BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Request of )
Dominion Energy Utah for Approval ) Docket No. 18-057-03
of a Voluntary Resource Decision to )
Construct an LNG Facility )

DIRECT TESTIMONY OF

BELA VASTAG

FOR THE

OFFICE OF CONSUMER SERVICES

AUGUST 16, 2018
Q. WHAT IS YOUR NAME, BUSINESS ADDRESS AND OCCUPATION?
A. My name is Béla Vastag. My business address is 160 East 300 South Salt Lake City, Utah 84111. I am a Utility Analyst for the Utah Office of Consumer Services (Office).

Q. PLEASE DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.
A. I have a Bachelor of Science degree in physics with a minor in mathematics from Virginia Tech and a Master of Science degree in finance from the University of Utah. I have worked for the Office for the past 8 years and have filed testimony and memoranda in numerous electric and natural gas proceedings before the Utah Public Service Commission. Prior to joining the Office, I held positions as a Data Analyst for the Utah State Board of Education, as a Financial Manager for the Utah State Library and as a Budget and Revenue Analyst for the Salt Lake City Department of Airports.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?
A. I will introduce the additional witnesses testifying on behalf of the Office and provide the Office's overall recommendation. I will also discuss why the Office finds Dominion Energy Utah's (DEU or Company) filing, i.e. its request for approval of a resource decision to construct an LNG facility, to be inadequate.

Q. PLEASE INTRODUCE THE OFFICE'S ADDITIONAL WITNESSES.
A. Alex Ware, a Utility Analyst for the Office, and Jerome D. Mierzwa of the firm of Exeter Associates have also prepared direct testimony on behalf of the Office in this proceeding. Mr. Ware reviews the regulatory history which
shows how the Company has failed to identify for regulators the need for an LNG facility to address reliability concerns. Mr. Mierzwa provides an overview of the Company’s LNG proposal and its cost, discusses typical gas industry practices for supply reliability and LNG facilities, examines whether DEU has properly evaluated all alternatives to constructing an LNG facility, shows how DEU’s current system is very resilient in addressing gas supply shortages and avoiding outages and concludes that if an LNG facility is constructed, transportation customers should share in its cost.

Q. **WHAT IS THE OFFICE’S OVERALL RECOMMENDATION ON THE COMPANY’S REQUEST FOR RESOURCE DECISION APPROVAL?**

A. The Office cannot support the Company’s decision to construct an LNG facility to address supply reliability, i.e. to address potential supply shortfalls. The Office recommends that the Utah Public Service Commission (Commission) deny the Company’s request for approval of a resource decision to construct an LNG facility. On the DEU system, no outages have occurred from supply shortfalls. A very high degree of due diligence should be required from the Company before committing ratepayers to a new and very expensive resource to address potential outages. As the Commission stated on page 9 of its July 13, 2018 Order in Docket No. 17-057-20: “We expect that a reasonable utility would perform a higher degree of due diligence in creating defensible modeling practices for a large expense than it would perform for a smaller expense.”
The Office believes that the Company has not clearly demonstrated that an LNG plant is needed to address potential gas outages due to supply disruptions. The Company’s evidence and analysis are inadequate.

Q. WHY DOES THE OFFICE BELIEVE THAT THE COMPANY’S DUE DILIGENCE IS INADEQUATE?

A. The Company’s actions and filings have not provided sufficient evidence of the existence of a supply reliability problem or that an LNG facility is the best long-term solution to potential future supply disruptions. These shortcomings include 1) poor evidentiary support in identifying a supply reliability problem in this filing, 2) lack of evidence for both the reliability problem and the proposed LNG facility in the Company’s previous regulatory filings, and 3) insufficient system analysis and development of all possible solutions to address future supply disruptions. Mr. Ware discusses item number two in his testimony and Mr. Mierzwa discusses item number three. I will discuss shortcoming number one.

Q. IN ITS APPLICATION, THE COMPANY HAS ATTEMPTED TO JUSTIFY THE NEED FOR AN LNG FACILITY. DOES THE OFFICE BELIEVE THAT THE EVIDENCE SUBMITTED BY THE COMPANY IS SUFFICIENT TO ENABLE THE COMMISSION TO APPROVE THIS RESOURCE DECISION?

