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August 10, 2015

Susan Hudson, Clerk
Public Service Board
112 State Street
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Montpelier, VT 05620-2356

Re: Docket No. 7970 – Reply Brief

Dear Mrs. Hudson,

Attached please find a Reply Brief submitted on behalf of AARP.

Thank you and please let me know if you have any questions.

Sincerely,

~ *Caroline*

Caroline Engvall

cc: Service List

**STATE OF VERMONT
PUBLIC SERVICEBOARD**

Petition of Vermont Gas Systems, Inc.,)
requesting a Certificate of Public Good pursuant)
to 30 V.S.A. § 248, authorizing the construction)
of the "Addison Natural Gas Project" consisting) of
approximately 43 miles of new natural gas)
transmission pipeline in Chittenden and Addison)
Counties, approximately 5 miles of new)
distribution mainlines in Addison County,)
together with three new gate stations in)
Williston, New Haven, and Middlebury,)
Vermont)

Docket No. 7970

REPLY BRIEF SUBMITTED ON BEHALF OF AARP

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STATE OF VERMONT
PUBLIC SERVICE BOARD

Petition of Vermont Gas Systems, Inc.,)
for a certificate of public good,)
pursuant to 30 V.S.A. § 248 ,)
authorizing the construction of the)
“Addison Natural Gas Project”) Docket No. 7970
consisting of approximately 43 miles)
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new distribution mainlines in Addison
County, together with three new gate
stations in Williston, New Haven and
Middlebury, Vermont

REPLY BRIEF OF AARP

AARP thanks the Board for the opportunity to submit a reply brief. The post-hearing proposed order submitted by Vermont Gas Systems, Inc. (VGS) on its face appears to be comprehensive and reasonable -- but it is neither. It ignores the key facts in the record.

1. VGS Has Not Proposed Findings Which Address the Incomplete and Misleading Information Provided to the Board in September of 2014; VGS' Failure to Disclose Mr. Roam's Evidence Requires Reopening Under Rule 60(b)(1) and (2).

VGS concludes on page 9 that “no party offered evidence of mistake... and we therefore find that there is insufficient ground to reopen the docket on this basis.” VGS concludes on page 10 that no party has identified any newly discovered evidence that would change the Board’s prior determinations. But *VGS has not proposed a single finding or conclusion that addresses the truth or accuracy of VGS’ submissions to the Board on September 26, 2014.* On that date,

when Mr. Gilbert and Ms. Simollardes testified they were confident that the \$121.6 million figure was reliable, they did not disclose that the experts they had brought in, whose expertise they had trumpeted to the Board, had found significant cause for concern that the figure was wrong. Mr. Roam of PriceWaterhouseCooper “realized” the project cost was going to cost “quite a bit more” than \$121.6 million. See 6/22/156 Tr. pp. 110-112 (denying that he had no clue that the cost was going to be quite a bit more by September, and then agreeing that he did “realize” it would be “quite a bit more” in September) and 6/23/15 Tr. p. 16 (Ms. Simollardes agreeing with Mr Roam). He then told Mr. Sinclair. But VGS did not tell the Board. And now VGS’s proposed findings completely fail to address these key facts.

This is a classic example of newly discovered evidence that existed at the time of the tribunal’s decision but through due diligence was not known the parties at the time. The standard treatise on civil procedure, Wright Miller & Kane’s 11 Federal Practice and Procedure, Civil § 2889 (3rd ed., 2015) states that the newly discovered evidence rule, Rule 60(b)(2), has proved “especially” useful “when newly discovered evidence calls into question the validity of the judgment by directly refuting the underpinnings of the theory which prevailed.” The theory which prevailed on October 10, 2014 was that “We find that there is a reasonable basis to conclude that the revised cost projections are reliable.” Mr. Roam’s newly discovered evidence “calls into question” the validity of that theory. The validity of the ruling having been called into question, the Board should now

grant relief under Rule 60(b)(2).

VGS's proposed finding 11 implicitly acknowledges that VGS failed to provide complete information to the Board in September of 2014. Proposed finding 11 states that in September of 2014, "Vermont Gas observed cost-performance trends of concern for one component of the project, mainline construction..." VGS does *not* propose a finding that it informed the Board of this concern. VGS cannot propose such a finding because VGS did not inform the Board.

