

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DG 10-017

In the Matter of:
EnergyNorth Natural Gas, Inc d/b/a National Grid NH
Petition for Permanent Rate Increase

Direct Testimony

of

Randall S. Knepper
Director – Safety & Security
Safety Division

October 22, 2010

1 **New Hampshire Public Utilities Commission**

2 **EnergyNorth Natural Gas, Inc. d/b/a National Grid NH**

3
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6 **Testimony of**
7 **Randall S. Knepper**
8

9 **Q. Please state your name, occupation and business address.**

10 **A.** My name is Randall S. Knepper. I am employed by the New Hampshire Public Utilities
11 Commission (Commission) as Director of the Safety & Security in the Safety Division. My
12 business address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

13 **Q. Please summarize your educational and professional experience.**

14 **A.** I received a Bachelor of Science in Mechanical Engineering from University of Rochester and
15 a Master of Science in Civil Engineering from the University of Massachusetts. I am a
16 licensed Professional Engineer in State of New Hampshire No. 9272. I have been the Director
17 of Safety for the New Hampshire Public Utilities Commission since December 2004. Prior to
18 that I was an environmental consultant and Business Development Manager at The Smart
19 Associates, Environmental Consultants, Inc. of Concord. My prior experience includes a
20 number of Business and Operations roles at KeySpan Energy Delivery and EnergyNorth
21 Natural Gas Inc., including Key Account Executive, Commercial & Industrial Sales Manager,
22 Sales Engineer, Senior Engineer, Staff Engineer and CAD Supervisor. For many of those
23 years, I designed distribution systems, recommended capital improvement projects,
24 recommended system expansions, wrote Operations and Maintenance procedures, oversaw
25 construction projects and maintained Code Compliance. I also worked at Westinghouse

1 Electric designing high voltage transmission bus as a project engineer. I have completed 15 of
2 17 Technical Training Sessions provided by the Training and Qualification Center of the
3 Pipeline and Hazardous Material Administration (formerly Training Safety Institute (TSI)). I
4 serve as staff engineer for the New Hampshire Site Evaluation Committee and as subject
5 matter expert for the New Hampshire Advisory Council on Emergency Preparedness and
6 Security. My professional work experience spans 25 years.

7 **Q. What professional organizations are you a member of?**

8 A. I am a member of the Association of Energy Engineers, serve as National Secretary for the
9 Board of Directors of the National Association of Pipeline Safety Representatives (NAPSR)
10 and participate on numerous task groups and committees: (Legislative, Grant Allocation
11 Staffing Formula , Data Team, Service Line Periodic Inspections) of NAPSR. I serve as Chair
12 of the Pipeline Safety subcommittee of the National Association of Regulatory Commissioners,
13 serve on the Common Ground Alliance technology committee and I am a board member of the
14 New Hampshire Public Works Standards and Training Council.

15 **Q. What is the purpose of your testimony in this proceeding?**

16 A. The purpose of my testimony is to provide Staff's recommendations relative to the historical
17 capital expenditures for EnergyNorth Natural Gas, Inc. d/b/a National Grid NH (National
18 Grid or the Company) and the Company's proposals for capital projects going forward.

19 **Q. Please summarize Staff's recommendations on these issues.**

20 A. Staff recommends that the Commission reject the Company's proposed capital tracking
21 mechanisms. In addition, Staff questions the Company's proposals for extensive non-growth
22 related capital spending. Finally, Staff believes that the Company's strategy and goals for
23 New Hampshire growth may need to be changed in light of current economic conditions and

1 to better address the particular circumstances of the New Hampshire markets.

2 **Q. Does Staff endorse National Grid’s position in regard to an expanded capital tracker?**

3 **A.** At this time, Staff does not prefer to have an expanded capital tracker as proposed for the
4 following reasons:

5 **Burden Shift**

6 (1) The imposition of a tracker will result in a significant shift in burden from National Grid
7 to Staff for reviewing any tracker, including the nature of the projects included in a tracker
8 and the reasonableness of the costs incurred. A tracker would create a tremendous strain on a
9 limited Staff given the small window of opportunity, and tight timelines required to properly
10 review, with any meaningful inspection and analysis, before allowing for immediate rate
11 recovery. Staff believes that in order to accommodate a reviewable tracker the Company
12 would, at a minimum, need have to have all expenditures, including loading factors, reviewed
13 and finalized within 45 days of the completion of construction and gas entering the system.
14 No specific method has been clearly identified for doing so. It is difficult for Staff to
15 adequately review the entire year’s worth of capital expenditures in a short timeframe. Staff’s
16 two year experience with the Cast Iron/Bare Steel (CIBS) program indicates that any tracker
17 will also require the Company to produce better reporting, reporting that is detailed enough
18 and in a format that will make it easily reviewable.

