BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE REQUEST OF DOMINION ENERGY UTAH FOR APPROVAL OF A VOLUNTARY RESOURCE DECISION TO CONSTRUCT AN LNG FACILITY	Docket No. 19-057-13

DIRECT TESTIMONY OF WILLIAM F. SCHWARZENBACH

FOR DOMINION ENERGY UTAH

April 30, 2019

DEU Exhibit 3.0

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is William F. Schwarzenbach. My business address is 333 S. State, Salt Lake City, UT.

Q. By whom are you employed and what is your position?

A. I am employed by Dominion Energy Utah (DEU or Company) as the Manager of Gas Supply. My qualifications are included in DEU Exhibit 3.01.

Q. Have you testified before this Commission before?

A. Yes. I have testified in Docket 14-057-31 and Docket 17-057-09. I have also presented at numerous technical conferences and workshops related to the Company's Integrated Resource Plan and other gas supply related matters.

Q. Attached to your written testimony are DEU Exhibits 3.01 through 3.03. Were these prepared by you or under your direction?

A. Except as otherwise stated, the exhibits were prepared by me or under my direction. The remaining exhibits are true and correct copies of what they purport to be.

Q. What is the purpose of your direct testimony?

A. I describe the supply reliability request for proposal (RFP) process for supply reliability options and provide an overview of the design requirements that were included in the RFP, including an explanation of the sizing determination for the proposed supply reliability resource. I describe each of the proposals to determine whether the proposal can provide supply reliability to DEU's customers and can avoid supply shortfalls.

I offer testimony describing the evaluation of the options provided in the proposals and explain why the Company has chosen to pursue pre-approval for the construction of an on-system DEU-owned-and-operated Liquefied Natural Gas (LNG) facility (the DEU-owned LNG Facility). I provide evidence showing that the proposed DEU-owned LNG

Facility provides the maximum amount of reliability, such that on the coldest days, the Company will be able to provide safe and reliable natural gas service to its customers.

II. REQUEST FOR PROPOSAL

Q. Why did DEU decide to request proposals for a supply reliability resource?

A. In Docket No. 18-057-03, and after extensive analysis, the Company proposed to build a DEU-owned LNG Facility as a resource to provide supply reliability for DEU's customers and avoid supply shortfalls and loss of service. In its Order in that docket, the Utah Public Service Commission (Commission) determined: "Clearly, potential well freeze offs and forces like natural disasters that disable pipelines and gas processing plants constitute risks to gas supply reliability. Moreover, no party disputes that the DEU-owned LNG Facility would have some beneficial effect in mitigating such risks and enhancing reliability." October 22, 2018 Order, Docket No. 18-057-03, at page 18. However, the Commission stated, "because we have an inadequate record on which to determine what, if any, cost-effective alternate options may exist to improve gas supply reliability by mitigating these risks, we cannot now determine [if] the public interest in reducing those risks would be best served by construction of the LNG Facility." *Id.*

In its order, the Commission concluded, "we cannot now properly evaluate the reasonableness of the LNG Facility as a means of improving supply reliability, because we do not have adequate assurance other more cost-effective options are not available." *Id.*

To provide adequate assurance that all potentially reasonable, cost-effective options to provide supply reliability for DEU customers have been considered, the Company issued a well-advertised public solicitation for proposals to identify any potential resource that may be available.

Q. Please describe the RFP that provided information to potential bidders.

A. DEU prepared a detailed RFP, attached as DEU Exhibit 3.02, that explained in detail the purpose and scope of the RFP, identified the requirements of a qualifying proposal,

provided DEU contact information, identified key dates, outlined supply resource requirements, explained the criteria that would be used for evaluation, described the required proposal content, requested information on the ability to extend DEU service to remote locations or other factors determined to be relevant, described the process by which DEU could revise the RFP, explained confidentiality commitments, provided disclaimers, explained DEU's commitments to equal opportunity employment and affirmative action, noted the private proposal opening process, and noticed a planned respondent conference.

