

**REDACTED**

**THE STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

**DG-18-\_\_\_\_\_**

**DIRECT TESTIMONY OF**

**CINDY L. CARROLL**

**EXHIBIT CC-1**

1       **I. INTRODUCTION**

2       **Q. Ms. Carroll, please state your name and business address.**

3       **A.** My name is Cindy L. Carroll. My business address is 325 West Road, Portsmouth, New  
4       Hampshire.

5

6       **Q. What is your position and what are your responsibilities?**

7       **A.** I am Director of Customer Energy Solutions at Unitil Service Corp. (“Unitil Service”), an  
8       affiliate of Northern Utilities, Inc. (“Northern” or the “Company”). Unitil Service  
9       provides, at cost, a variety of administrative, managerial and professional services on a  
10      centralized basis to its affiliated Unitil companies. My primary responsibilities are the  
11      development, implementation, and advancement of the Unitil Corporation’s distribution  
12      utilities’ business expansion and economic development programs, energy efficiency  
13      programs, and critical customer management.

14

15      **Q. Please describe your professional and educational background.**

16      **A.** I possess more than twenty years of experience in the natural gas industry, working on  
17      matters directly related to the expansion of the natural gas distribution system. I joined  
18      Unitil Service in October 1997 and was promoted to Director in May 1999. I hold a  
19      Master’s Degree in Business Administration from Southern New Hampshire University  
20      and a Bachelor of Arts degree in Communications from the University of New  
21      Hampshire.

1 **Q. Have you ever testified before the New Hampshire Public Utilities Commission**  
2 **(“Commission”) or any other regulatory body?**

3 **A.** Yes. I testified before this Commission on behalf of Unitil Energy Systems, Inc. in DE  
4 09-137 regarding the Company's investment in and rate recovery for Distributed Energy  
5 Resources as well as on behalf of Northern in DG 14-154 regarding Northern’s request  
6 for authorization to provide natural gas service within the Town of Brentwood. I have  
7 also testified before the Maine Public Utilities Commission and the Massachusetts  
8 Department of Public Utilities in various proceedings related to, among other things,  
9 business expansion and economic development programs and energy efficiency  
10 programs.

11

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

13 **A.** The purpose of my testimony is to support the Company’s Petition seeking to provide  
14 natural gas service as a public utility in the Town of Kingston and to expand its existing  
15 franchise to provide natural gas service as a public utility in Atkinson. I provide an  
16 overview of Northern’s plans for expansion into Kingston and Atkinson to serve new  
17 customers that have entered into contracts with the Company. I also explain the  
18 discounted cash flow (“DCF”) model Northern used to evaluate the economic feasibility  
19 of extending its distribution system to serve these new customers. My testimony further  
20 addresses the Company’s technical, managerial and financial ability to serve Kingston  
21 and Atkinson, and how the proposed expansion is in the public good.

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1       **II. EXPANSION INTO THE TOWN OF KINGSTON**

2       **Q.     Please explain why Northern seeks authorization from the Commission to provide**  
3       **natural gas service in the Town of Kingston.**

4       **A.**     Currently, Northern provides natural gas service to approximately 33,000 customers in 21  
5       towns located in New Hampshire’s seacoast region. Northern has been steadily  
6       expanding its service territory westward; most recently, the Commission approved the  
7       Company’s request to provide service in the Town of Brentwood in 2014, *see Northern*  
8       *Utilities, Inc.*, Order No. 25,700 (Aug. 1, 2014), and the Company has filed an  
9       application to operate as a public utility in the Town of Epping (Docket DG 18-094).  
10      Northern currently provides service to many of the towns surrounding Kingston,  
11      including Plaistow, East Kingston, Exeter, and Brentwood, making Kingston a natural  
12      and logical addition to its service territory.

13  
14      Northern’s initial expansion of its distribution system into Kingston is necessitated by the  
15      Company’s contact with Benevento Bituminous LLC (“Benevento”), which has  
16      requested that Northern serve Benevento’s asphalt plant at 1 Roadstone Road in  
17      Kingston. The asphalt plant currently uses approximately [REDACTED] gallons of propane per  
18      year, and the Company anticipates that the plant will use an estimated [REDACTED] therms per  
19      year after converting to natural gas.

