interim energy center (IEC) is being designed for 1,400 tons cooling and 18,000 MBH (5.3 MW) heating. Space has been allocated within this IEC (referred to below as IEC#1) for an additional 5,000 MBH (1.5 MW) boiler, and outside of the IEC additional space has been allocated

for cooling modules and/or heat recovery chiller modules. There is the potential to service up to 3,000 tons of cooling load from the first IEC. In addition to the heating and cooling modules, the IEC will include all associated pumps, valves lighting, chemical feeds, controls and utility connections including water, sewer, gas and power. This plant is scheduled to be in service by March 1, 2026, prior to service of the first customer.

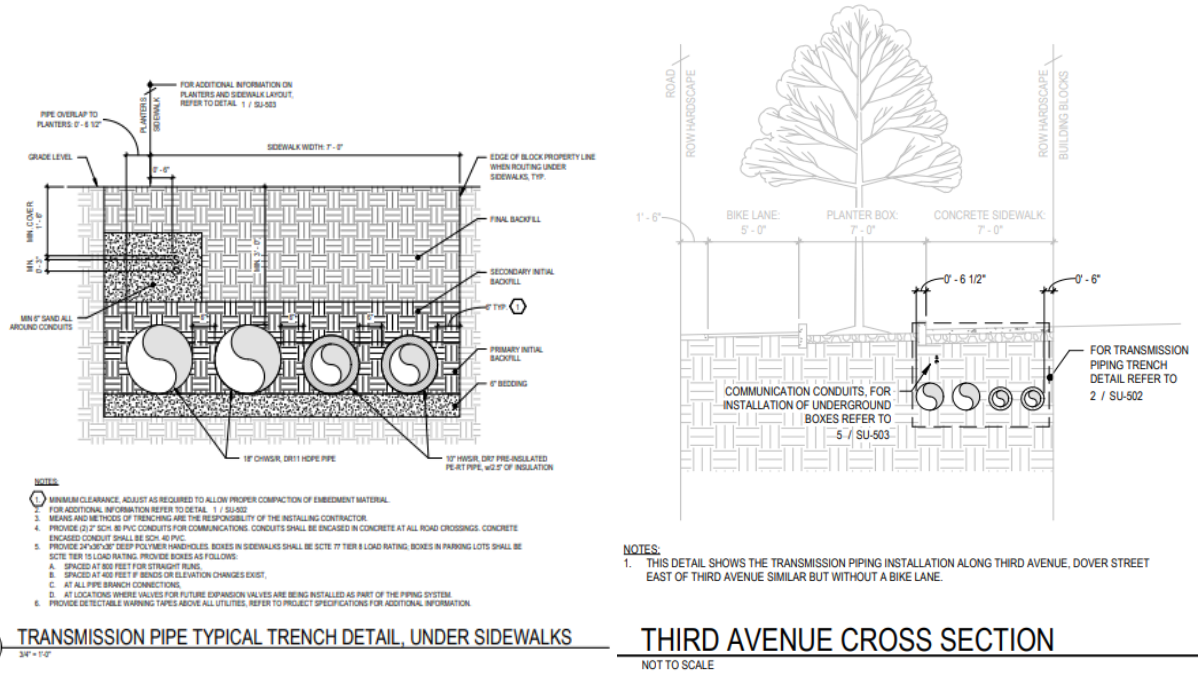
A second interim energy center, IEC#2, will be constructed when the demand on the system from new connected customers is nearing the capacity of IEC#1. IEC#2 is currently forecasted to be in service in 2029. This will allow the utility to phase in incremental new capacity to match demand from new customers before completing the full network of distribution piping connecting all development blocks with the permanent energy center locations. The permanent energy centers will be designed and constructed in conjunction with the delivery of new parking structures serving the development, and equipment from IEC#1 and IEC#2 will be relocated to the new permanent locations. It is currently forecasted that three (3) permanent energy centers (PECs) will be needed to serve the full buildout of Utah City. The location of the PECs, distributed across the development area, will enable Corix to limit the pipe sizes needed to distribute the thermal energy. An alternative approach that relies on only one PEC would lead to much larger pipes.

**Q. Please describe the Distributed Piping System.**

A. The initial stage of Phase 1 of the project consists of ~13,035 linear feet (3,250 trench feet) of distribution piping ranging in size from 6” up to 18”.

Owen Figure 1 below shows a schematic example of distribution piping.

**OWEN FIGURE 1 - DISTRIBUTION MAINS**




**Q. Please describe the Energy Transfer Stations.**

A. Each customer building houses an Energy Transfer Station (ETS) that is owned and operated by UCDEU. The key components of an ETS include:

- Both heating and cooling supply and return piping connecting to the distribution piping system (DPS) through interior piping
- Heat exchangers to transfer heat to and from the building's hydronic heating, cooling and DHW systems
- Control systems to regulate and monitor the flow and temperatures required to meet the building's energy demand and regulate UCDEU return temperatures
- Energy meters to monitor the energy used by each customer for billing and system optimization purposes

In most instances, the ETS will be prefabricated offsite, and delivered to site and installed by Corix.

