Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-1 Witness: C. Goulding & D. Nawazelski

REQUEST:

For each of the years 2010 to 2021, inclusive, please provide the number of customers, net capital, and the total load. Also provide by customer class.

RESPONSE:

Please refer to NHPUC RR 1-1 Attachment 1 for the number of customers and total load for the years 2010 through 2021. Note that the net capital for this time period has been provided in response to NHPUC RR 1-3.

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-2 Witness: C. Goulding & D. Nawazelski

REQUEST:

Please provide a summary of last three rate cases (DG 11-069, DG 13-086, DG 17-070) and compare them with the current one. Please provide the following in Excel format:

a. Plant in service (filing and approved)
b. Accumulated depreciation (filing and approved)
c. Total Revenue requirement (filing and approved)
d. Operating revenue (filing and approved)
e. Operating expenses (filing and approved)
f. Test year number of customers by class
g. Plant additions (between three rate cases) growth, non-growth (in each category -mandated/regulatory/reliability/maintenance etc.)
h. Rate base, Return on Equity, Return of Debt, WACC for each test year (filing and approved)

RESPONSE:

a. Please refer to NHPUC RR 1-2 Attachment 1.
b. Please refer to NHPUC RR 1-2 Attachment 1.
c. Please refer to NHPUC RR 1-2 Attachment 1.
d. Please refer to NHPUC RR 1-2 Attachment 1.
e. Please refer to NHPUC RR 1-2 Attachment 1.
f. Please refer to NHPUC RR 1-2 Attachment 1.
g. Please refer to the Company’s response to NHPUC RR 1-3.
h. Please refer to NHPUC RR 1-2 Attachment 1.

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-3 Witness: K. Sprague & C. Leblanc

REQUEST:

Provide the next 5 years' forecasted capital expenditure projections by growth and non-growth (mandated/regulatory/reliability/maintenance etc.).

RESPONSE:

Please reference NHPUC RR 1-3 Attachment 1 which provides actual and forecasted capital spending for 2009 – 2025 categorized into the growth and non-growth categories.

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-4 Witness: C. Goulding & D. Nawazelski

REQUEST:

Please provide updated revenue requirement (CGDN 1-7), and rate design schedules (RAJT 1-17) in unlocked excel format.

RESPONSE:

Please see the enclosed:

Excel versions of the Filing Requirement Schedules and Revenue Requirement Schedules as filed August 2, 2021

Excel versions of the Revised Revenue Requirement Schedules as filed February 22, 2022

Excel versions of Schedules CGDN-2 through CGDN-6 as filed August 2, 2021

Excel versions of the Cost Studies and Rate Design Schedules and Workpapers supporting the August 2, 2021 filing

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-5 Witness: C. Goulding & D. Nawazelski

REQUEST:

Please compare and contrast the rate plan (CGDN-2) with UES (DE 21-030) step increase model. Please explain the differences with supporting analysis/work papers.

RESPONSE:

Please refer to the table below for a comparison of the filed and settled rate plan (pending approval) in DE 21-030 versus the proposed plan in this docket.

Description	UES (As Filed)	UES (Settlement)	NUNH
Rate Plan Term	3-years (Three Steps)	2-years (Two Steps)	3-years (Three Steps)
Filing Date	January 30th	February 14th	March 31st
Rate Effective Date	April 1st	June 1st	August 1st
Non-Growth Investment Recovery	Change in Net Plant	Change in Net Plant	Additions & Cost of Removal
Software Amortization?	No	Yes	No
RevReq Cap?	No	Yes (Step 1 only)	Yes (3-year cap)
Investment Cap?	No	Yes (Step 2 only)	No
Rate Cap?	2.5% Total Revenue*	2.5% Total Revenue	No
Earnings Sharing?	Yes	No	Yes
Exogenous Events?	Yes	Yes	Yes
Stay Out Provision	Yes	Yes	Yes
Rate Design Increase	Customer, Demand and Energy Charges	Demand and Energy Charges	Customer and Energy Charges
Revenue Allocation	Proportional	Proportional excluding Outdoor Lighting Classes	Proportional

*Any part of the Revenue Requirement that is above the cap will be deferred at the Company's cost of capital established in Docket No. DE 21-030.

Date Request Received: 3/23/2022 | Date of Response: 4/6/2022
Request No. NHPUC RR 1-6 | Witness: C. Goulding & D. Nawazelski

REQUEST:

Please provide a copy of any Department of Energy Audit Reports for audits done on the current rate case filing.