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1 **Q. How does Northern plan to extend service to Kingston?**

2 **A.** Exhibit CC-2 is a map showing where Northern intends to initially expand service into  
3 Kingston. To do so, Northern will connect to the Company's existing 6" gas main  
4 located along Route 125 in Plaistow and install approximately 7,300 feet of new 6" gas  
5 main along Route 125 North to the intersection of Roadstone Road and Route 125 in  
6 Kingston. From there the Company will install approximately 500 feet of new main on  
7 Roadstone Road, as well as a 700 foot 6" gas service line to serve Benevento's asphalt  
8 plant.

9  
10 **Q. Are there additional service prospects located along the route to the asphalt plant?**

11 **A.** Yes. There are approximately thirty two (32) commercial prospects along the proposed  
12 route, as well as fourteen (14) residential prospects. The Company intends to pursue these  
13 potential customers, employing a marketing strategy that focuses on differentiating  
14 natural gas from other energy alternatives by communicating the benefits of having  
15 natural gas service from the consumer's point of view. These benefits include, among  
16 other things, affordability, efficiency, reliability and versatility of the product. To the  
17 extent that commercial properties along the route currently burn propane, it will also be  
18 important to emphasize the ease of converting propane equipment to natural gas. Finally,  
19 the Company will emphasize the environmental benefits of natural gas and its domestic  
20 abundance as important to national energy independence. Northern will also continue to  
21 seek out additional expansion opportunities within the Town of Kingston.

22

1 **Q. Has Northern discussed the Company's proposed expansion with Town of Kingston**  
2 **officials?**

3 **A.** Northern is in the process of meeting with officials of the Town of Kingston to inform  
4 them of the proposed main expansions, and the Kingston Board of Selectmen supports  
5 the Company's proposed expansion into the Town. The Kingston Board of Selectmen has  
6 provided a letter encouraging the Commission to grant Northern's application to expand  
7 its service area into the Town. A copy of the Town's letter is attached as Exhibit CC-3.

8  
9 **Q. Please describe Northern's analysis for determining the economic feasibility of**  
10 **extending its distribution system to serve the Benevento asphalt plant.**

11 **A.** In accordance with its approved tariff, NHPUC No. 12 – Gas, Original Page 16, Section  
12 III (“Line Extensions”), Northern evaluated the economic feasibility of extending its  
13 distribution system to serve the Benevento asphalt plant based on a Discounted Cash  
14 Flow (“DCF”) (i.e., a Net Present Value (“NPV”)) analysis. Under this method, Northern  
15 compares the estimated net distribution revenues (i.e., excluding revenues attributed to  
16 the gas commodity) to be derived from a customer with the estimated cost to serve the  
17 new customer, including the incremental costs associated with the main and service  
18 extension, operations and maintenance expense, depreciation expense, and property and  
19 other taxes. The distribution revenues used in the analysis reflect estimated customer  
20 usage applied to the respective distribution rates for the relevant customer class. These  
21 amounts are reflected on an annual basis and result in the annual after-tax cash flow  
22 associated with the new main and service line extension. These annual cash flows are  
23 then discounted over ten years to a present value at a rate representative of the

1 Company's updated after-tax weighted cost of capital. If the NPV is zero or greater, no  
2 contribution is required from the new customer; if the NPV is negative, then the new  
3 customer must pay the excess cost as a Contribution in Aid of Construction ("CIAC").  
4

5 The Company's analysis of extending service to the Benevento asphalt plant resulted in a  
6 negative NPV. As such, a CIAC of \$159,144 is required. A copy of Northern's NPV  
7 analysis is attached hereto as CONFIDENTIAL Exhibit CC-4.  
8

9 **Q. Does the Benevento NPV analysis incorporate any anticipated costs or revenues**  
10 **from other potential new customers?**

11 A. No. Though there are approximately thirty two (32) potential new commercial customers  
12 and fourteen (14) potential new residential customers along the proposed route to the  
13 Benevento plant, the Company does not currently have any additional contracts or  
14 defined plans to provide service to specific new customers along the route. As noted  
15 above, the Company expects to market its services to potential new customers along the  
16 route.  
17

18 **Q. When does the Company intend to begin construction on the proposed main**  
19 **extension into Kingston?**

20 A. Benevento has requested that gas service be available by April 1, 2019. Given that the  
21 Company does not typically install new service pipes or main extensions during winter  
22 conditions (i.e., when frost is on the ground), and New Hampshire's short construction

1 season has already started, the Company wishes to commence construction on the  
2 Kingston extension as soon as possible to ensure that gas service is available by April 1  
3 of next year. Accordingly, Northern is seeking expeditious approval of its Petition via an  
4 Order *Nisi* and without a hearing.