This evidence also demonstrates that relief should be granted under V.R.C.P. 60(b)(1), for mistake. The legal standard is set forth in Murphy v. Tax Department, 173 Vt. 571, 573 (2001), in which the Superior Court had initially granted judgment to Murphy based on grounds of estoppel. Later the Tax Department moved under Rule 60(b)(1) for relief from the judgment on grounds of mistake, because the facts supporting one of the elements of estoppel had been mistakenly represented to the Court. No one claimed bad faith or misrepresentation, just factual error. The Superior Court granted the motion and the Supreme Court affirmed. A mistake by the tribunal, based on erroneous information, suffices.

Here, as in Murphy, the Board relied on VGS's representations to it that have turned out to be erroneous. On October 10, 2014, the Board summarized AARP's and Ms. Lyons' arguments that the record showed that more cost increases were likely, and rejected them. "We find that there is a reasonable basis to conclude that the revised cost projections are reliable." The Board listed three reasons for

this conclusion. “First, many of the cost elements in the revised budget are no longer projections, but reflect actual costs.” Second, the revised budget included a contingency. Third, Mr. Gilbert had “testified under oath at the September 26th hearing that the project is now under new management that is capable and is producing reasonable cost projections.” October 10, 2014 Order pp. 20-21.

The Board was mistaken on all three counts. While many of the items in the revised budget were no longer projections, the single largest item, mainline construction, was still a projection, and VGS had “observed cost-performance trends of concern” about the mainline construction projection but had kept its concern under wraps. The revised budget did contain a contingency, but the contingency was based on Ms. Simollardes’ erroneous belief that VGS’ method of estimating costs was reliable – and the Board now knows, from Mr. Roam’s testimony, that the method was unreliable. And while the project was under new management, old management had been responsible for the erroneous cost estimate. AARP and Ms. Lyons had unsuccessfully argued in their post-hearing memorandum dated October 2, 2014 that this was true, but the Board disagreed – and now the Board knows that AARP and Ms. Lyons were correct, from Mr. Roam’s testimony. The estimate by old management turned out to be off by tens of millions of dollars. The Board should now grant relief under Rule 60(b)(1)¹.

2. There is Clear and Convincing Evidence that AARP Was Deprived of a

¹ Mr. Roam’s testimony also is newly discovered evidence under Rule 60(b)(2) that the cost estimates had been prepared by old management and were not reliable. If the Board had been convinced of this fact on October 10, 2014, it would have reached a different outcome.

Full and Fair Opportunity to Litigate the Reliability of the July 1, 2014, Cost Estimate Under Rule 60(b)(3) – None of Which VGS Addresses.

VGS argues, on page 10, that there is no evidence to support the claims of wrongfully withheld information. The undisputed facts constitute clear and convincing evidence under Rule 60(b)(3) that AARP and the other parties were deprived of a full and fair opportunity to litigate the questions before the Board because of VGS' wrongful withholding of information. One of the principal purposes of the September 26 hearing was to determine if VGS's faith in its new cost estimate was justified. Mr. Roam had informed VGS there were problems. He did not know the size of the error but he reached a conclusion that the actual cost was going to be "quite a bit" more than \$121 million, and he notified VGS. VGS witnesses testified at length about their faith in the reliability of their \$121 million estimate, but they kept Mr. Roam's finding that the cost would be quite a bit more than \$121 million from the Board and the parties.

VGS' proposed conclusions, which gloss over this subject by concluding there is no evidence of misconduct, should be compared with the cross-examination and redirect examination of Mr. Roam. After Mr. Roam disclosed to Attorney Saudek that he had discovered in September that the cost would be quite a bit more and had informed Mr. Sinclair of this discovery, a recess was taken. Tr. p. 113. After the recess, VGS' counsel asked Mr. Roam "in September or early October did you know that there was going to be a significant increase in the cost estimate for phase one of the project?" Mr. Roam answered that he did not *know* this until later. He never withdrew or corrected his earlier statement that he had

“realized” it would cost “quite a bit more” in September and that he had informed Mr. Sinclair of this in September. *He would have had nothing to tell Mr. Sinclair in September if he had not reached an important conclusion about the cost of the project.* VGS’ proposed findings were its opportunity to explain to the Board why VGS had not misled the Board in September about this important information. VGS has chosen not to address this central issue.

AARP in particular was deprived of the opportunity to fully and fairly litigate the case. AARP’s cross-examination of Mr. Gilbert and AARP’s post-hearing memorandum focused on the same issue as Mr. Roam’s withheld evidence addressed, whether the \$121 million estimate was reliable. AARP’s memorandum began by stating that “The record of the hearing demonstrates the following:

1. Vermont Gas Systems, Inc., (VGS) has no credible basis for asserting that there will not be further, substantial increases in the cost of the project. The only credible assessment of the evidence is that the project will cost *at least* \$121 million.”