RESPONSE:

Please see NHPUC RR 1-6 Attachment 1 for a copy of the Final Department of Energy Audit Report in DG 21-104. Please note, this report has also been provided as Attachment DHM-5 to the April 1, 2022 testimony of Department of Energy witness Donna Mullinax.

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-7 Witness: K. Sprague & C. Leblanc

REQUEST:

Please explain how the proposed capital expenditures are consistent with, and also how they differ from the Company's most recent approved Least Cost Integrated Resource Plan.

RESPONSE:

Northern's Least Cost Integrated Resource Plan ("LCIRP") is primarily a resource planning document prepared bythe Company and reviewed by the Commission pursuant to the statutory framework set forth in RSA 378:37-40. The Company's most recent LCIRP, which the Commission approved in Order No. 26,382 (DG 19-126) reviewed the Company's projected long-term resource needs over the five year planning period 2019-2020 through 2023-2024 as well as the planning processes used to develop a natural gas portfolio that provides reliable service to customers at a reasonable cost. The 2019 IRP communicated Northern's gas supply planning objective, described the current market dynamics impacting long-term resource decisions, explained the process used by the Company to forecast planning load, identified incremental resource needs, and evaluated potential resource alternatives for possible addition to the portfolio.

The Company's LCIRP is not a system-planning or capital budget document. The Company's capital spending includes projects required to ensure safe and reliable gas service to customers, whereas the LCIRP focuses on gas supply planning. Northern's capital projects include:

- Customer projects such as new services, mains extensions, and customer meters;
- Mandated projects such as highway projects, asphalt restoration, pipe replacement, company meters, corrosion control, abandon gas services, water heaters;
- System improvement projects designed to address localized capacity or pressure concerns;
- Replacement projects designed to address the replacement of aging equipment or other known reliability concerns; and
- Other projects such as facility upgrades, office furniture, software projects, efficiency projects, tools and equipment.

The Company's LCIRP and its capital budget are fundamentally different documents and cannot be directly compared.

Date Request Received: 3/23/2022 — Date of Response: 4/6/2022
Request No. NHPUC RR 1-8 — Witness: K. Sprague & C. Leblanc

REQUEST:

Please describe the Company's schedule of inspections of utility plant and describe in detail the process for determining when plant needs to be upgraded.

RESPONSE:

The Company inspection programs and schedule for the distribution system are as follows:

1. System Patrols – Distribution gas mains in places, or on structures where anticipated physical movement or external loading, beyond design, could cause failure or leakage shall be patrolled in business districts at intervals not exceeding 4½ months, but at least 4 times each calendar year, and outside of business districts, at intervals not exceeding 7½ months, but at least twice each calendar year.

2. System Patrols – Distribution gas mains at locations with no anticipation of physical movement are patrolled in conjunction with the gas main leak survey program and at the frequencies established.

3. Gas Main Leak Survey for Business Districts – Distribution gas mains within an established business district are leak surveyed annually not to exceed fifteen months.

4. Gas Main Leak Survey Outside of Business Districts - Distribution gas mains outside of a business district are leak surveyed on a twenty-four month cycle.

5. Gas Main at Risk Pipe Survey – Gas mains that are identified as "at-risk" are leak surveyed on a daily, weekly or monthly cycle depending on the risk.

6. Service Lines Inside a Business District – Gas Services inside a Business District are leak surveyed annually not to exceed fifteen months.

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Request No. NHPUC RR 1-8 Witness: K. Sprague & C. Leblanc

7. Service Lines Outside of a Business District – Service lines outside of a Business District are Leak surveyed every three calendar years not to exceed thirty-nine months.

8. Regulator Station (Annuals) - Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment is inspected and tested at intervals not exceeding 15 months, but at least once each calendar year.

9. Regulator Stations (Monthly) - Each pressure regulating station is inspected monthly to ensure proper operation and to confirm the proper operation of the regulating equipment and to identify abnormal operating conditions including fugitive emissions from gas leaks.

10. Odorant Testing - At least 12 times per calendar year, at intervals not exceeding 45 days.

11. Cathodic Protection Testing - Each pipeline that is under cathodic protection is tested at least once each calendar year, but at intervals not exceeding 15 months.

12. Cathodic Protection Testing (Short Segments) - Separately protected short sections of pipeline, not in excess of 100 feet, or separately protected service lines these pipelines are surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system is surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

13. Cathodic Protection Rectifiers - Each cathodic protection rectifier or other impressed current power source is inspected six times each calendar year, but at intervals not exceeding 2½ months.

14. Atmospheric Corrosion - Each aboveground gas pipeline or any gas related piping system exposed to atmosphere is inspected at least once

every 3- calendar years, but at intervals not exceeding 39 months.