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7 **III. FURTHER EXPANSION INTO THE TOWN OF ATKINSON**

8 **Q. Please explain why Northern seeks authorization from the Commission to expand its**  
9 **franchise to provide natural gas service in the Town of Atkinson.**

10 **A.** The Company is currently authorized to operate as a natural gas public utility in a defined  
11 portion of the Town of Atkinson, and has done so for approximately thirty (30) years.  
12 The Commission granted the Company's franchise in *Northern Utilities, Inc.*, DE 88-096,  
13 Order No. 19,147, 73 NH PUC at 298 (Aug. 22, 1988). Maps showing the service  
14 territory approved by the Commission in DE 88-096 are included with the Company's  
15 Petition. In the past thirty years, the Company has expanded service within its previously  
16 approved franchise territory in Atkinson. Northern now has an opportunity to expand its  
17 distribution system beyond that limited territory to a significant new project in Atkinson.

18  
19 **Q. How does Northern plan to extend its existing service territory in Atkinson?**

20 **A.** Lewis Builders in Atkinson, NH has requested gas service from Northern at the main  
21 club house of the Atkinson Country Club, as well as to an additional nine buildings  
22 comprising 288 condominiums. The latter project is scheduled to be built out over five

1 years, from 2018 to 2022, and is the first phase in what is anticipated to be a much larger  
2 development that will include 800 condominiums, a hotel, and an entertainment complex.  
3 The Company anticipates that the club house and phase 1 of the condominium  
4 development will result in 10 commercial meters and 288 residential meters, and use  
5 approximately 302,503 therms of natural gas per year once fully built out. To provide the  
6 requested natural gas service to the club house and development, Northern will install  
7 approximately 20,000 feet of 8” gas main to reach the Atkinson Country Club and  
8 condominium development, and thereafter install on site approximately 2,160 feet of 4”  
9 gas main and ten 2” service lines at an approximate length of 200 feet each. Exhibit CC-5  
10 is a map showing where Northern intends to further expand service into Atkinson.

11  
12 **Q. Are there additional service prospects located along the route to the asphalt plant?**

13 **A.** Yes. There are approximately one hundred and twenty nine (129) residential prospects  
14 along the proposed main extension route to the Atkinson Country Club, as well as eight  
15 (8) commercial prospects. The Company intends to pursue these potential customers,  
16 employing the marketing strategy discussed in connection with the Kingston expansion.  
17 Northern will also continue to seek out additional expansion opportunities within the  
18 Town of Atkinson.

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1 **Q. Are there other reasons supporting the Company's request to expand its right to**  
2 **operate as a public utility within the Town of Atkinson?**

3 A. Yes. The above-described project demonstrates that Northern has outgrown the limited  
4 service territory in Atkinson, and the Company's franchise to operate as a public utility  
5 providing natural gas in the Town of Atkinson should be expanded to include the entire  
6 Town. Expanding the Company's franchise in Atkinson will enable the Company to more  
7 freely seek out new customers and bring service to them without having to return to the  
8 Commission for approval. For most of the municipalities that Northern serves in New  
9 Hampshire, the Company has a franchise to serve the entire town; granting Northern  
10 permission to operate broadly within the territorial borders of Atkinson will simply make  
11 the Company's Service Area tariff more consistent across the municipalities in which it  
12 operates.

13  
14 **Q. Has Northern discussed the Company's proposed expansion with Town of Atkinson**  
15 **officials?**

16 A. The Company has been in communication with the Town of Atkinson regarding the  
17 proposed expansion of its existing franchise area and will further explain the details of  
18 the proposed expansion at the next Atkinson Board of Selectmen meeting on July 9,  
19 2018. Northern will provide an update regarding its interactions with the Town of  
20 Atkinson during the course of this proceeding.