Q. How did DEU ensure that all potential resource providers were notified of this RFP?

A. DEU attempted to "cast a broad net" in order to identify all potential resources that could potentially provide supply reliability for DEU customers. DEU provided the RFP on a publically available Dominion Energy "Utah Natural Gas Supply Reliability Proposals" website along with other relevant information, such as "RFP Questions and Answers" and slides from the bidder's conference meeting. The Company sent a link to the RFP website, www.dominionenergy.com/utahrfp, to all known parties that may be able to provide resources, including gas suppliers, storage providers, and upstream pipelines. The RFP information was also advertised for multiple days over a two-week period in the S&P Global Platts Gas Daily newsletter. This is a popular natural gas industry newsletter subscribed to, and read by, most parties in the natural gas supply industry on a daily basis.

Q. Was this RFP process consistent with the process used for other requests for proposals issued by DEU for large capital projects and material procurement contracts?

A. Yes. The process was overseen and administered by DEU's Contract Administration Department.

Q. Did DEU offer potential respondents the opportunity to ask questions about the RFP?

A. Yes. On January 14, 2019, the Company held a bidder's conference where it answered prospective bidders' questions. Fourteen people, representing potential bidders, attended the conference either in person or by phone. Participants asked numerous questions and the Company provided both verbal responses at the bidder's conference, and written responses in a Question and Answer document that was posted and regularly updated on the RFP website.

Q. Can you describe the design requirements that were outlined in the RFP?

A. Yes, DEU requested a solution that would provide up to 150,000 Dth/day with an optimal inlet delivery pressure of 650-720 psig and a total annual supply availability of between 750,000 – 1,500,000 Dth. The range of pressures and volumes were given to allow respondents flexibility in developing their proposals. DEU bases this recommendation on its historical experience. As described in the Direct Testimony of Tina Faust, on January 6, 2017, DEU experienced a supply shortfall of over 100,000 Dth/day. Because DEU's system is growing, and because there is potential for weather to be much colder than it was on January 6, 2017, DEU recommends a higher level of supply to mitigate winter-time shortfalls. In Docket 18-057-03, an expert witness for the Division of Public Utilities agreed, testifying: "And so I think the company did demonstrate that it had this need, and I would, my recollection, I think the shortfall on one of the days was like 139,000 decatherms. And from that, I think the company came to the conclusion, and I am sure it was after they looked at the sizes of vaporization equipment and so forth, that they should put together something that met 150,000 decatherms a day, provide eight days of service and store 1.2 million decatherms of supply. So I found the company's conclusions to be reasonable". Allen R. Neale, Hearing Transcript, Vol 2, at 381, Docket 18-057-03.

Q. What was the intent of the evaluation process?

A. DEU'S evaluation process was intended to identify a supply reliability option that, taking into account all relevant factors, will allow DEU to provide safe and reliable service to its customers at the lowest reasonable cost.

Q. What criteria were used to evaluate the RFP responses?

A. The Company utilized the following price and non-price factors in evaluating all of the options, including the DEU-owned LNG Facility: 1) whether the proposal satisfies the Operational and In-Service Requirements contained in the RFP; 2) total annual customer cost of the proposal; 3) the long- and short-term impacts of the proposal, including any operational considerations; 4) technical, operational and financial viability of the proposal; 5) the impact of the proposed delivery location on DEU's system, including any resulting costs or benefits; 6) reliability of the proposal, including but not limited to, any operational reliability benefits and design redundancy; 7) the risks addressed and/or presented by the proposal; 8) the financial impact on DEU, if any, other than the total annual cost to customers; 9) other identified benefits or risks associated with the proposal; and 10) other factors that were determined to be relevant.

Q. Did you complete a summary of the RFP response evaluation?

A. Yes. A summary of the evaluation is included as DEU Highly Confidential Exhibit 3.03.

Q. How many proposals were received in response to the RFP?

A. As Mr. Mendenhall explains, DEU received proposals from three respondents. Magnum Energy Midstream (Magnum) provided three different options in its proposal. Prometheus Energy (Prometheus) provided two different options in its proposal. United Energy Partners, LLC (UEP) provided one option in its proposal.

Q. Did DEU consider any other options in its evaluation?

A. Yes. As indicated in the RFP, DEU evaluated proposals in response to the RFP to the DEU-owned LNG Facility using the same criteria outlined in the RFP.