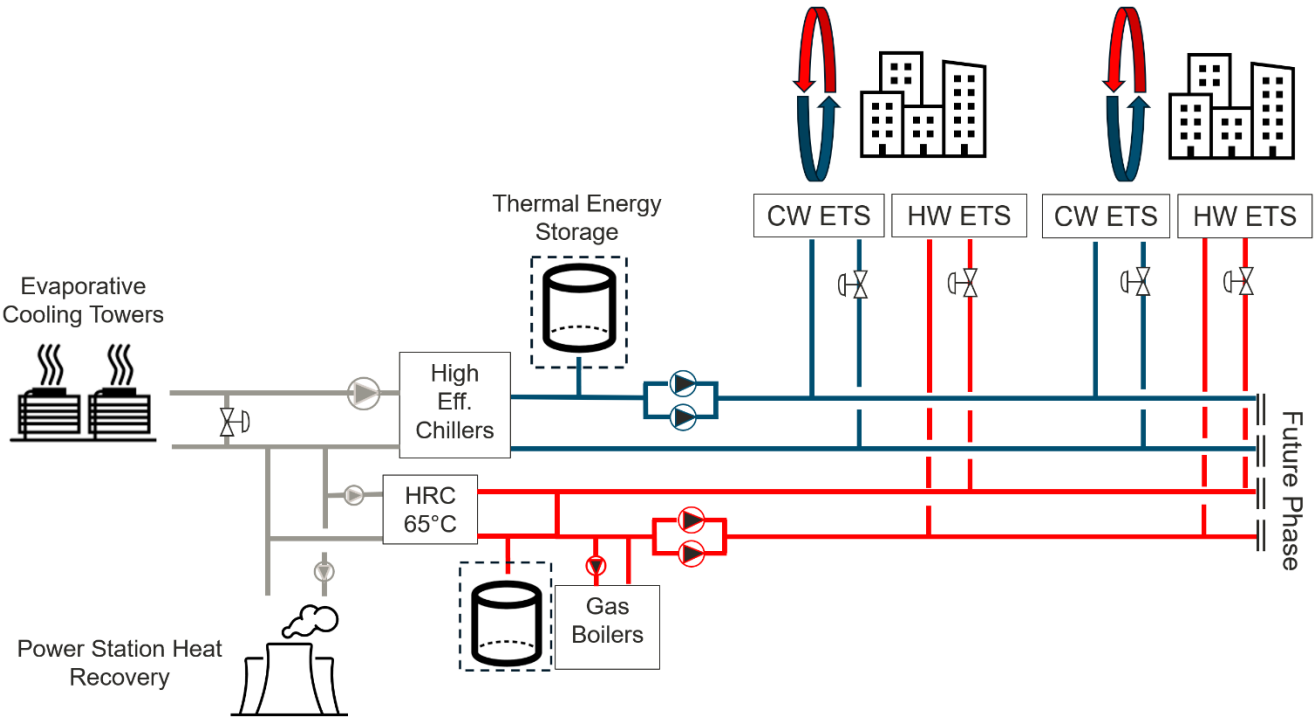
Flow through the primary district energy (DE) side of the ETS is controlled to achieve the building's supply temperature set point.

ETS's generally have three heat exchangers: one for space heating, one for space cooling and one for DHW. This is typical of most four pipe DE systems around the world. There is a vast amount of experience and data regarding DE performance and reliability with this configuration, and it is also the most efficient for space and cost. Heat exchangers are very reliable (with no moving parts), and it is not necessary to have redundant units in an ETS since it is very unlikely to have a fault or complete failure with a heat exchanger. Corix is able to repair or replace any damaged equipment quickly and on short notice if any issues arise. It is important to note that a leaking or faulty heat exchanger can often continue to supply heat, and the repair/replacement can be scheduled for a convenient, low demand period. Ultimately, Corix will be responsible for the cost, maintenance and reliable operation of the ETS, including the heat exchangers.

**Q. What is included in a District Energy Utility?**

A. The energy centers, DPS, and ETS's collectively make up the district energy utility. Owen Figure 2 below shows an example of a district energy system that takes advantage

of possible technologies. Different sources of energy can be added to the thermal system as the system develops and evolves.




OWEN FIGURE 2 - DISTRICT ENERGY UTILITY

**Q. How will the UCDEU impact existing utility services?**

A. UCDEU to be operated by Corix will provide centralized thermal energy services—specifically hot water for space heating and chilled water for cooling—to buildings within the Utah City development in Vineyard, Utah. These services will be delivered through a network of buried distribution pipes connected to central utility plants.

**Q. How does the UCDEC complement the use of gas and electricity?**

A. UCDEU system is designed to work in harmony with existing utility services, not to replace them. Each building within the Utah City development will continue to receive both electric and gas service for uses outside of heating and cooling, such as:

- Gas fireplaces, cooktops, and outdoor barbeques
- Electric lighting, appliances, and plug loads

The central utility plants operated by Corix will utilize both natural gas and electricity to deliver thermal energy efficiently. These plants will include:

- Natural gas boilers to provide reliable heating capacity, especially during peak demand periods
- Electric chillers for cooling services
- Heat recovery chillers, which will be phased in over time to capture and reuse waste heat from simultaneous heating and cooling demands

This hybrid energy platform allows the system to optimize energy use across both utilities. For example, heat recovery chillers can significantly reduce the need for additional gas or electric input by repurposing waste heat from cooling processes to meet heating loads. Additionally, the system is designed to accommodate waste heat from external sources, such as nearby power generation facilities, further enhancing its efficiency and sustainability.

**Q. Please describe the utility demand and system benefits.**

A. Rather than reducing demand on existing utilities, UCDEU will be a significant customer of both the local gas and electric utilities:

- The central plants will require firm natural gas capacity to ensure uninterrupted heating service.
- They will also draw substantial electrical load to operate chillers and heat recovery systems, in a way that reduces peak electrical demand across the development.