A. No, the Company has provided poor evidentiary support. The Company attempts to use the construction of an Arizona LNG facility and recent histories of DEU system supply disruptions and outages as evidence of
need for the proposed LNG facility in the Salt Lake Valley. However, none
of this evidence convincingly demonstrates that such an LNG facility is
needed now. The Company also does not adequately address risks
associated with siting an LNG plant in the Salt Lake Valley. In addition, the
Office is concerned that guidance from DEU’s corporate parent, Dominion
Energy, is a factor in the Company’s decision to pursue an LNG plant.

The 2011 outage in Arizona is not comparable to DEU’s situation

Q. THE COMPANY USES AN EXAMPLE FROM ANOTHER GAS UTILITY
WHERE COLD WEATHER CAUSED SUPPLY DISRUPTIONS AND
OUTAGES. THE UTILITY THEN RECEIVED APPROVAL TO
CONSTRUCT AN LNG FACILITY. WHAT UTILITY WAS INVOLVED AND
WHAT WERE THE CIRCUMSTANCES?

A. in February 2011, local distribution companies (LDCs) in Texas, New
Mexico and Arizona, including New Mexico Gas Company and Southwest
Gas, experienced the loss of gas service to more than 50,000 customers
due to reduction in gas supplies caused by record setting cold
temperatures. In response to a loss of service to 19,000 of its customers in
Tucson, Arizona, Southwest Gas received approval from its state
commission in December 2014 to construct an on-system LNG facility near
Tucson, projected to be in-service by the end of 2019. The decision to
pursue an LNG plant came after years of investigations into the reliability
problem and into possible solutions.
Q. DOES THE OFFICE BELIEVE THAT THIS EXAMPLE IS COMPELLING EVIDENCE SUPPORTING THE NEED FOR DEU TO CONSTRUCT AN LNG FACILITY FOR ITS SYSTEM?

A. No. Southwest Gas and DEU’s systems are configured and operated differently; and therefore, Southwest Gas’ situation is not analogous to DEU’s. For example¹:

- The decision to pursue an LNG plant in Arizona was made after first attempting to develop a traditional underground storage facility in Arizona. Southwest Gas does not have local storage on or close to its system. DEU already has service from 5 relatively close underground storage facilities.

- Southwest Gas relies exclusively on El Paso Natural Gas interstate pipeline to deliver gas to Tucson from the Permian and San Juan Basins. DEU is connected directly to two interstate pipelines and receives gas supplies from several different areas or basins.

- Storage services for shippers on El Paso are located in Texas – about 700 miles away from the Tucson distribution system. DEU’s five storage facilities are relatively close. Clay Basin is about 200 miles away, Ryckman 95 miles and the three aquifer storage facilities between 40 and 80 miles. Three of these

¹ See DEU Exhibit 2.14, Southwest Gas Corporation’s application for approval of an LNG facility, application pages 4 & 6.
facilities are located in Utah with the other two near the Utah border in Wyoming.

Q. DOES THE OFFICE BELIEVE THE OUTAGE IN TUCSON IN 2011 IS ADEQUATE EVIDENCE TO JUSTIFY DEU’S NEED FOR AN LNG FACILITY?

A. No. While the Office acknowledges that gas shortfalls can occur due to cold weather, DEU has not presented an analysis that adequately compares its upstream and local distribution systems to those in Texas, Arizona and New Mexico that experienced an outage due to the cold weather event. It is not adequate to simply say that because two LDCs experienced service outages because of cold weather that DEU would also experience a similar event. It is necessary for regulators to be fully informed and assess whether there are differences in DEU’s infrastructure and/or gas supply sources. These differences may include the existence for DEU of many diverse alternatives in accessing gas supplies and upstream infrastructure redundancies that can ensure the delivery of gas supplies that could insulate the Company from a similar cold weather event, before the need for an LNG facility can be justified. It is DEU’s burden to conduct such analysis and present it to its regulators before such an LNG facility should be approved.