19 **Historical Issues Encountered**

20 (2) Staff has experience with an existing capital tracker used in the CIBS which has been in
21 place for 3 years, and for which 2 years worth of results have been reviewed. The amount of
22 time and effort spent by Staff on the relatively small portion of expenditures in the CIBS
23 program has been significant and the results of the tracking have not been impressive. In the

1 first year, Staff found that National Grid veered from some of the requirements, such as not
2 performing the specimen testing and not promptly filing reports of selected segments prior to
3 petitioning for the recovery and even after hearing. Staff also found that the sections
4 identified for replacement were not replaced within the stated time period due to internal
5 delays. Some of those projects were delayed into the following construction season. Staff has
6 further found that refinements to initial conditions of the tracker and program processes were
7 necessary so as to refine the program as it goes along.

8 In addition, capital expenditures reports need to show the alternatives that were considered
9 and the comparable cost impacts. Staff has encountered problems with wildly fluctuating
10 load factors applied to capital expenditures which are not consistent from job to job let alone
11 year to year.

12 In 2010, upon reviewing CIBS-related expenditures in the prior year, Staff found variances to
13 be as much as 177% over the estimated cost per foot, after taking into consideration the
14 changes in length because of altered scopes. This resulted in nearly a million dollars in excess
15 of \$3.7 million dollars estimated by the Company. Until National Grid can complete a few
16 years in which these issues are brought under control, Staff believes an expanded capital
17 tracker would only amplify these problems. The proposed expanded capital tracker contains
18 public work projects that are not reviewed with Staff from the onset and can add to the
19 difficulty in tracking.

20 **Q. Do you believe the \$500,000 threshold for the existing CIBS tracker should remain in**
21 **place?**

22 **A.** Yes, this serves as incentive to have meetings with Staff early before the construction season
23 begins in earnest with identified projects approved and still incorporate leaks that occur over

1 the winter period. Moreover, it would keep CIBS related rate increases more modest, which
2 is in line with the representations of the Company when the program was implemented. *See*
3 *National Grid plc, et al.*, Order No. 24, 777 (July 12, 2007) at 48.

4 **Q. According to Company witness Tierney (testimony p. 13), ‘Company capital expenditure**
5 **rose dramatically in the past few years, more than twice as fast as non-commodity/non-**
6 **production operations and expenses.’ Why has there been such a dramatic increase in**
7 **capital expenditures?**

8 A. System reinforcement of the Milford pipeline and Laconia system, as well as the Tilton
9 Highline upgrades including take station upgrades, have accounted for the largest of the
10 capital expenditures. The next largest factors revolve around the change in policies (upsizing
11 pipes, replacing non-standard components with standard components), large increases in
12 overhead and direct charges, material costs, and road restoration costs.

13 **Q. Are those costs within the control of the Company?**

14
15 A. Yes, some more than others. Some projects are categorized as mandatory, meaning that they
16 are required to maintain the system, meet state or federal regulations or meet a local
17 municipal requirement, while others are categorized as growth on the system, which may
18 necessitate system upgrades from time to time. The immediate need for growth related
19 projects and spending on capital expenditures has decreased since growth on the system has
20 significantly lessened during the last two years. It is worth noting that such reductions in
21 growth have not occurred at the other gas companies within New Hampshire during the same
22 period.

23 As to the mandatory projects, even though they are mandatory, the costs are still within the
24 Company’s control to some degree. The Company may alter how it defines mandatory

1 projects and may change how it determines what system upgrades are to be made and when
2 those projects are to be completed and who will complete them. Thus, it exercises some
3 control over the cost of even mandatory projects. Further, the Company negotiates wage
4 increases and assigns overheads, pays bonuses, determines when to use contractors, which
5 contractors and vendors to use, works with the city and towns to “piggy back” on municipal
6 projects and can participate in proceedings in which road work policies are established. Thus,
7 the Company has numerous avenues for controlling costs.