The Company replaces utility plant for the following reasons:

1. A system inspection has identified a component that has deteriorated, been damaged or poses some other safety threat (e.g., under the Company's Distribution Integrity Management Plan).

2. A component has been identified as at risk through a product recall or other notification (e.g. PHMSA Advisory).

3. A component has failed or is an age related replacement.

4. As part of a system improvement project.

5. Required by a city or the state in conjunction with municipal work

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-9 Witness: T. Diggins, A. Francoeur, R. Hevert

REQUEST:

Has the Company reviewed its cost of debt and evaluated refinancing of existing debt or new debt? What was the result of the evaluation?

RESPONSE:

The Company continually monitors the capital market environment, evaluates the potential to cost-effectively refinance existing debt, and assesses the need and opportunity to issue new debt. Those assessments consider multiple factors, including early redemption (call) features contained in the debt agreements, current and expected short-term debt levels; the existing weighted average life of debt and the associated debt maturity schedule; the interest rate environment; the market for relatively small, privately placed debt offerings, including potential terms; and the implications of financing decisions for its credit profile.

The Company's practice is to refinance debt when it is economically effective to do so – generally when there is no cost-prohibitive call premium, the interest rate on new debt is sufficiently below the rate on the debt being refinanced, and transaction costs do not outweigh savings. Assessing refinancing opportunities therefore begins with understanding the call provisions contained in the debt agreements. Currently, all the Company's Notes contain "make-whole" provisions, a type of call feature allowing the issuer to redeem notes before their final maturity by making an up-front, lump-sum payment (sometimes referred to as the " make-whole premium") to investors. The make-whole premium reflects the difference between the present value of all future required payments (principal and interest), discounted at a stated "reinvestment yield", and the note's remaining principal balance. To the extent the present value of future payments is greater than the remaining principal, that difference is the required make-whole premium.[1]

The reinvestment yield used to calculate the make-whole premium typically is the sum of (1) the yield on U.S. Treasury bonds with a term equivalent to the remaining life of the debt being redeemed, and (2) a premium (for example, 50 basis points). As interest rates fall, so will the reinvestment yield. Because the present value of future cash flows increases as the discount rate decreases,

[1] A common element of "make-whole" provisions is that the lump-sum payment cannot be negative. That is, the minimum amount the lenders would receive as a lump-sum payment is remaining principal balance. As a practical matter, if the reinvestment yield is above the coupon rate, there would be no motivation for the borrower to refinance the debt.

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Request No. NHPUC RR 1-9 Witness: T. Diggins, A. Francoeur, R. Hevert

lower reinvestment yields produce higher make-whole premiums. Make-whole provisions therefore are designed to produce higher premiums in low interest rate environments, mitigating the risk to investors that their investment will be called when interest rates are below the "coupon" rate on the existing debt. Because investors have that additional comfort, notes with make-whole provisions may provide somewhat lower interest payments (coupon rates) than they otherwise would.

There are other, related factors the Company considers when reviewing early redemption options. First, under generally accepted accounting principles, the early redemption of a note requiring a make-whole premium would be considered a "debt extinguishment". In that case, the difference between the net carrying value of the existing debt (i.e., the remaining principal) and the fair value of the new debt (the present value of future payments) to be recognized as a gain or loss in the current period. In effect, the make-whole premium would be recognized as a non-recurring expense when it is incurred. As discussed below, that expense can be significant, and its effects material to the Company.

Second, if the make-whole premium is refinanced with new long-term debt, the additional debt would alter capital structure, potentially adding more financial leverage (that is, more financial risk) than the Company considers appropriate. To offset that additional leverage, the Company would have to issue additional equity. Moreover, because the make-whole premium is a current period expense, it would reduce the retained earnings component of the common equity balance, requiring further equity to restore that loss. The make-whole premium therefore creates financing requirements considerably greater than its dollar amount.

The Company's 7.72% Notes provide a practical example of the points discussed above. The make-whole provision under those notes calls for a reinvestment yield of 50 basis points (0.50%) over the equivalent-term Treasury bond yield, recently about 2.60%. Because the reinvestment yield (2.60% + 0.50%, or 3.10%) is well below the 7.72% coupon rate, the present value of remaining payments based is well above the remaining principal.[2] Consequently, if the Company were to retire its $50 million remaining principal, it would be required to provide a make-whole premium of approximately $23 million[3]. As explained above, that premium would be a current period loss for which the after-tax effect

[2] The present value of payments for debt carrying a coupon rate of 7.72%, discounted back at 7.72% equals the existing principal balance. That will be the result any time the discount rate equals the coupon rate.