AARP submitted detailed arguments that the cost estimate was not reliable:

A. The current cost estimate was developed by the project management team which VGS has replaced because it lacked the necessary experience and skill to predict costs.

The July 2, 2014 submission to the Board by Vermont Gas Systems, Inc. (VGS) which revealed a 40% increase in the cost of the project, was followed by VGS’ prefiled testimony stating that Clough Harbor and Associates, the overall project managers, had been replaced with a new team of managers who possess sufficient experience and skill to control and accurately predict project costs. The new team “will take a hard look at” the estimated cost of Phase 1 “using industry recognized standards such as those established by

the Association for the Advancement of Cost Engineering. These new estimates “will be... very similar to that now being used by ISO New England, Inc., to assess cost estimates for transmission projects proposed in New England.” Donald Gilbert Prefiled Testimony pp.3-4.

Clough Harbor’s role is being reduced so that it performs only engineering and surveying. Donald Gilbert Prefiled Testimony p.4

VGS’s prefiled testimony that it has hired a new team that possesses the experience and skill needed for cost prediction and cost control, and its relegation of Clough Harbor to a “reduced” role of just engineering and surveying, is a frank acknowledgement that the prior project managers lacked the necessary skill and experience. At the hearing, VGS’s President, Mr. Donald Gilbert, was asked by Mr. Young whether the cost increases arose from unpredictable changes in the market or from inaccuracies in the original submissions. He answered that it was the latter. In hindsight, he said, “there are a number of things” which “I would do differently.” Clough Harbor “was not keeping up with some of the areas we wanted them to.” 9/26/14 Tr.110.

Mr. Gilbert testified that the new team that will use the industry-recognized standards, such as those of the Association for the Advancement of Cost Engineering and ISO-New England, did not develop the current cost estimate. The current estimate was developed by the team that lacks the skill and experience that VGS believes are needed. The new team has not yet developed its own estimate of project costs. 9/26/14 Tr.127, line 5.

Mr. Gilbert testified that he is confident that the cost prediction developed by the former project managers is reliable, but he did not explain why. When asked whether any of the existing contracts have fixed prices or other means to protect against cost increases, he was generally unaware of any of those specifics. Vice President Simollardes also did not know. 9/26/14 Tr.94-95 (Simollardes); 127-130 (Gilbert).

A reasonable person, upon observing the witnesses and reading all of the exhibits, would not find there to be credible evidence that the existing cost estimate are reliable. At best they are estimates that the project will cost at least \$121.7 million.

(Underlining added.) AARP argued again and again that the Board should not accept the \$121 million estimate:

The Board has received compelling evidence that some of the

original cost estimates were inaccurate and/or incomplete. The current, more accurate numbers, add *at least* \$48.8 million to the carrying costs that existing ratepayers would pay during just the first 20 years and will push the cross-over point out to 32 years. Even those numbers may be too low, since they are based on cost predictions by project managers who have been replaced because of VGS' lack of confidence in their abilities.

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AARP does not advocate that the CPG in this matter be withdrawn on the basis of the current record. AARP does, however, urge that the Board take the steps necessary to make that determination. The Board should order VGS to provide a cost estimate that has been prepared by experts other than Clough Harbor and Associates, and should schedule a hearing, and allow for expedited discovery, on whether the Certificate of Public Good in this matter should be withdrawn or maintained.

(Underlining added.)

In In re Citizens Utilities, 179 P.U.R.4th 16, 1997 WL 582155, the utility was under investigation for ignoring Board orders and submitting misleading statements to regulatory authorities, including the Act 250 District Commission. The Board concluded that “Citizens has exhibited a consistent pattern of failure to disclose complete and accurate information in the regulatory process.” 179 P.U.R.4th 16 at 127 (emphasis added). See also The Board ruled that failure to disclose “complete and accurate information” to a regulatory body could be grounds for revocation of a CPG to do business in Vermont. 179 P.U.R.4th 16 at 105. See also LeFlore Broadcasting Co. v. F.C.C., 636 F.2d 454, 461-62 (D.C. Cir. 1980) (“[E]ffective regulation is premised upon the agency’s ability to depend upon the representations made to it by its licensees...” and “Where public policy

demands complete and accurate disclosure... it may suffice to show nothing more that the misrepresentation were made with disregard for their truth.”).