III. MAGNUM OPTION 1

Q. Please describe the first option provided by Magnum.

A. [redacted]

[redacted]

Q. Do you have any safety concerns with the gas storage under Magnum Option 1?

A. No. Salt cavern storage is a proven safe method of storing natural gas.

Q. Is this the least-cost option?

A. No. As detailed in the Direct Testimony of Kelly B Mendenhall, Magnum Option 1 is not the least-cost option.

Q. Did this option provide acceptable contract terms?

A. The proposal represented [redacted] However, as described in Mr. Mendenhall's testimony, [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. The Magnum Option 1 proposal meets most of the design and technical requirements set out in the RFP. However, [redacted]

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. [redacted]

Q. Does this option meet the operational requirements set out in the RFP?

A. Yes.

Q. Does the Company have any concerns with the financial viability of this option?

A. [redacted]

Q. Are there any reliability concerns with this option?

A. Yes. Salt cavern storage is a proven reliable method of storing natural gas. However, Magnum is not currently serving any natural gas storage customers, so its reliability is unknown. Additionally, the proposed storage facility is geographically remote and is subject to many of the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage as more fully discussed in DEU Exhibit 2.04.

Q. Could this option provide any ancillary benefits?

A. Magnum indicated that [redacted]

[redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

This proposal would require FERC permitting which could delay the project.

The pipeline extensions associated with this option are subject to the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

IV. MAGNUM OPTION 2

Q. Please describe the second option provided by Magnum.

A. In response to the RFP, Magnum proposed to meet the Company's supply reliability needs with [redacted]

[redacted]

[redacted] This option in total is referred to as Magnum Option 2.

Q. Do you have any safety concerns with the gas storage under Magnum Option 2?

A. No. Salt cavern storage is a proven safe method of storing natural gas.

Q. Is this the least-cost option?

A. No. As detailed in the Direct Testimony of Mr. Mendenhall, the Magnum Option 2 is not the lowest reasonable cost option.

Q. Did this option provide acceptable contract terms?

A. Yes. The proposal represented [redacted] However, as described in Mr. Mendenhall's testimony, [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. The Magnum Option 2 proposal meets most of the design and technical requirements set out in the RFP, except [redacted]

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. [redacted]

Q. Does this option meet the operational requirements set out in the RFP?

A. Yes.

Q. Does the Company have any concerns with the financial viability of this option?

A. [redacted]

Q. Are there any reliability concerns with this option?

A. Yes. Salt cavern storage is a proven reliable method of storing natural gas. However, Magnum is not currently serving any natural gas storage customers, so its reliability is unknown. Additionally, the proposed storage facility is geographically remote and is subject to many of the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

Q. Could this option provide any ancillary benefits?

A. Magnum indicated that [redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

This proposal would require FERC Permitting which could delay the project.

The pipeline associated with this option is subject to the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

V. MAGNUM OPTION 3

Q. Please describe the third option provided by Magnum.

A. In response to the RFP, Magnum proposed to meet the Company's supply reliability needs with [redacted] This option in total is referred to as Magnum Option 3.

Q. Do you have any safety concerns with gas storage under Magnum Option 3?

A. No. Salt cavern storage is a proven safe method of storing natural gas.

Q. Is this the least-cost option?

A. No. As detailed in the Direct Testimony of Mr. Mendenhall, the Magnum Option 3 is not the lowest reasonable cost option.

Q. Did this option provide acceptable contract terms?

A. Yes. The proposal represented [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. Magnum Option 3 proposal meets most of the design and technical requirements set out in the RFP, except [redacted]

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. [redacted]

Q. Does this option meet the operational requirements set out in the RFP?

A. Yes.

Q. Does the Company have any concerns with the financial viability of this option?

A. [redacted]

Q. Are there any reliability concerns with this option?

A. Yes. Salt cavern storage is a proven reliable method of storing natural gas. However, Magnum is not currently serving any natural gas storage customers, so its reliability is unknown. Additionally, the proposed storage facility is geographically remote and is subject to many of the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

Q. Could this option provide any ancillary benefits?

A. Magnum indicated that [redacted]

[redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

This proposal would require FERC Permitting which could delay the project.

The pipeline associated with this option is subject to the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

VI. PROMETHEUS OPTION 1

Q. Please describe the first option provided by Prometheus.

A. In response to the RFP, Prometheus proposed to meet the Company's supply reliability needs with [redacted] This option in total is referred to as Prometheus Option 1.