21

1 **Q. Please describe Northern’s analysis for determining the economic feasibility of**  
2 **extending its distribution system to serve the Atkinson Country Club clubhouse and**  
3 **condominium project.**

4 **A.** The Company performed the same DCF analysis described above, consistent with its  
5 Line Extension tariff, NHPUC No. 12 – Gas, Original Page 16, Section III. The  
6 Company’s analysis of extending service to the clubhouse and phase 1 of the  
7 condominium project shows a NPV of zero or better, and thus no CIAC is required from  
8 the new customer. The Company notes that Lewis Builders will provide trench and back  
9 fill for all of the gas mains and services installed in connection with this project. A copy  
10 of Northern’s NPV analysis is attached hereto as CONFIDENTIAL Exhibit CC-6.

11

12 **Q. Does the Atkinson Country Club NPV analysis incorporate any anticipated costs or**  
13 **revenues from other potential new customers?**

14 **A.** No. Though there are approximately one hundred and twenty nine (129) potential new  
15 residential customers and eight (8) potential new commercial customers along the  
16 proposed route to the Atkinson Country Club, the Company does not currently have any  
17 additional contracts or defined plans to provide service to specific new customers along  
18 the route. As is the case in Kingston, the Company expects to market its services to  
19 potential new customers along the route.

20

21

1 **Q. When does the Company intend to begin construction on the proposed main**  
2 **extension in Atkinson?**

3 A. Lewis Builders has requested that gas service be available by December 1, 2018. Given  
4 that the Company does not typically install new service pipes or main extensions during  
5 winter conditions (i.e., when frost is on the ground), and New Hampshire's short  
6 construction season has already started, the Company wishes to commence construction  
7 on the Atkinson extension as soon as possible. Furthermore, the Company has recently  
8 become aware that the Department of Transportation will be performing work on a  
9 portion of the proposed route this year, and as such it is imperative that the Company  
10 complete its project prior to any paving work by the State. Accordingly, Northern is  
11 seeking expeditious approval of its Petition via an Order *Nisi* and without a hearing.

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13 **IV. EXPANSION OF THE COMPANY'S DISTRIBUTION SYSTEM IN KINGSTON**  
14 **AND ATKINSON IS FOR THE PUBLIC GOOD**  
15

16 **Q. Does Northern have the technical, managerial, and financial capability to provide**  
17 **service in Kingston and Atkinson?**

18 A. Yes. As discussed earlier in my testimony, Northern currently operates natural gas plant  
19 in twenty-one New Hampshire municipalities serving approximately 33,000 customers.  
20 The Company is also the largest natural gas utility in Maine, serving approximately  
21 32,000 customers in twenty one municipalities. Northern's affiliate, Fitchburg Gas and  
22 Electric Light Company, operates a natural gas utility in Massachusetts and serves  
23 approximately 16,000 customers in six municipalities. Northern employs highly qualified

1 technical, managerial, and administrative personnel to operate its natural gas system and  
2 provide administrative functions. The Company's culture emphasizes public safety and  
3 operational reliability, and it is proud of the quality of service it provides the customers in  
4 its New England service territories. The Company is well-prepared to deliver that same  
5 level of service in Kingston and Atkinson.

6  
7 **Q. Would Northern's provision of service to Kingston and Atkinson be in the public**  
8 **good?**

9 **A.** Yes. Extending Northern's gas distribution facilities into Kingston and expanding the  
10 Company's franchise in Atkinson will enable two significant commercial customers, as  
11 well as a large number of residential customers in the planned Atkinson condominium  
12 development, to take advantage of low energy costs associated with natural gas service.  
13 For the Benevento asphalt plant in particular, it will enable the plant to become more  
14 competitive and thus provide the potential for economic development in the area.  
15 Furthermore, the new main extensions will provide nearby businesses and residences  
16 with natural gas as a fuel supply option, and with that option the potential to lower their  
17 energy costs.

18  
19 Kingston and Atkinson have, like much of the seacoast area, experienced strong growth  
20 in recent years, and will benefit from the availability of natural gas service. Compared to  
21 other fuels that have historically been used in New Hampshire, natural gas is a desirable  
22 alternative due to its abundance, domestic availability, and low environmental impact.

1           Moreover, the Company's existing New Hampshire customers will benefit from having  
2           more customers over which the Company's fixed costs can be spread.

3

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

5   **A.**    Yes, it does.