By centralizing thermal energy production, UCDEU reduces the need for individual electric heat pumps and electric water heaters in each building—technologies that were originally planned for the development. This shift results in:

- Lower peak electricity demand across the grid.
- Improved load factor for electric utilities.
- More efficient use of natural gas at scale.

UCDEU represents an optimized, integrated energy solution that benefits all stakeholders. It supports the long-term sustainability goals of the Utah City development, reduces environmental impact, and provides cost savings to customers. At the same time, it enhances—not diminishes—the role of existing gas and electric utilities. UCDEU will become a large stable customer for each of the electric and gas utilities. Through the use of a mix of district energy technologies, Corix will also be using both gas and electricity that optimizes the production of thermal energy to provide service to its customers in Vineyard, Utah.

**Q. How does the UCDEU benefit customers?**

A. UCDEU provides many benefits to the customer (broadly defined as Flagborough), any future building owner connected to the utility, and the occupants of the individual units within the buildings. Firstly, it will provide a reliable and efficient source of heating, cooling and domestic hot water at a competitive rate. Utilizing centralized energy centers with utility-grade heating and cooling equipment and professional operational oversight ensures that heating and cooling services will be continuously delivered with control strategies designed to optimize the efficiency of simultaneously delivering heated and chilled water. Centralization of this equipment limits the amount of heating, ventilation,

and air conditioning (HVAC) equipment within each individual building, reducing cost and space requirements for the building owners. As the centralized energy centers will make optimal use of waste heat generated from cooling equipment, the amount of source energy (electricity and natural gas) required for heating a cooling is minimized. Further, the amount of peak electrical demand required of the central energy plants is significantly lower than what would otherwise be required for the aggregate demand of individual heating and cooling plants within the individual buildings. Overall, this system will reduce input energy costs for the customers, reduce peak demands on the Rocky Mountain Power grid and ensure stable and competitive long-term rates while freeing up space within buildings and their rooftops for public amenities.

**Q. How does the UCDEU benefit the community?**

A. UCDEU proposed by Corix offers a range of long-term benefits to the broader community of Vineyard, Utah. These benefits extend beyond the immediate customers of the system and contribute to regional goals related to energy efficiency, air quality, and environmental sustainability.

**Q. How does the UCDEU improve energy efficiency?**

A. District energy systems are inherently more efficient than traditional, building-by-building heating and cooling solutions. By centralizing thermal energy production, UCDEU can:

- **Optimize fuel use** through large-scale equipment that operates at higher efficiencies than individual rooftop units or in-suite systems.
- **Utilize heat recovery chillers** to capture and reuse waste heat from cooling processes to meet heating demands, significantly reducing the need for additional energy input.

- **Incorporate waste heat from external sources**, such as nearby power generation facilities, further improving overall system efficiency and reducing primary energy consumption.

This integrated approach allows for **simultaneous heating and cooling**, which is particularly advantageous in mixed-use developments like Utah City, where different buildings may have varying thermal needs at the same time.

**Q. How does the UCDEU reduce peak electrical demand?**

A. By replacing electric heat pumps and electric domestic hot water tanks with a centralized system, UCDEU significantly reduces peak electricity demand across the development. This benefits the local electrical grid by:

- Smoothing out demand curves
- Reducing the need for costly peak generation capacity
- Improving grid reliability and resilience

The system still uses electricity—particularly for chillers and heat recovery equipment—but does so in a way that is strategically managed and optimized, resulting in a more balanced and efficient use of electrical infrastructure. The centralized system will also be able to participate in Rocky Mountain Power's Demand Response Program which is designed to help maintain a reliable and cost-effective electric grid.

**Q. How does the UCDEU improve air quality and environmental impacts?**

A. The UCDEU system contributes to improved air quality in several ways:

- **Cleaner combustion:** Centralized natural gas boilers are equipped with advanced emissions controls and operate more cleanly and efficiently than smaller, distributed systems.

- **Support for decarbonization:** The platform is designed to evolve over time, incorporating more renewable and low-carbon energy sources, including potential integration with waste heat and renewable electricity.

These features align with broader environmental goals and help reduce the carbon footprint of the Utah City development.

**Q. What are the economic and Social Benefits from the UCDEU.**

- **Lower lifecycle costs** for customers through improved energy efficiency and reduced maintenance of in-building equipment.
- **Enhanced reliability and comfort** for residents and businesses due to professionally managed, utility-grade infrastructure.
- **Support for local utilities**: The system remains a significant customer of both gas and electric utilities, contributing to stable utility revenues and infrastructure utilization.

**Q. Please describe the support for the UCDEU.**

A. *Exhibit F* to the CPCN Application contains Letters of Support from various stakeholders for this Application.

UCDEU project has received strong support from key stakeholders, including:

- The Developer Customer, Flagborough L.L.C.
- A state representative.
- A potential future institutional customer.

Letters of support endorsements reflect confidence in the project's technical feasibility, financial structure, and alignment with community and state energy goals.

**Q. Why is the UCDEU necessary?**

A. UCDEU is necessary to meet the thermal energy needs of the Utah City development. The scale and density of the development make a centralized district energy system the most appropriate and efficient solution. Without UCDEU, each building would require its own heating and cooling systems, leading to higher capital and operating costs, increased energy consumption, and greater environmental and pollution impact.

Moreover, the centralized system enables the integration of advanced technologies and energy recovery strategies that would not be feasible at the individual building level.