Q. Do you have any safety concerns with Prometheus Option 1?

A. No. [redacted]

Q. Is this the lowest reasonable cost option?

A. No. As detailed in the Direct Testimony of Mr. Mendenhall, the Prometheus Option 1 is not the lowest reasonable cost option.

Q. Did this option provide acceptable contract terms?

A. No. [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. Yes. [redacted] meets the design and technical requirements set out in the RFP.

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. Yes. This proposal would be well positioned to meet all of the supply reliability requirements.

Q. Does this option meet the operational requirements set out in the RFP?

A. Yes.

Q. Do you have any concerns with the financial viability of this option?

A. [redacted]

Q. Are there any reliability concerns with this option?

A. No. [redacted]

[redacted]

Q. Could this option provide any ancillary benefits?

A. Yes. [redacted]

[redacted]

Q. What other factors were considered in the evaluation?

A. [redacted]

Q. Was timing of supply availability considered in the evaluation?

A. Yes. [redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

VII. PROMETHUES OPTION 2

Q. Please describe the second option provided by Prometheus.

A. In response to the RFP, Prometheus proposed to meet the Company's supply reliability needs with [redacted] This option in total is referred to as Prometheus Option 2.

Q. Do you have any safety concerns with Prometheus Option 2?

A. No. [redacted]

Q. Is this the lowest reasonable cost option?

A. No. As detailed in the Direct Testimony of Mr. Mendenhall, the Prometheus Option 2 is

not the lowest reasonable cost option.

Q. Did this option provide acceptable contract terms?

A. No. [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. No. [redacted]

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. Yes. This proposal would be well positioned to meet all of the supply reliability requirements regarding Optimal Delivery Location.

Q. Does this option meet the operational requirements set out in the RFP?

A. [redacted] this proposal would meet the operational requirements as defined in the RFP.

Q. Do you have any concerns with the financial viability of this option?

A. [redacted]

[redacted]

Q. Are there any reliability concerns with this option?

A. [redacted]

[redacted]

Q. Could this option provide any ancillary benefits?

A. Yes. [redacted]

[redacted]

Q. What other factors were considered in the evaluation?

A. [redacted]

[redacted]

Q. Was timing of supply availability considered in the evaluation?

A. Yes. [redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

VIII. UNITED ENERGY PARTNERS

Q. Please describe the option provided by United Energy Partners.

A. In response to the RFP, United Energy Partners (UEP) proposed [redacted] This option in total is referred to as the UEP option.

Q. Do you have any safety concerns with the UEP option?

A. No. [redacted]

Q. Is this the lowest reasonable cost option?

A. No. As detailed in the Direct Testimony of Mr. Mendenhall, the UEP Option is not the lowest reasonable option.

Q. Did this option provide acceptable contract terms?

A. [redacted]

Q. Does this option meet the design and technical requirements set out in the RFP?

A. Yes. [redacted]

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. [redacted]

Q. Does this option meet the operational requirements set out in the RFP?

A. No. [redacted]

Q. Do you have any concerns with the financial viability of this option?

A. [redacted]

Q. Are there any reliability concerns with this option?

A. [redacted] the service provided by the facility would be subject to all of the risks associated with delivery on a long distance interstate pipeline, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

Q. Could this option provide any ancillary benefits?

A. [redacted]

Q. Were any other risks identified that are associated with this option?

A. Yes. [redacted]

This proposal would require FERC Permitting which could delay the project.

The pipeline associated with this option is subject to the same risks as other remote supply resources, including landslides, flooding, earthquakes, human error, upstream facility design inadequacies and maintenance, cyber-attacks, and third-party damage.

IX. DEU-OWNED LNG FACILITY

Q. Please describe the option for an on-system LNG facility owned and operated by DEU.

A. Under this option, the Company would construct, own, and operate an LNG storage facility on its system near its demand center along the Wasatch Front. This would be an LNG facility with liquefaction/ vaporization capabilities. This facility would be designed to provide up to 150,000 Dth/day of deliverability.

This on-system facility would be owned and operated by Dominion Energy, allowing the utility complete operational control over the facility and the deliveries into the DEU

system. This option would include liquefaction capabilities, including the ability to liquefy gas throughout the summer months for use during the heating season. This option in total is referred to as the DEU-owned LNG Facility option.