[3] Preliminary estimate, subject to review and refinement.

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would be approximately $16.8 million. To put that loss in context, the Company's 2021 Net Income was $16.5 million. The loss of an entire year's net income certainly would negatively affect the Company's credit profile.

If the Company were to refinance the entire $50 million remaining principal and the $23 million make-whole premium ($73 million combined) with debt alone, its capital structure would become increasingly leveraged. On a pro forma basis, the $16.7 million loss on the debt extinguishment (a reduction in equity) and the additional $23 million of debt associated with the financing the make-whole payment would move the Company's filed capital structure from 52.47% equity to 47.95%, a reduction of about 450 basis points. To restore the capital structure to the 52.47% equity ratio, the Company would require about $42.2 million of additional equity. At that point, the Company would have issued $75.2 million of additional securities ($23 million of additional debt, and $42.2 million of additional equity). Notably, those securities would not have been required to fund additional capital investments.

To summarize, the Company recognizes the importance of continually assessing opportunities to refinance its existing debt when it is economically advantageous to do so. The make-whole provisions contained in its debt agreements likely limit those opportunities in the near-term; none of the Company's existing notes may be called without a premium until 2027. For the reasons discussed above, it is highly unlikely the Company will be able to cost-effectively refinance its existing debt until then. Nonetheless, the Company will maintain its practice of continually monitoring market conditions, looking for financing and refinancing opportunities as they arise.

Date Request Received: 3/23/2022 Date of Response: 4/6/2022
Request No. NHPUC RR 1-10 Witness: R. Hevert, C. Goulding & D. Nawazelski

REQUEST:

Please propose a plan that minimizes adjustments between rate cases and minimizes dockets to review interim adjustments.

RESPONSE:

Northern Utilities, Inc. ("Northern" or the "Company") believes that the proposed Rate Plan, which is consistent with those previously approved by the Commission, accomplishes the objectives underlying its application, and strikes an appropriate balance between the interests of the Company and its customers. As discussed below, the proposed rate plan, including the ratepayer protection provisions and stay-out commitment, are integrated elements that look to realize multiple objectives, including the administrative efficiency associated with avoiding multiple, serial base rate filings. The Company believes those elements, together with its continuing focus on cost control and prudent capital allocation, minimize interim revenue adjustments, the administrative burden associated with them, the effect on customer bills.

The Commission has held that a rate plan implementing annual step adjustments to recover certain capital costs, subject to review by the DOE, the OCA, and the Commission, "is a reasonable method to allow for a more timely recovery of assets in service without resort to a full rate proceeding." Unitil Energy Systems, Inc., Order No. 25,214 at 27 (April 26, 2011) (approving four step adjustments to recover, *inter alia*, certain changes to distribution utility plant); Public Service Co. of N.H., Order No. 25,123 at 32 (June 28, 2010) (approving multi-step rate plan); see also Northern Utilities, Inc., DG 13-086, Order No. 25,653 at 10 (April 21, 2014) (approving a settlement agreement including multiple step adjustments as "representing an appropriate balancing of the interests of the Company and its customers."). "Step adjustments to rates are employed as a means of ensuring that a regulated utility retains its ability to earn a reasonable rate of return after implementing large capital projects, and to avoid placing a utility in an earnings deficiency immediately after a rate case in which a revenue requirement was based on a historical test year." Lakeland Management Co., Inc., DW 10-306; DW 11-269; Order No. 25,357 at 13 (May 1, 2012); see also Unitil Energy Systems, Inc., DE 10-055, Order No. 25,214 at 25 (April 26, 2011) ("We have previously approved step adjustments to base rates as a means of ensuring that a regulated utility retains its ability to earn a reasonable rate of return after implementing large capital projects that increase the utility's rate base after a test year."); Pittsfield Aqueduct Co., Inc., DW 10-090, Order No. 25,229 at 12 (June 8, 2011) ("Step adjustments can avoid placing a utility in an earnings deficiency immediately after a rate case in which the revenue requirement was based on a historic test year and a

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smaller rate base.”).

In this case, the Company’s proposed Rate Plan includes three step adjustments to recover the revenue requirement associated with non-growth plant additions in the investment years 2021, 2022, and 2023, with annual compliance filings due on March 31 of the following year for rates effective August 1. Exhibit CGDN-1, Schedule CGDN-1 Bates 000187; Exh. RBH-1 Bates 00021. Consistent with this proposed framework, the Company submitted, on March 31, 2022, a comprehensive and extensively supported filing detailing eligible 2021 investments for recovery through the first proposed step adjustment to take effect on August 1, 2022. This proposed process allows for a four-month review by the DOE, OCA, and the Commission.