Q. DID REGULATORS INVESTIGATE THE COLD WEATHER EVENT IN 2011 WHICH CAUSED GAS OUTAGES IN ARIZONA, NEW MEXICO AND TEXAS?
A. Yes. The Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) issued a joint report in August 2011 outlining their findings and recommendations following the cold weather event in Arizona, New Mexico, and Texas. FERC and NERC presented 12 key findings and 6 recommendations for the natural gas industry.

Q. WHAT ARE THE RECOMMENDATIONS FOR THE NATURAL GAS INDUSTRY FROM THE FERC/NERC REPORT?

A. While the report does state in one of its key findings that “additional gas storage capacity in Arizona and New Mexico could have prevented many of the outages”\(^2\) experienced during the 2011 cold weather event in the Southwest, it is remarkable that the FERC/NERC report does not specifically recommend building additional storage. Instead, recommendations encompass these six areas:\(^3\)

\begin{enumerate}
\item Implementation of uniform winterization standards for gas production facilities
\item Exemption of critical natural gas facilities from rolling electrical blackouts
\item Development of voluntary curtailment plans that can reduce demand quickly and efficiently
\item Development of plans as to whether residential gas or electrical generation customers should receive priority during an emergency
\item Determination of how local distribution systems can be improved to increase flows to handle periods of historically high demand
\end{enumerate}


\(^3\) Ibid, pages 214 - 217.
6. Determination of how local distribution systems can be improved to implement curtailments that speed up system recovery after an outage or emergency

Q. IF THE FERC/NERC REPORT DID NOT SPECIFICALLY RECOMMEND GAS STORAGE, WHY DID THE ARIZONA CORPORATION COMMISSION APPROVE THE CONSTRUCTION OF AN LNG PLANT?

A. A review of the documents associated with the cold weather event, including hearings held by the Arizona Corporation Commission, indicates that officials noted numerous times that Arizona did not have access to any in-state storage facilities prior to the cold weather event. The documents also indicate that discussions in Arizona soon after the event originally centered around the creation of a salt cavern storage facility. A salt cavern storage facility in Arizona was not pursued at the time due to public and legislative opposition, uncertainties regarding brine disposal and difficulties demonstrating cost-effectiveness\(^4\). However, when Southwest Gas came before the Arizona Commission in October 2016 asking to increase the cost of its new LNG plant by 60%, from $50 million to $80 million, Arizona Commission Staff, recommended that Southwest Gas pause the LNG project and investigate two developing underground storage facilities in Arizona instead, because these storage facilities would be cheaper and provide better deliverability than the proposed LNG facility.\(^5\)


Q. DOES DEU CURRENTLY HAVE ACCESS TO ANY LOCAL GAS STORAGE FACILITIES?
A. Yes, as discussed above DEU reports they currently have contracted access and use of five different storage facilities, with three of these facilities located in Utah (OCS 2.12).6

The proposed LNG facility would not have prevented past outages on DEU's system.

Q. IN ITS TESTIMONY, THE COMPANY SPECIFICALLY DISCUSSES THE PROBLEMS THAT OCCURRED WITH THE RECENT JANUARY 2017 OUTAGE IN COALVILLE.7 WOULD THE COMPANY'S PROPOSED LNG FACILITY HAVE PREVENTED THE COALVILLE OUTAGE?
A. No. The proposed LNG plant would be located in the Salt Lake Valley and not have any direct means to flow gas to the city of Coalville.

Q. IN THE PAST 20 YEARS, HAS THE COMPANY REPORTED ANY OTHER OUTAGES SIMILAR TO THE COALVILLE INCIDENT?
A. In response to DPU 1.128, the Company stated that in the last 20 years, there were four outages in addition to Coalville:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/6/2017</td>
<td>Coalville</td>
</tr>
<tr>
<td>10/31/2013</td>
<td>Monticello</td>
</tr>
<tr>
<td>~8/8/2011</td>
<td>Glendale</td>
</tr>
<tr>
<td>~12/15/2010</td>
<td>Saratoga</td>
</tr>
<tr>
<td>2008</td>
<td>Ogden Valley</td>
</tr>
</tbody>
</table>

6 A copy of DEU response to OCS discovery request 2.12 can be found in Vastag Exhibit 1.1
7 Direct Testimony of Michael L. Platt, page 9.
8 A copy of DEU response to DPU discovery request 1.12 can be found in Vastag Exhibit 1.1
Q. WOULD THE OUTAGES THAT OCCURRED IN MONTICELLO, GLENDALE, SARATOGA OR OGDEN VALLEY HAVE BEEN PREVENTED BY THE COMPANY’S PROPOSED LNG FACILITY?