VGS’s misconduct would be actionable in tort even if it had not been testifying under the heightened duties of a regulated utility. Cheever v. Albro, 138 566, 571 (1980)(The common law test of “liability for failure to disclose facts material to the transaction is some duty, legal or equitable, arising from the relations of the parties, such as that of trust or confidence, or superior knowledge or means of knowledge.”)’ and Equitable Life Ins. Co. of Iowa v. Halsey Stuart & Co., 312 U.S. 410, 426 (1941) (“A statement in a business transaction which, while stating the truth so far as it goes, the maker knows or believes to be materially misleading because of his failure to state qualifying matter is a fraudulent misrepresentation.”, citing Restatement of Torts).

VGS failed to disclose complete and accurate information to the Board and the parties on September 26, depriving AARP of the opportunity to fully and fairly present its argument to the Board that \$121 million was not a reliable estimate. Mr. Roam’s testimony corroborates the factual allegations made by AARP in its post-hearing memorandum, which the Board rejected.

3. VGS’s Proposed Findings Obscure the Evidence That VGS’ Witnesses Lacked the Qualifications to Provide the Cost Estimate Relied on in the 12/23/13 Order; Reopening Should Be Ordered under Rule 60(b)(1) and (2).

It is now clear that VGS witnesses lacked the qualifications needed to submit reliable testimony to the Board in 2013 about project cost, but VGS’ proposed

findings try to obscure this fact by a frivolous argument. The Board initially found, in finding 245, that the project was estimated to cost \$86.6 million. Mr. Heintz had testified that VGS developed the cost estimate from “quotes from equipment vendors, discussions with contractors familiar with the work and historical costs from similar projects.” Heintz pft p.36. According to Mr. Gilbert’s testimony and Mr. Roam’s testimony, it was not until September of 2014 that experts with the skills to reliably estimate project cost commenced that process. VGS had not understood that Clough Harbor & Associates lacked these skills until then.² That fact -- that VGS and its consultant lacked the skills necessary to reliably estimate project costs -- was just as true in December of 2013 as it was in the summer of 2014. The Board was unaware of this critical fact when it found, in finding 245, that the project was estimated to cost \$86.6 million.

VGS argues in footnote 37 that cost estimation is “not an exact science,” and typically does not match project cost, citing findings 21-22 of the Board’s

² At the hearing held during the first remand, on September 26, 2014, Board staff asked Mr. Gilbert about the accuracy of the company’s estimates as of that date. At page 108, Mr. Gilbert explicitly addressed uncertainties about construction costs. He testified that the majority of the cost increase was from the increasing demand for natural gas, resulting in a “high demand” for contractors who install pipelines. He said there are “other factors as well,” including additional engineering and archaeological work, higher levels of inspection, and thicker wall pipe (p.109). Board staff pressed Mr. Gilbert to make clear why these changes had not been anticipated. Mr. Gilbert replied that the company was not content with the work that Clough Harbour and Associates had done, so “we decided to de-contract with CHA.” (p. 110). Mr. Roam subsequently testified that PriceWaterhouseCooper commenced applying industry-standard estimating techniques in September.

October 10, 2014 Order, and therefore VGS' error cannot be grounds for reopening. VGS' argument falls wide of the mark. The Board routinely hears testimony from qualified experts about financial forecasting and budgeting, both of which the Board has described as an "inexact science." The two most recent examples are Petition of Rutland Renewable Energy, LLC, Docket 8188, Order issued March 11, 2015 at pp.63, 65 and In re 2013-2014 Demand Resources Plan Proceeding, Docket No. EEOU-13-1, Order issued July 9, 2014 at pp. 48-49. The Board always relies upon the testimony of *qualified experts* in those *inexact sciences*. In the Rutland Renewable Energy case two experts were relied upon in determining the size of the decommissioning fund (see findings 245, 248 and 251 even though the Board described that process as an inexact science; in the Demand Resources Plan case, the Board relied upon an expert report from Synapse Energy Economics even though the Board described EEU budgeting as an inexact science. That was not the case here. VGS lacked the necessary skills to provide the testimony it provided. VGS cannot credibly argue that the Board should have known better than to rely on VGS' sworn testimony as to project cost because the Board should have known that VGS lacked the competence to do so.