As explained in the testimony of Robert Hevert, non-growth plant additions represent approximately 76.6% of all forecasted investments by the Company through the end of calendar year 2023. Exhibit RBH-1 Bates 000021; see also Exhibit KSCL-1 Bates 000326 (providing a five-year capital spending forecast, segregated by growth and non-growth spending, for the years 2021 – 2025). Non-growth projects include infrastructure replacement programs, system improvements, highway projects, asphalt restoration, farm tap replacements, a system reinforcement project in the Rochester area, and other smaller non-growth related projects. Exhibit KSCL-1 Bates 000327-331. Even if the customer count increases and the Company’s operating costs are well-managed, revenue may not keep pace with the increase in fixed costs associated with these investments, resulting in earnings attrition. Exhibit RBH-1 Bates 00016.

As Messrs. Diggins and Francoeur explain, the Company’s ability to finance capital investments relies heavily on internally generated funds (operating cash flows). Those cash flows are supplemented by short-term borrowings which in turn, are rolled into long-term debt and common equity. Bates 000559 That financing cycle is subject to market risk, which is magnified when cash flows are diluted, requiring expanded access to external financing. Messrs. Diggins and Francoeur also explain that rating agencies focus on cash flows in their credit rating determinations. To that point, Standard & Poor’s has indicated that if the Company’s key credit metrics do not improve over time, its credit rating may be downgraded. Bates 000564. Financing risk and the risk of a credit downgrade both are mitigated by strengthened cash flows from operations. That mitigation benefits ratepayers in the form of lower costs of capital, and more efficient access to both debt and equity capital. The proposed step increases therefore support the cash flows needed to fund the non-growth investments that support system reliability, and to support the Company’s credit profile.

Understanding the importance of minimizing rate effects on customers, the administrative burden on parties to rate proceedings, and the need to maintain its

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Request No. NHPUC RR 1-10 Witness: R. Hevert, C. Goulding & D. Nawazelski

financial profile, the Company is committed to operating and capital cost control. Unitil Corporation manages its utility operations in a centralized manner, realizing efficiencies from scale economies, avoiding duplicate activities, and adopting best practices. Exhibit RBH-1 Bates 000008, 000017. Northern's capital budgeting process, in which projects are scoped, estimated, and justified to prioritize the most cost-effective solutions to improve reliability, address significant risks, and address aging facilities, is rigorous and subject to several layers of controls. Exhibit KSCL-1 Bates 000324-325. The Company also deploys a contracting strategy that includes a competitive bidding process and analyses to ensure that a winning bidder delivers the lowest overall cost relative to units of work to be completed. Exhibit KSCL-1 Bates 000334. The process requires multiple rounds and levels of evaluation on a project-by-project basis, culminating in review and approval by Unitil Corporation's senior management, and Board of Directors. Even after the overall capital budget is approved, each project must be authorized before budgeted funds may be invested. Exh. RBH-1 Bates 00017-18.

Regarding customer protections, the Rate Plan includes a cumulative revenue requirement cap of $10,500,000 over the proposed three years of the rate plan. Exhibit CGDN-1 Bates 000096, Schedule CGDN-1 Bates 000188. The Company also has committed to a rate case stay-out through the end of calendar year 2024 (unless the Company's earned return on equity drops below 7%). The Rate Plan also includes an Earning Sharing provision pursuant to which the Company will return 50% of earnings if the Company's return on equity exceeds 11%. The Commission has previously found that such provisions, presented in by Northern in connection with step adjustments, are beneficial to customers: "We . . . particularly welcome the innovative Earnings Sharing provision, [and] the 'Stay-Out' provision . . . . These provisions offer considerable potential benefits to the Company's customers." Northern Utilities, Inc., DG 13-086, Order No. 25,653 at 11 (April 21, 2014).

In summary, Northern's Rate Plan is designed to mitigate erosion in earnings, allow for a longer period of time between costly base rate cases, and incorporate customer protection and rate mitigation measures to ensure a proper balancing of interests. When considered in the context of the Company's rigorous cost controls and other proposed customer protection and rate mitigation measures, as well as a process whereby the DOE, OCA, and the Commission can review prior year investments on a well-documented and efficient basis, the Company's proposed multi-step Rate Plan is a reasonable plan for minimizing adjustments between rate cases, minimizing and streamlining dockets to review interim adjustments, and extending the period of time between costly and resource-intensive base rate cases.