8 **Q. Has National Grid done a good job controlling capital costs?**

9 A. In some areas, but in other areas its decisions and policies could have been, and could be,
10 better.

11 **Q. Please provide some examples of where you believe National Grid could have reduced
12 capital spending?**

13 A. Generally speaking it is the Company’s decisions to oversize its pipes, to not postpone or
14 implement a graduated process of system reinforcement in areas where growth opportunities
15 are limited, to replace non-standard equipment prematurely, and to do unnecessary projects
16 such as paving previously unpaved parking lots.

17 **Q. On the issue of pipe sizing, in DG 10-139 Staff expressed concerns about unnecessary
18 capital expenditures being made in regards to oversizing replacement gas mains when
19 removing leak prone pipe. Does Staff have the same concerns in this proceeding?**

20 A. Yes and Staff requests that the Commission take administrative notice of that proceeding.
21 Despite the concerns expressed previously National Grid has not sufficiently demonstrated
22 that upsizing or oversizing is warranted even if it was initially allowed in the CIBS program.
23 Though it may have been initially allowed, that fact does not necessarily mean that should be

1 implemented in all cases. As can be seen from attachment RSK 1 there is a small reduction
2 (12% to 19%) in flow area by replacing metal pipe with “in-kind” pipe diameters of
3 polyethylene due to smaller internal diameters associated with polyethylene. Conversely
4 there is an 83% increase in flow area that results from replacing metal 4 inch pipe with 6 inch
5 polyethylene. This excess flow area will never be fully utilized and is often unnecessary. For
6 the majority of the systems, flow capacity has not necessarily reached a maximum level to
7 start with, so a small amount of loss in capability would still maintain adequacy and does not
8 significantly impact system distribution pressures in New Hampshire. In many of the streets
9 that are targeted for replacement with new pipe sizes, there are little or no future growth
10 prospects since they are already built out and the majority of customers already have gas
11 systems. Lack of familiarity with local conditions, such as which streets are already built out,
12 causes overly conservative decisions which are based on a general policy determinations
13 which, in turn, may be based on situations occurring in other operating divisions or states but
14 which are not necessarily applicable here.

15 **Q. Can you explain more about this general policy driving the Company’s decision making.**

16 **A.** National Grid uses a replacement policy of installing nothing smaller than 6 inch diameter
17 pipes for low pressure distribution systems, regardless of the specific locations.

18 This policy does not seem to account for many things including: the number of customers that
19 are already being served; whether a street has any future growth potential; the location of the
20 segment in relation to the rest of the system; the diameters of the remaining connecting
21 pipelines in which the segment is being replaced; or the observation that many of the low
22 pressure distribution systems are not growing at all since they serve already established
23 downtown areas that are mature, saturated and changing minimally.

1 For example on low pressure distribution systems where leak prone pipe is surrounded by
2 previously replaced 4 inch diameter polyethylene or coated steel pipelines, a segment can be
3 oversized to 6 inch diameter which contains approximately a 12% differential in installation
4 costs, but there would be no need for that increased pipe size and increased cost. Wyman
5 Street in Concord would be a prime example. In that instance customers would be absorbing
6 a 12% increase in costs that may not be necessary. In the future, those cost differentials can be
7 greater depending upon pricing submitted in association with obtaining bids and contractor
8 crews. The primary purpose of eliminating leak prone pipes is to not redesign distribution
9 systems but to remove potential hazards. Staff notes, as it did in the prior CIBS proceeding,
10 that it is not the intent to replace every cast iron and bare steel main with the distribution
11 system.

12 **Q. How does oversizing affect this proceeding?**

13 **A.** Since the Company has asked for a capital tracker on all public works projects and not only
14 CIBS program, the size and scope of the oversizing issue could be expanded as well. Public
15 works projects are not typically reviewed with Staff collaboratively since there is no selection
16 process. Thus there is no review of estimated costs, or the projected impact upon customers
17 nor would there necessarily be a review of the final expenditures with a capital tracker.