A. No, in response to OCS 2.17\(^9\), the Company states: “The proposed LNG plant in Magna would not have prevented these outages, many of which were on small isolated systems.” Also, the response indicates that none of these outages were caused by a supply shortfall. As Mr. Mierzwa explains in his testimony, the system feeding gas to DEU’s Wasatch Front demand area is not a “small isolated system” but a large, resilient system capable of responding to disruptions.

Supply shortfalls have not caused any outages on DEU’s system

Q. ON SLIDE 11 OF THE JUNE 19, 2018 TECHNICAL CONFERENCE, THE COMPANY PLOTTED THE SUPPLY CUTS THAT HAVE OCCURRED DURING THE LAST 7 HEATING SEASONS. ARE THESE SUPPLY CUTS EVIDENCE THAT AN LNG PLANT IS NEEDED?

A. No. In response to DPU 4.01\(^{10}\), the Company stated that none of these supply cuts resulted in outages. Below is a copy of the chart from Slide 11. As one can see, supply cuts are fairly common both in cold and warm weather. In its response to DPU 4.01, the Company also stated that it primarily relied on its storage services to resolve these supply cuts.

\(^9\) A copy of DEU response to OCS discovery request 2.17 can be found in Vastag Exhibit 1.1.

\(^{10}\) A copy of DEU response to DPU discovery request 4.01 can be found in Vastag Exhibit 1.1.
However, the Company claims that if supply cuts occurred on a Design Day, its storage facilities would not be available to cover them.

Q. **HOW DOES THE OFFICE RESPOND TO THE COMPANY’S CONCERN ABOUT SUPPLY CUTS OCCURRING ON A DESIGN DAY?**

A. As Mr. Mierzwa explains in his testimony, the last time the Company’s Wasatch Front system experienced Design Day conditions was in 1963. The chart above shows supply cuts occurring in both warm and cold conditions. The chart actually appears to indicate that the chance of a very large cut occurring on a Design Day is very small; and therefore, the chart does not provide evidence that the Company needs an LNG plant.

The proposed LNG facility is not a risk-free solution to potential supply reliability problems.

Q. **DOES THE COMPANY DEMONSTRATE THAT THE LNG FACILITY WOULD BE A ROBUST SOLUTION TO SUPPLY RELIABILITY RISKS?**
A. In her direct testimony, Tina Faust lists these risks to supply reliability: cold weather related well freeze offs and processing plant interruptions, instances of pipeline repair and maintenance, landslides, earthquakes, and other unanticipated events. The majority of these factors would still pose a risk to an LNG plant located in the SL Valley. Earthquakes, pipeline damage, repair and maintenance issues and “other unanticipated events” are still a risk.

In addition, if supply disruptions were to occur, it is unknown if the LNG plant’s proposed output, 150,000 Dth/day for 8 days, will be sufficient. The Company claims in response to OCS 2.24 that a capacity of 150,000 Dth/day for the LNG plant was chosen because it “is representative of the shortfalls the Company has seen on the system over the past few years.” Again, the Company refers to Slide 11 of the LNG Technical Conference which is not compelling evidence to demonstrate what kind of future supply disruptions might be experienced nor to support that a capacity of 150,000 Dth/day would be an appropriate remedy. At the time of a crisis the need could be greater than 150,000 Dth/day or may be caused by a disruption that is not able to be resolved by an LNG plant at all.