**Q. How does the UCDEU satisfy the public convenience?**

A. UCDEU satisfies the public convenience by:

- Supporting the development of a major new urban center in Utah County.
- Providing essential utility services in a manner that is efficient, scalable, and environmentally responsible.
- Reducing strain on the local electric grid by lowering peak demand.
- Helping to maintain a reliable and cost-effective electric grid through participation in Rocky Mountain Power's Demand program.
- Offering a replicable model for future district energy systems in Utah and beyond.

**Q. Is the project in the public interest?**

A. UCDEU is clearly in the public interest. It aligns with state energy policy, supports economic development, and provides a modern utility service that enhances quality of life for residents and businesses.

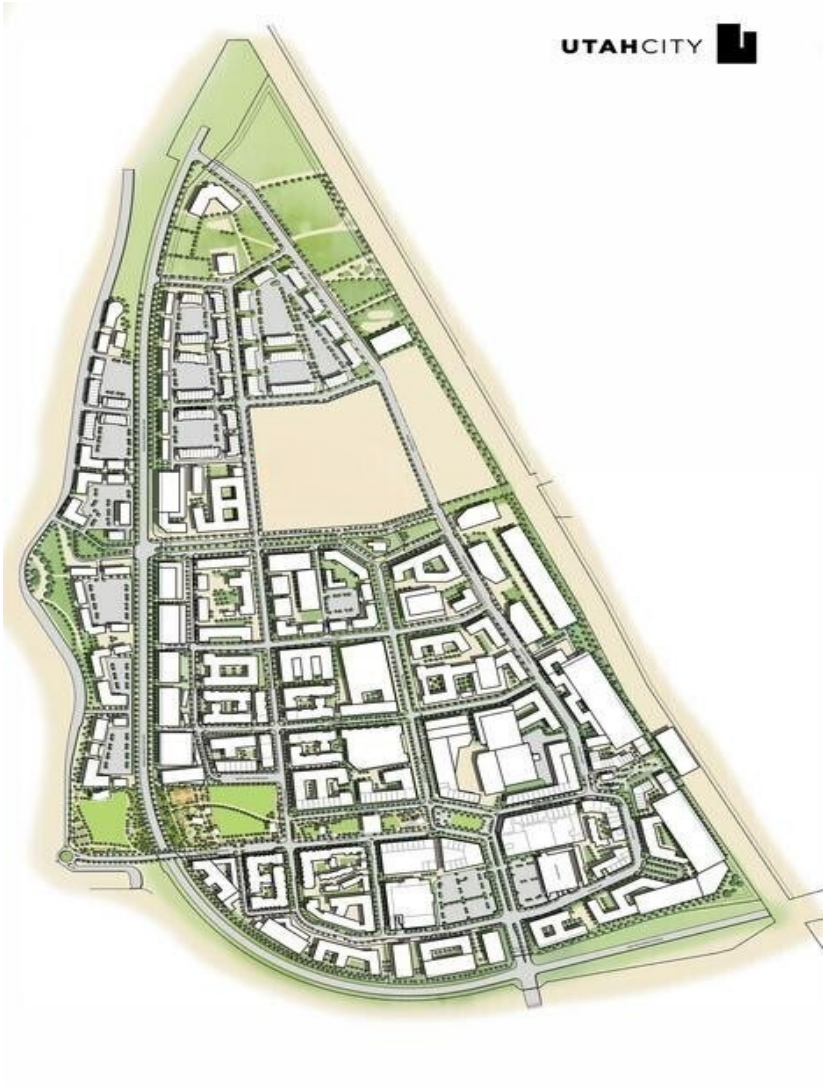
The project:

- Advances Utah's goals for clean, efficient, and reliable energy infrastructure;
- Enables the redevelopment of a long-vacant industrial site into a vibrant, livable community;
- Demonstrates innovation in utility service delivery and rate design;
- Provides long-term value to customers through stable rates and high service quality;
- Provides a necessary utility service in the community for the long term. This is evidenced by the project support from stakeholders; and
- The Developer Customer has chosen Corix to be the thermal utility provider

## II. THE UTILITY PROJECT DETAILS

**Q. Please describe the project scope.**

A. UCDEU will serve the Development Project, which spans 350 acres along the eastern shore of Utah Lake. The development is being led by Flagborough L.L.C., a joint venture between Utah City Partners and the Woodbury Corporation. The project includes residential towers, commercial buildings, civic facilities, and public amenities.




**OWEN FIGURE 3 - UTILITY PROJECT IN UTAH CITY**

Exhibit CS.B of the Corix Supplement to the CPCN Application contains the utility location map in the State of Utah.

UCDEU will be constructed in multiple phases, corresponding to the development's build-out schedule. The system will include:

- Central energy plants (interim and permanent).
- A four-pipe distribution network.
- ETS units in each building.
- Control systems and metering infrastructure.

The system is designed to scale with demand, minimizing upfront capital costs and aligning infrastructure deployment with customer connections.

**Q. Who are the project partners?**

A. Key partners in the Utility Project include:

- Flagborough L.L.C. – Developer Customer for this Application's CPCN service area.
  - Flagborough L.L.C is a 50/50 joint venture between the indirect owners, Utah City Partners and the Woodbury Corporation. Flagborough is the developer and builder of the Utah City development. They are responsible for development approvals, construction of all buildings within the development, delivery of civil infrastructure within the public easements and will ultimately be the owner/operator of the buildings.
- Corix Utah City Heating and Cooling LLC – Owner and operator of the utility.
  - Corix brings energy systems to life by building enduring infrastructure for communities across North America. They partner with developers,

municipalities, universities, hospitals, and other stakeholders to develop the reliable and cost-effective thermal energy they need to thrive. Corix has decades of utility development, ownership and operations experience serving communities of different sizes—from single-site operations to master-planned communities. Corix is responsible for the financing, design, construction, operations, maintenance and ownership of UCDEU.