18 **Q. Please cite an example of where adequately functioning appurtenances are prematurely
19 being replaced.**

20 **A.** Staff data request 2-83 data asked about a regulator station on Gas St. and South Main St. in
21 Concord. The equipment selected for replacement was of fine quality and Staff questions the
22 need for any replacement. The maintenance records did not indicate any extensive
23 maintenance issues and there were no apparent pressure problems indicating a control

1 problem. I personally visited the site on the day of the installation and did not notice any
2 significant wear in the existing equipment at the time. This was confirmed with a second
3 inspector of the Safety Division who also attended and inspected the facility. While this was
4 a minor amount it is an indication of the types of decisions being made.

5 **Q. According to Company witness Stravropoulos (testimony p. 13) the Company is**
6 **planning to spend \$63 million in non-growth related projects over the next five years.**

7 **What is that estimate based on?**

8 A. Mr. Stravropoulos breaks the \$63 million in non-growth related projects into 2 components:
9 \$42 million for reliability and integrity programs and \$21 million for public works related
10 projects. Staff data request 1-227 asked for a further breakdown of the \$42 million by year
11 and location but National Grid states that a detailed breakdown could not be provided.
12 National Grid did provide a list of projects that had been already been selected in 2010 as part
13 of the CIBS program. To the extent that may be the basis for determining the \$42 million
14 worth of projects, those plans have not been memorialized and shared with Staff. Staff
15 believes \$42 million is a high estimate and is without further support to substantiate the
16 forecast. Staff believes trending of leaks after the fourth year of CIBS will reveal a trend of
17 leak rates beginning to level off and demonstrate the beginning stages of decline. Once the
18 trending becomes clearer, then Staff and the Company would have a better feel for the future
19 expectations of the CIBS program and for other potential non-growth related projects.
20 As for the \$21 million for public works related projects, in response to Staff 1-226 National
21 Grid stated that it could not determine where those projects would be and could not provide
22 any details or estimates. National Grid did note that municipalities do not provide the
23 Company with a 5 year plan. Staff was anticipating a better forecasting method and more

1 details for such a large estimate. For example, the City of Concord has a long range plan for
2 public works project and road projects from the engineering and public works departments,
3 with estimated costs. Municipal water has similar plans available. Each of these departments
4 must get annual approval and the majority of projects get repeatedly delayed because of fiscal
5 constraints, and their estimates are continually revised. The locations are known. The only
6 unknown is the precise year in which it will be funded because the priorities may be shifted
7 slightly from year to year. The Company could have determined what impacts those potential
8 projects have upon existing gas facilities and tracked the city projects to determine their
9 forecasts and provided this as support. Staff expects a significant portion of any projects to
10 also be routinely delayed in timing and schedule and would not be surprised if they were
11 delayed until 10, 12 or 15 years. For example in Concord, the largest and most recent project
12 that had the most impact on existing facilities is on Fisherville Rd. and North State St. and the
13 majority of those costs have already been incurred. In short, \$63 million seems like an
14 excessive amount to project with such little support.

15 .
16 **Q. The Company states that that deferred investments will have an adverse effect on the**
17 **quality of service over the long run (Tierney testimony p. 19). If the Company had**
18 **deferred some of the capital projects that so drastically increased capital spending over**
19 **the past few years or the proposed spending over the next five years, would there have**
20 **been, or will there be, an adverse impact on the quality of service over the long run?**

21 A. Very little, if any, impact on the quality of service either over the short or long run would
22 occur if National Grid made more limited investments. The Tierney testimony is targeted
23 towards the concept of regulatory lag and deferring investments which may lead to an adverse

1 effect on quality of service. The quality of service within New Hampshire is very high
2 because previous investments in replacing aging infrastructure have had an overall positive
3 effect and positioned the New Hampshire system on a safer, more reliable level than other
4 National Grid divisions. Staff Data Request 2-74, OCA 1-83 and 1-229 further substantiate
5 New Hampshire's high quality of service, since none of these investments would rise to a
6 level of priority for replacement using the Company's Standard Methodology for replacement
7 prioritization. Therefore, it is clear that the New Hampshire system is already of higher
8 quality than the Company's standard. National Grid's predecessor companies had a excellent
9 track record regarding safety and reliability and while the drastic increase in capital spending
10 may have kept the quality of service from eroding, it is unlikely customers have noticed a
11 change in their service, although they have unquestionably seen an increase in delivery rates.