Q. Do you have any safety concerns with the DEU-owned LNG Facility option?

A. No. LNG storage is a proven safe method of storing natural gas. The facility would be sited, designed, constructed, operated and maintained in accordance with the requirements of strict Federal Safety Regulations (United States Department of Transportation (DOT), 49 CFR, Part 193). Dominion Energy can also draw on its affiliate's extensive experience with safely operating LNG facilities. The DEU-owned LNG Facility would be subject to inspections by Federal Pipeline and Hazardous Materials Safety Administration (PHMSA) and Utah Commission regulators.

Q. Is this the lowest reasonable cost option?

A. Yes. As detailed in the Direct Testimony of Mr. Mendenhall, the DEU-owned LNG Facility option is the lowest reasonable cost option.

Q. Did this option provide acceptable contract terms?

A. This proposal would not require a contract with a third party. It would be owned and operated by DEU.

Q. Does this option meet the design and technical requirements set out in the RFP?

A. Yes. The DEU-owned LNG Facility option meets the design requirements of the RFP.

Q. Would this option provide supply delivered to the Optimal Delivery Location as discussed in the Direct Testimony of Michael L. Platt?

A. Yes. This proposal would be well positioned to meet all of the supply reliability requirements.

Q. Does this option meet the operational requirements set out in the RFP?

A. Yes.

Q. Do you have any concerns with the financial viability of this option?

A. No. Dominion Energy has the experience and available funding to construct this project in the time frame indicated in the RFP. The financial viability of this option is discussed in detail in section IV of the Direct Testimony of Mr. Mendenhall.

Q. Are there any reliability concerns with this option?

A. No. The DEU-owned LNG Facility would provide the maximum amount of supply reliability as it would be owned and operated by Dominion Energy, and would be located close to the DEU demand center. The DEU-owned LNG Facility could provide up to 150,000 Dth of supply when needed without any reliance on third-party suppliers or interstate pipelines.

The DEU-owned LNG Facility's close proximity to the DEU Demand Center also mitigates the reliability risks outlined in DEU Exhibit 2.04 including 1) freeze-offs of upstream production, gathering and processing facilities, 2) force majeure events such as earthquakes, land movement, floods or washouts that may impact pipelines, 3) external factors such as third-party damage, 4) maintenance shut-downs on compressors, processing plants, or other pipeline facilities, and 5) time delays due to the physical transportation of the gas from distant locations.

Q. Could this option provide any ancillary benefits?

A. Yes. The proposed facility could provide LNG to serve outlying communities that currently do not have natural gas service. Some communities such as Kanab, Green River, and Wendover are distant from the DEU system and could be more economically served by satellite LNG compared with a mainline extension. The DEU-owned LNG Facility on the Wasatch Front could be used to fill trucks to transport LNG to these remote locations.

Q. Could the DEU-owned LNG Facility be used to provide operational benefits during

peak hours?

A. Yes. The DEU-owned LNG Facility could be used to provide operational benefits, such as offsetting approximately 25,000 Dth/day of peak-hour service.

Q. Were there any other risks identified that are associated with this option?

A. No.

Q. What other factors were considered in the evaluation?

A. DEU considered that converting and storing natural gas in liquid form is a proven and safe technology with over 100 such facilities in use across the country. Twenty other natural gas utilities have LNG facilities for supply reliability. Locating the DEU-Owned LNG Facility on the DEU system would also eliminate the need to transport the gas over long distances to its system.

Q. Was timing of supply availability considered in the evaluation?

A. Yes. A DEU-owned and operated facility could be kept ready to operate when supply shortfalls are most likely. This would provide rapid supply availability. Withdrawing from the facility would not be subject to any constraints such as nomination cycles or travel time for supplies and could be used to directly match demand on the DEU system. Withdrawals from the DEU-owned LNG Facility would be directly injected into the Dominion Energy feeder line system. There would be no timing concerns with the transportation of the supply to the DEU system. This is one of the strongest benefits of an on-system storage facility. The natural gas utility has complete control over when and how to use the storage to mitigate shortfalls. As I referenced earlier, it is a prudent practice adopted by numerous other LDCs.