- Ramboll – Engineering consultant responsible for feasibility studies and system design.
  - Ramboll is a global architecture, engineering, and consultancy company, delivering expertise and sustainable solutions to clients and partners. Founded in Denmark in 1945, Ramboll today operates across 35 countries. Ramboll has been contracted by Corix for the detailed design of the UCDEU infrastructure.
- UMC Inc. – Construction partner for the initial energy center.
  - With over 400 employees, UMC is a leading plumbing and HVAC design/construction company of the intermountain west. Starting in 1972, they have completed 1,500 projects generating $84M revenue (2022). UMC has been contracted by Corix to deliver the first interim energy center, and were successfully awarded through public procurement, the construction of Corix's interim energy center at our Bellingham District Energy Utility.

**Q. What is the Utility Project area included in the CPCN Application?**

A. The CPCN Application covers the entire Utility Project Area as shown in *Exhibit J* and also reproduced in the figure below. This includes all parcels currently owned by Flagborough and planned for development within the next 10–15 years.


**OWEN FIGURE 4 - UTILITY PROJECT – CPCN APPLICATION**

**Q. Will there be potential for future project expansion?**

A. While the current CPCN Application is limited to the Utah City development as shown in the figure above, there is potential for future expansion to serve adjacent developments, including:

- The Huntsman Cancer Institute (HCI) Vineyard Campus.

- Utah Valley University's planned Innovation District.
- Vineyard City Hall and other civic buildings.

These expansions would be subject to future CPCN amendments or new applications

**Q. What is an Integrated District Energy System?**

A. UCDEU will deploy a modern, integrated district energy system (DES) that provides centralized heating and cooling services to buildings throughout the Utah City development. The system is designed to be scalable, efficient, and resilient, using a combination of proven technologies and innovative design strategies to meet the thermal energy needs of a large, mixed-use urban community.

During the planning phase, several alternatives to a centralized DES were considered. These included traditional building-by-building HVAC systems using rooftop units, air-source heat pumps, and individual electrical or natural gas boilers. While these systems are common in lower-density developments, they were found to be suboptimal for Utah City due to:

- Higher lifecycle costs.
- Increased maintenance complexity.
- Greater energy consumption.
- Limited ability to integrate low-carbon technologies or recover waste heat.

The district energy model was selected for its ability to centralize energy production, optimize efficiency, and support long-term flexibility and environmental performance.

**Q. Are there heating and cooling alternatives for the project?**

A. Multiple heating and cooling technologies were evaluated, including:

- Natural gas boilers.

- Electric boilers.
- Heat recovery chillers.
- Geoexchange (ground-source) systems.
- Waste heat recovery from cooling processes.
- Air-source heat pumps.

The final system design incorporates a hybrid approach that combines natural gas boilers and electric chillers with optional heat recovery units to be added as the system scales. This configuration allows the system to recover waste heat from cooling operations and reuse it for space heating and domestic hot water, significantly improving overall energy efficiency.

**Q. Please describe the District Energy System Concept Designs.**

A. Several system configurations were modeled to determine the optimal balance of capital cost, operational efficiency, and environmental performance. The selected design includes:

- A phased build-out of central energy plants (CEPs) to align with development timelines.
- A four-pipe distribution piping system (DPS) for separate heating and cooling supply and return.
- Modular equipment installation to match load growth and minimize stranded capital.
- Integration of heat recovery and potential for future renewable energy sources.

This approach ensures that the system remains flexible and cost-effective throughout its development.

**Q. How did you select the proposed option?**

A. The selected system design was chosen based on its ability to:

- Meet the thermal energy demands of a large, high-density development.
- Provide reliable service with built-in redundancy.
- Optimize energy use through heat recovery and centralized control.
- Support long-term rate stability through efficient capital deployment and phased construction.

**Q. Please describe how the design is consistent with Infrastructure Agreement between the Provider and Customer?**

A. The design is consistent with the Infrastructure Agreement between Corix and Flagborough L.L.C. and will be reflected in the upcoming Rate Application.

**Q. Please describe the location central energy plants and what they entail?**

A. The central energy plants will be located in purpose-built facilities within the Utah City development. These plants will house:

- Natural gas boilers for peak heating demand and backup capacity.
- Electric chillers and cooling towers for peak cooling demands.
- Heat recovery chillers that capture waste heat from cooling operations.
- Pumps, heat exchangers, and control systems for efficient energy distribution.

The plants will be constructed in phases, with interim facilities serving early buildings and permanent plants added as the development grows.

To ensure timely service to the first buildings, two (2) interim energy centers will be constructed. These facilities will include modular boiler and chiller units and will be designed for relocation or integration into the permanent system. The interim energy

centers allow the utility to phase in modular capacity over time as the energy demand grows.

**Q. Please describe how the Distribution Piping System (DPS) works?**

A. The DPS will consist of four underground pipes—two for heating (supply and return) and two for cooling (supply and return). These pipes will run through utility corridors and connect each building to the central energy plants. The system is designed for:

- High reliability and redundancy.
- Minimal thermal losses through insulation and efficient routing.
- Easy access for maintenance and future expansion.

The DPS will be installed in coordination with the development's civil infrastructure to minimize disruption and optimize construction efficiency.