Q. ARE THERE ANY ADDITIONAL “OTHER UNANTICIPATED EVENT” TYPE RISKS TO THE COMPANY’S PROPOSED LNG PLANT?

11 Docket 18-057-03, Direct Testimony of Tina M. Faust for DEU, 4-30-18, p.2-3.
12 A copy of DEU response to OCS discovery request 2.24 can be found in Vastag Exhibit 1.1.
A. Yes, building such a facility in a highly populated and growing valley appears to present other types of risks. For example, it is conceivable that a not-in-my-backyard (nimby) movement could prevent the construction or operation of the plant. DEU has not provided evidence that it has done adequate work with local residents or officials to have confidence that this project will move forward without opposition. Ratepayers should not be forced to pay anything toward the development of a plant which may face a significant risk of not becoming operational.

Nimby issues could become even more problematic, if a failure at the plant occurred. A release of liquid and/or vaporized gas, possibly causing an explosion, would cause public outcry and possibly cause the plant to have to be shut down. Similar LNG facilities have experienced failures that caused an explosion, such as the Williams Northwest LNG facility near Plymouth, WA in March 2014.¹³

Other potential reasons for DEU to pursue the LNG facility

Q. ARE THERE OTHER FACTORS PRESSURING DEU TO CONSTRUCT A LARGE FACILITY SUCH AS AN LNG PLANT?

A. Yes. DEU’s parent company, Dominion Energy, which is comprised of 90% regulated operations is promising its investors that it will generate 6-8% annual growth in earnings and 6-10% annual growth in dividends. Dominion

Energy’s June 2018 presentation to investors explained that these increases were underpinned by a 6-7% per year growth in rate base.\textsuperscript{14} This presentation lists the DEU LNG plant as one of the projects generating its future growth.

Q. **COULD THE GOALS OF DEU’S CORPORATE PARENT AFFECT HOW THE COMPANY DEVELOPS A SOLUTION TO THE NEWLY STATED NEED TO ADDRESS SYSTEM RELIABILITY, I.E. POTENTIAL SUPPLY SHORTFALLS?**

A. Yes. The corporate goals appear to favor a solution that involves the Company building and owning a large expensive LNG facility rather than contracting with a third party to provide system reliability solutions.

**Conclusions and Recommendations**

Q. **PLEASE SUMMARIZE THE OFFICE’S RECOMMENDATIONS REGARDING DEU’S REQUEST FOR APPROVAL TO CONSTRUCT AN LNG FACILITY.**

A. The Office recommends that the Commission deny DEU’s request for approval of an LNG facility. The Office believes that the Company has not conducted sufficient due diligence concerning the newly identified system reliability problem. DEU also failed to present sufficient evidence to meet

\textsuperscript{14} See: http://investors.dominionenergy.com/static-files/e59c2e0a-6f33-42ff-b7a4-3c11fbdac33. A copy of the presentation is also included in Vastag Exhibit 1.1.
its burden of proof that an LNG facility is needed. The Company’s request is inadequate for the following reasons:

1. Lack of evidence in its application and in DEU’s regulatory history that a supply reliability problem exists on the DEU system and if needed, that an LNG plant is the optimal solution.

2. Failure to adequately investigate all potential supply reliability solutions considering the resilient, inter-connected nature of the DEU system. For example, DEU should investigate its no-notice transportation service, adjustments to existing transportation contracts and how other LDCs address similar supply reliability problems.

3. Lack of evidence that LNG plants are typically used by the natural gas industry to deal with supply disruptions such as well freeze-offs.

4. Failure to demonstrate that 150,000 Dth/day is an appropriately sized plant to remedy its alleged supply reliability problem.

5. Failure to consider the risks of siting an LNG plant in the highly populated Salt Lake Valley.

The Office agrees that the avoidance of natural gas outages during cold winter weather is extremely important. However, the construction of an LNG facility is not a time-limited solution. The Commission should require more from the Company than the insufficient analysis provided in this
docket which is based on a continually shifting statement of problems used
to justify an LNG facility. The Commission should require the Company to
fully document the alleged supply reliability problem and fully explore and
completely evaluate all potential supply reliability services. Only then can
regulators and stakeholders properly assess what solution would be the
most effective for DEU's ratepayers.

Finally, if the Commission decides to approve the Company's
request, then the Office asserts that DEU's firm transportation customers
should share in the cost of an LNG facility because they would also benefit
from its service.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes it does.