Q. Has the Company evaluated all known options?

A. Yes. As referenced in Docket 18-057-03, DEU reviewed numerous options to solve the supply reliability problem, including a DEU-owned LNG Facility. *See* DEU Highly

Confidential Exhibit 2.11, Docket No. 18-057-03. The Company now has also issued an RFP and considered and analyzed all of the options presented by respondents as well as the DEU-owned LNG Facility. After that thorough analysis, the Company has concluded that the DEU-Owned LNG Facility would be the best, lowest reasonable-cost resource to provide supply reliability and that the majority of the other options were not viable. By issuing a public RFP and evaluating the responses along with a Company-owned solution, DEU has captured all known viable options. Any options that require third-party resources that were not proposed as a response to the RFP should not be considered as available options.

Q. What is your conclusion regarding the RFP evaluation?

A. DEU has considered and evaluated all of the proposals provided in response to its RFP for options to meet the Company's commitment and statutory obligation to provide safe and reliable service to its customers. The recommended approach for DEU to ensure safe and reliable service, even during periods of supply shortfalls is to construct, own, and operate an on-system LNG storage facility.

The DEU-owned LNG Facility provides the lowest reasonable cost option and the highest reliability. This solution also has significant advantages over other options. For example, such a facility would provide supply independence in times of supply shortfall. Withdrawing from the DEU-owned LNG Facility would not be subject to NAESB nomination cycle constraints or upstream supply risks that are associated with many of the other alternatives the Company considered as solutions to supply disruptions. The LNG supply could be used to directly match demand on the DEU system in the event of an upstream supply disruption. Withdrawals from the facility would feed directly into the DEU feeder line system and ensure supply reliability with the best system pressures. Additionally, the on-system facility would be owned and operated by the Company, giving it complete control of the facility.

On-system storage provides reliability and flexibility that other supply options cannot match. Reliability is an attribute that cannot be overstated. This alternative provides

supply reliability when upstream sources fall short. Gas from on-system storage does not need to be purchased or nominated at the time of need, and may be brought onto the distribution system on short notice. With a 15 million gallon LNG storage tank the Company could vaporize at 150,000 Dth/day and be able to maintain pressure for firm customers in the event of supply shortfalls or other system emergencies. Proximity to the demand center provides immediate system support and is not dependent on long transmission pipelines that are subject to a variety of risks such as land movement, third party excavation damage, forest fires, floods, washouts, corrosion, regulatory shutdowns, and other force majeure events.

The DEU-owned LNG Facility option also has additional benefits beyond supply reliability. It could provide peak-hour system support and flexibility to offset purchases when supply is limited. It also could be used to provide natural gas service to remote communities that do not currently have natural gas availability and would be more economically served by satellite LNG than a mainline extension. The availability of on-system LNG would prove advantageous in responding to emergencies.

Q. Can you summarize your recommendation?

A. Yes. Based on my analysis of each proposal in response to the RFP and my review of other options in the prior docket, the DEU-owned LNG Facility is the lowest reasonable cost option and the most reliable. Additionally, recent events impacting supply deliverability to the DEU system and examples impacting other LDCs in other areas of the country, there is a risk that during a cold weather event, or other unpredictable supply shortfalls, at least a portion of Dominion Energy Utah's gas supply could be disrupted. Based on the Company's evaluation of costs, risks and reliability, the DEU-owned LNG Facility is the lowest reasonable cost and most reliable option to offset these anticipated supply shortfalls. The Company recommends that the Commission find that the construction and operation of the on-system Company-owned DEU-owned LNG Facility is in the public interest and approve the Company's Application in this matter. Approval of the Company's resource decision, to construct the DEU-owned LNG Facility, is just, reasonable and in the public interest.

Q. Does this conclude your testimony?

A. Yes.

State of Utah)
) ss.
County of Salt Lake)

I, William F. Schwarzenbach, being first duly sworn on oath, state that the answers in the foregoing written testimony are true and correct to the best of my knowledge, information and belief. Except as stated in the testimony, the exhibits attached to the testimony were prepared by me or under my direction and supervision, and they are true and correct to the best of my knowledge, information and belief. Any exhibits not prepared by me or under my direction and supervision are true and correct copies of the documents they purport to be.

William F. Schwarzenbach

SUBSCRIBED AND SWORN TO this 30th day of April, 2019.

GINGER JOHNSON
Notary Public State of Utah
My Commission Expires on:
August 4, 2019
Comm. Number: 684539

Notary Public