**Q. What is an Energy Transfer Station (ETS)?**

A. Each building connected to UCDEU will have an ETS located in its mechanical room. The ETS serves as the interface between the utility's distribution system and the building's internal HVAC systems. Each ETS will include:

- Heat exchangers for space heating, cooling, and domestic hot water.
- Flow meters and temperature sensors for accurate energy metering.
- Control valves and automation systems for efficient operation.

**Q. Please describe the safety and reliability aspects of the Utility Project.**

A. The ETS ensures that the utility can deliver thermal energy safely and efficiently while maintaining separation between the utility and customer systems.

UCDEU is designed with a strong emphasis on safety and operational reliability. Key features include:

- N-1 redundancy in major equipment, ensuring continued service even if one component fails.
- Backup power systems to maintain operations during electrical outages.
- Centralized monitoring and control systems for real-time performance management.
- Compliance with all applicable building, safety, and environmental codes.

The system will be operated by trained personnel and supported by Corix's regional and corporate teams, ensuring high standards of service and rapid response to any issues.

**Q. Can the Utility Project be expanded?**

A. UCDEU is designed to be future-ready. The system can accommodate integration of renewable energy sources such as waste heat from nearby facilities (i.e., cogeneration) or heat recovery from cooling (from heat recovery chillers). It can also be expanded to serve additional customers beyond the initial development area. This flexibility ensures that UCDEU will remain a valuable and sustainable utility for decades to come.

**Q. Will there be an alternative energy source in the absence of District Energy?**

A. In the absence of the UCDEU, buildings within the Utah City development would rely on conventional, decentralized systems for their thermal energy needs. This includes electric air-source heat pumps for both space heating and cooling, and electric resistance or heat pump water heaters for domestic hot water. Each building would also be individually connected to the local gas and electric utilities for other uses such as cooking, fireplaces, and general electrical loads.

This approach is currently being implemented in the first two residential buildings under construction, which are not connecting to UCDEU due to their advanced stage of planning

and development prior to the district energy concept being introduced. These buildings are fully electric for heating and cooling and use mostly electric water heaters. They also have individual gas meters for appliances and amenities.

In contrast, an equivalent residential building connected to UCDEU would receive centralized hot and chilled water for space conditioning and domestic hot water. While these buildings would still maintain electric and gas service for non-thermal uses, their overall energy profile would be significantly different. The centralized system reduces peak electricity demand by shifting thermal loads to a more efficient, utility-scale platform. From a utility revenue perspective, the district energy system results in a more stable and optimized demand profile. The permanent plants will be large, consistent customers of both the gas and electric utilities. Electricity will be used to power chillers and heat recovery systems, while natural gas will be used in high-efficiency boilers to meet heating loads. This model not only supports continued utility engagement but enhances it, as the centralized system uses both energy sources more effectively than the decentralized alternative.

Overall, the district energy system offers a more efficient, environmentally responsible, and utility-aligned solution compared to the conventional approach. It reduces peak electrical demand, improves fuel utilization, and provides long-term benefits to customers, utilities, and the broader community.

## III. Project Phases – Initial Phase and Remaining Buildout

**Q. Please describe Phase 1.**

A. Phase 1 of UCDEU includes an IEC, eight (8) ETS and 5,000 trench feet of DPS. The DPS includes four-pipes in a common trench; for each of the heating and cooling systems there is one pipe that supplies heated or chilled water to the buildings and one pipe that returns the water to the energy center.

Each building connected to Phase 1 infrastructure will house an ETS. The table below summarizes the Phase 1 buildings, their total floor area served by UCDEU and the forecasted in-service date.

**OWEN TABLE 1 - PHASE 1 GROSS FLOOR AREA AND SCHEDULE**

| BLOCK | BUILDING TYPE | GROSS FLOOR AREA (GFA) | IN-SERVICE YEAR |
|---|---|---|---|
| 13-b | Residential | 272,190 | 2027 |
| 13-c | Residential | 281,898 | 2027 |
| 8-a | Residential | 223,657 | 2026 |
| 4-d-R | Residential | 215,442 | 2028 |
| 18-c | Residential | 246,860 | 2027 |
| 14-d | Residential | 219,499 | 2026 |
| 9-Pool-1 | Resort pool complex | 8,965 | 2026 |
| 9-Pool-2 | Resort pool complex | 17,931 | 2026 |

**Q. Please describe the remaining buildout.**

A. The remaining buildout of UCDEU beyond Phase 1 will be planned and designed in conjunction with the phases of the Utah City development masterplan. The location and timing of the future phases of the development master plan are subject to variability but the overall pace and scale is well understood and used to forecast UCDEU infrastructure needs over time. Based on the current development forecast, UCDEU will be constructed over several phases. The specific contents of each phase will be adjusted over time as the

respective phases of the development master plan advance to the detailed design stage. This flexible approach to building out UCDEU ensures that utility infrastructure is not overbuilt relative to the demand for heating and cooling services.

Based on the current development master plan forecast, UCDEU infrastructure will be completely built out by 2044 with approximately 64 building blocks connected to the system. In total, there will be two (2) interim energy centers and three (3) permanent energy centers with the latter incorporating equipment salvaged from the former. The DPS connecting the three permanent energy centers to the customer buildings will comprise approximately 15,000 trench feet of DPS.

The table below summarizes the total amount of utility infrastructure to be constructed in service of the built-out development masterplan.