12 **Q. How might the Company limit its capital spending without impacting the quality of**
13 **service?**

14 A. Improved planning and detailed survey of the buildings and associated loads of the specific
15 distribution system to determine detailed potential growth coupled with increased
16 coordination of field work with developers and cities and towns can have a positive impact on
17 capital spending. Removing communication barriers between numerous departments and
18 avoiding constantly revolving positions within the local departments of New Hampshire
19 division can also have an impact on capital spending because it leads to increased customer
20 relationships and increased productivity. System reinforcement can be avoided in some areas
21 based on the specific survey information and can be used to provide new service in others to
22 pick up new customers in a cost effective manner.

1 **Q. Please describe EnergyNorth’s strategy for growth and market capture.**

2 A. EnergyNorth is an operating division of National Grid and thus adopts the National Grid
3 model for attracting customer growth that is primarily based on a corporate wide strategy with
4 an implementation approach that is applied across all divisions. Unfortunately this single
5 “across-the-board” corporate wide approach, while it may be useful and successful in many
6 of the more metropolitan territories that National Grid services, has had minimal support and
7 success in New Hampshire. According to Mr. Stravapolous’ testimony at page 11 line 28 to
8 30, New Hampshire has many unique geographic and demographic characteristics, but it stops
9 there. National Grid has not demonstrated that it has developed a customized marketing and
10 sales plan focused on New Hampshire that incorporates these demographic characteristics. In
11 essence, New Hampshire could be considered a very rural territory comprised of smaller
12 communities when compared to other more densely populated service territories and
13 metropolitan like characteristics of more populated states. Instead of adapting , embracing
14 and understanding the nature and local submarkets within New Hampshire and uniqueness of
15 New Hampshire, National Grid focuses on the fact that the only way to enhance sales growth
16 is to alter the Commission’s long standing policy of prohibiting advertising expenses.

17 **Q. Do you feel that a customized marketing and sales approach can succeed in New**
18 **Hampshire? And if so why?**

19 A. I most certainly do. Different markets require different strategies. This applies to smaller
20 markets. If it were not true then no other utility and operating company in New Hampshire
21 would ever be able to survive, let alone thrive. Most utilities in New Hampshire operate
22 within the confines of similar ranges of overall rate of returns and return on investments made
23 based on common Commission philosophies that have historically worked very well. If

1 viewed only from within a single corporate frame of reference or lens, New Hampshire may
2 not ever be able to compete against more densely populated areas since, for given a unit
3 length of natural gas pipeline there are fewer buildings and end use customers and, more
4 importantly, lower volumes of natural gas consumed to offset the capital costs. Thus a
5 different approach is necessary to ensure success.

6 **Q. What approaches have you seen successfully employed?**

7 A. First and foremost a large, strong and local sales presence needs to be established in all the
8 communities. This includes management and labor at all levels. Much of New Hampshire is
9 parochial by nature and wary of out of state entities.

10 Secondly, a considerable effort must be made to keep an eye and ear to the ground concerning
11 areas such as land developments, local real estate markets, planning and zoning boards, public
12 works projects, economic development agencies, and other utilities' plans, to name a few.

13 Shortening the internal cycle time between customer inquiry, actual customer authorization
14 and completed installation will also lead to increased satisfaction, increased growth and an
15 expanding base. If there are delays then frustration may end up precluding further growth and
16 gas penetration into the sub market forever. This is especially true for those owners of
17 multiple properties and land developers, both residential and commercial.

18 A new creative approach customized to the conditions found in New Hampshire for adding
19 customers without relying on customer contributions may be necessary to increase growth.

20 .

21 **Q. Do you agree the recent economic downturn has had an effect on EnergyNorth's growth
22 in sales?**

23 A. While it is true that the New Hampshire economy has suffered a setback similar to those in

1 other places across the country, New Hampshire has consistently weathered the economic
2 downturn better than other states in New England.

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

4 A. Yes.

5

6