**OWEN TABLE 2 - UCDEU BUILD OUT PLAN**

| ASSET TYPE | SCALE | IN-SERVICE YEAR |
|---|---|---|
| IEC#1 | 5.3 MW heating; 7.4MW cooling | 2026 |
| IEC#2 | 11.1 MW heating; 15.6 MW cooling | 2029 |
| PEC#1 | 21.3 MW heating; 29.9 MW cooling | 2030 |
| PEC#2 | 13.2 MW heating; 18.4 MW cooling | 2034 |
| PEC#3 | 13.2 MW heating; 18.4 MW cooling | 2037 |
| DPS | 15,000 Trench Feet | 2026-2041 |

| | | |
|---|---|---|
| ETS | 64 | 2026-2041 |

**Q. Please describe the Phase 1 Detailed Construction Schedule.**

A. *Confidential Exhibit L* contains the Phase 1 Detailed Construction Schedule.

**Q. Please describe the Long-term Development Schedule.**

A. *Confidential Exhibit M* contains the long-term development schedule.

## IV. Utility Operations Resourcing

**Q. Will the project use local operations personnel?**

A. Yes, The Operations team will be made up of the Director Utilities, Plant Supervisor, as well as Plant and District Operators. These positions will be incrementally hired based on the system development, growth and commissioning of infrastructure into service. As staff are onboarded, they will be internally trained and certified, to meet the operations and maintenance (O&M) standards and competency to then operate and maintain UCDEU Infrastructure.

**Q. What are the operation staff's tasks?**

The Operations staff will be tasked with the daily 24/7 plant operations and will perform routine maintenance and minor repairs on an ongoing basis. Licensed contractors, electricians and plumbers will be hired for major capital modifications, as well as major and emergency repairs as needs arise.

**Q. Will there be shared support services with other Corix entities?**

A. In addition to local operations personnel, UCDEU will receive support services from centralized departments within Corix. These support services are necessary for the safe,

efficient and compliant operation of the utilities within Corix. The support services are broken down into two overarching categories, which are explained in detail below.

i. Corporate Services

ii. Regional Services

**Q. Please describe the Corporate Services.**

A. Corix District Energy Holdings Limited Partnership, with its general partner Corix District Energy Holdings GP Inc. (together "Corix DEH") is the corporate parent of businesses within Corix. Corporate Services refer to the administrative and general support services and functions provided to all the businesses within the whole Corix DEH organization.

**Q. Please describe the Regional Services.**

A. Corix DEH is broken down geographically into an east region and a west region, called "DE East" and "DE West" respectively. DE West, which includes UCDEU, include Corix DEH utility operations in Western Canada, and the contiguous Western United States. Regional Services refer to the administrative and general support services and functions provided to the DE West region within Corix DEH's organization.

The table that follows, lists the categories of the corporate and regional support services that are provided to utilities within Corix. This is followed by a brief overview of the types of services provided within each category.

**OWEN TABLE 3 – CORPORATE AND REGIONAL SUPPORT SERVICES**

| ITEM | SUPPORT SERVICE COST CATEGORY | CORPORATE/REGIONAL SUPPORT SERVICE |
|---|---|---|
| 1 | People and Culture | Corporate |

| | | |
|---|---|---|
| 2 | Information Technology, Operational Technology and Cybersecurity | Corporate |
| 3 | Communications | Corporate |
| 4 | Legal and Risk Management | Corporate |
| 5 | Corporate Finance | Corporate |
| 6 | Executive Management | Corporate |
| 7 | Regulatory Affairs | Regional |
| 8 | Health, Safety and Environment | Regional |
| 9 | Financial Planning & Analysis, and Accounting | Regional |
| 10 | Business Operations, Procurement and Accounts Payable | Regional |
| 11 | Billing and Customer Care | Regional |
| 12 | Operations Leadership and Strategy | Regional |
| 13 | Project Management Office | Regional |

1) **People and Culture** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) associated with human resource management, employee engagement, and organizational culture initiatives. At a high level, it includes policy and practice development, people programs and services administration, payroll processing, benefits and medical plan administration, pension plan administration, recruitment, training, employee development, and initiatives to foster a positive organizational culture.

2) **IT, OT and Cybersecurity** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) associated with the provision and

maintenance of information technology (IT) and operational technology (OT) infrastructure, applications, cybersecurity programs, and related support services for the organization. At a high level, it includes network and cloud infrastructure management, IT hardware and standard application provisioning and implementation, an enterprise-wide help center, OT systems and site implementation and management of uniform IT security and cybersecurity protocols.

3) **Communications** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) for, at a high level: communications strategy development and execution; external and internal communications management; managing content on the external website and the intranet; management of the social media channels; and brand management.

4) **Legal and Risk Management** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) for a comprehensive suite of risk management services, which includes enterprise risk management; technical safety and compliance leadership; health, safety and environment (HSE) leadership; internal audit services; and legal services.

5) **Corporate Finance** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) for corporate accounting, capital market engagement, corporate financial planning and analysis, insurance, taxation, and treasury services. Corporate Finance provides services that include, but is not limited to, securing debt and equity financing, managing

liquidity, managing the preparation and consolidation of financial statements, and supervising the corporate income tax provision and compliance work.

6) **Executive Management** – This represents costs incurred on a shared basis at the corporate level (Corporate Service cost) for the chief executive officer and its related executive management function responsible for all businesses within Corix's parent company's portfolio as well as rent and associated costs for the parent company headquarters.

7) **Regulatory Affairs** – This represents employee costs and third-party services costs incurred on a shared basis at the regional level (Regional Service cost) for utilities within Corix's parent company's DE West region that receive economic regulation. At a high level, this category captures the costs to ensure that regulated utilities seek and obtain all mandatory regulatory approvals and complies with all mandatory directives from economic regulators.

8) **Health, Safety and Environment** – This represents employee costs and third-party services costs incurred on a shared basis at the regional level (Regional Service cost) related to the health, safety and environment (HSE) program and compliance. At a high level, this category captures costs related to health, and safety programs, environmental compliance, incident management protocols and includes employee safety training and initiatives to maintain safe and sustainable operations.

9) **Financial Planning and Analysis (FP&A) and Accounting** – This represents employee costs and third-party services costs incurred on a shared basis at the regional level (Regional Service cost) related to FP&A and accounting. At a

high level, this category captures costs associated with utility accounting and bookkeeping, budgeting, financial modeling and forecasting, and supporting various departments including but not limited to Regulatory Affairs for the preparation of rate applications and annual reports to the economic regulators.

10) **Business Operations** – This represents employee costs incurred on a shared basis at the regional level (Regional Service cost) related to procurement, accounts payable and general business operations. At a high level, this category captures costs associated with procurement process management, accounts payable, fleet management, asset management support and data analysis and internal reporting.

11) **Billing and Customer Care** – This represents employee costs incurred on a shared basis at the regional level (Regional Service cost) related to billing and customer care. Billing and customer care staff are often the first point of contact for utility customers. At a high level, this category captures costs associated with preparing customer bills, statements, and reports, processing rate changes in the billing system, responding to customer enquiries, and managing the accounts receivable processes.

12) **Operations Leadership and Strategy** – This represents employee costs and third-party services costs incurred on a shared basis at the regional level (Regional Service cost) related to the oversight, guidance, leadership and direction of daily operations to ensure the safe, compliant and efficient operations of all utilities and all related engineering and project management activities in the region.

13) **Project Management Office** – This represents employee costs and third-party services costs incurred on a shared basis at the regional level (Regional Service cost) related to the management of the capital project program in the region. As these costs are typically capitalized to the respective projects, they are typically forecast to be $0 each year during the forecast period. However, there may be residual actual costs for time spent on general services, including but not limited to, providing support to the Regulatory Affairs team to respond to a regulator's questions following a general compliance filing.

**Q. Are there costs associated with Support Services?**

A. The Corporate Services costs and Regional Services costs are either:

i. directly assigned to the specific operating business(es) that caused the cost to be incurred, when it can reasonably be identified; or

ii. allocated to the relevant pool of utilities using a:

a. Functional Allocator, on the basis of variability in instances where this method is applicable; or

b. Composite Allocator based on the Massachusetts Formula with three equally weighted factors (gross property, plant and equipment (PPE); gross revenue; and headcount).

Additional details regarding the cost allocation methodology and forecast costs will be included in the subsequent application seeking approval for revenue requirement and rates for Utah City DEU.

**Q. What are the permit requirements for the UCDEU?**

A. The UCDEU project has identified and initiated a comprehensive set of federal, state, and local permitting and authorization processes necessary for the construction, operation, and maintenance of the utility. At the federal level, no specific permits are listed, but state-level actions include the incorporation of Corix Utah City Heating and Cooling, LLC in Delaware and its registration as a foreign limited liability company in Utah—both of which have been completed. Safety and operational certifications such as UL listing for modular equipment, boiler pressure vessel registration, and air emissions registration are scheduled for completion by March 2026, prior to the commencement of service.

Local permitting efforts are well underway, with several key milestones already achieved. These include the execution of an infrastructure agreement and acquisition of zoning and site location approvals from the City of Vineyard and Flagborough, completed as of July 2025. Additional permits such as site plat registration, civil/site disturbance permits, and stormwater management planning are either in progress or scheduled for completion by August 2025. Building permits for foundational and structural components, including slab-on-grade foundations and minor mechanical, electrical, and plumbing (MEP) work, are targeted for December 2025. Coordination among stakeholders—UMC, Corix, Ramboll, and Flagborough—is ongoing, with designated points of contact overseeing each permitting stream to ensure timely execution and compliance.

*Confidential Exhibit G* includes the necessary approvals that have been obtained or will be obtained to operate the thermal utility.

**Q. Have you identified project risks?**

A. As with any large-scale infrastructure initiative, the development of UCDEU is subject to a range of potential risks that could impact timelines, costs, and delivery. Key risks include delays in the broader Utah City development schedule, changes in building density or phasing, and fluctuations in construction costs due to inflation or market conditions. These factors could affect the timing and scale of customer connections to the district energy system.

Additional risks stem from the procurement and delivery of specialized equipment, including boilers, chillers, and heat recovery systems. Global supply chain disruptions, lead time variability, and economic volatility may influence the availability and cost of these components. Furthermore, shifts in economic conditions—such as interest rate changes or labor market constraints—could affect both capital financing and construction execution.

**Q. How does Corix plan to mitigate these risks?**

A. To mitigate these risks, Corix has adopted a modular and scalable infrastructure approach. Assets are deployed using a "just-in-time" methodology, allowing the utility to align capital investment with actual development progress and customer demand. This strategy minimizes upfront costs, reduces stranded asset risk, and ensures that infrastructure is built and commissioned in phases that match the pace of the Utah City development. By leveraging modular plant design and flexible distribution systems, Corix can respond dynamically to changes in density, timing, and market conditions—delivering reliable service while maintaining cost efficiency and long-term value for customers and stakeholders.

**Q. Please describe the project financing.**

A. The Utility Project has the necessary financial ability to complete all buildout phases. For Phase 1, Corix has secured debt financing to fund the project. See Section VI., **Error! Reference source not found.**, of Exhibit A of the Application for additional information.

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

A. Yes.