It is one thing to recognize that project costs often result in variances from cost estimates, as the Board noted in findings 21-22 of its Order. It is quite another to argue that a regulated utility can submit sworn testimony about project cost from witnesses who lack the competence to do so, and when their

testimony turns out to have grossly underestimated project cost and the utility admits it lacked the competence to provide reliable testimony, to argue that the utility had no duty to provide reliable testimony. By this logic, utilities are free to submit any cost estimate they think will earn them a CPG, without accountability.

VGS argues that Mr. Roam testified on June 22 that the methodology used in the earlier estimate was “reasonable” and ‘commonly used” but Mr. Roam never testified that it was reasonable or common to use VGS’ methodology in testimony to a regulatory agency applying least-cost criteria. VGS cites to transcript pages 85, 101 and 103. Page 85 does not address this topic. At pages 100 and 101 Mr. Roam explicitly refrained from saying that VGS’ method was reasonable. “I would say I didn’t cast a judgment as to whether or not it was a reasonable approach or not.” (Tr. p. 100, lines 17-19) He said it is “not uncommon” for these methods to be used, whether reasonable or not. On page 103, when asked by the Chairman to clarify his views as to when it is appropriate to use VGS’ methods, he testified first that “Again, I don’t - I don’t sit here with speculation as to the appropriate purpose for the prior estimate.” Chairman Volz asked again what the appropriate purpose of the prior estimate would be. Mr. Roam replied that it is reasonable to do so “as it was initially used... to develop the project over the course of an engineering development, it was used as a project was screened, it was used as the project figured out its route, which based on again what I’ve seen is common.” The initial, common use he described does not include submission

of sworn testimony by a *regulated utility* about *cost* to *regulatory* bodies charged by law to apply *least-cost* criteria. His testimony does not support the argument that utility witnesses are free to submit cost estimates to satisfy statutory criteria without regard to whether they have the training and experience to provide reliable testimony and without disclosing that they lack this expertise. The current proceedings would not be necessary if VGS had disclosed to the Board in 2013 that its witnesses were unaware of or were not following industry standards for cost estimating when they informed the Board that project cost would be \$86 million.

Under Rule 60(b)(1) and Murphy v. Tax Department, the Board mistakenly relied on VGS' sworn testimony to approve of the project on the basis of a cost of \$86.6 million. Evidence that the project will cost \$154 million justifies reopening the docket. Under Rule 60(b)(2) and the analysis in Federal Practice and Procedure, the Board now has the benefit of newly discovered evidence that calls into question the underpinning of the Board's order that the project's benefits outweigh its costs, because the VGS witnesses who testified about cost lacked the qualifications to submit reliable cost estimates. The December 23, 2013 Order should be reopened.

4. VGS' Proposed Findings Based on Allegations Outside the Record Should be Disregarded.

Findings 75-86, 88, 92-93 and 96 and the corresponding conclusions on pages 27-28 should be rejected because they are based upon evidence in another

docket, Docket No. 7676, in which AARP, Ms. Lyons and other parties to this case were not participants. These allegations are outside the record of this case, the judgment in the other docket was not offered as evidence by VGS in this case, and there has been no opportunity to respond. VGS does not explain why this hearsay is admissible or why the factual assertions in a judgment involving other parties can be introduced against these parties. Neither issue preclusion nor claim preclusion applies.

Also, Findings 65 and 137 should be disregarded because they rely on evidence about the vote of the Addison County Regional Planning Commission that is outside the record. AARP and others should be given the opportunity to respond by placing that vote in context.

5. VGS' and the DPS' Proposed Findings and Conclusions Fail to Address the Dramatic Change in the NPV of the Project.

Despite the length and superficial comprehensiveness of VGS' proposed findings and conclusions, VGS never addresses the dramatic shift in the NPV of the project that Dr. Hopkins and Dr. Dismukes agree upon, once the correct discount rate is used.

The Department's sole utility economist expert, Jatinder Kumar, testified on pages 15-16 of his prefiled testimony, that the weighted average cost of capital is the lowest discount rate that should be used, and itself may be too low. No party has suggested that Mr. Kumar was biased against the project, was testifying a certain way to please his client, or lacked appropriate qualifications. There is

no reason to question his judgment. His analysis mirrors the Board's ruling earlier this year, in Docket No. 8010, establishing rates for power sold by Qualifying Facilities under PURPA.

I recommend that the Board conclude that it is not appropriate to use a societal discount rate in calculating levelized avoided costs. The Board has only accepted the use of a societal discount rate in the context of screening energy efficiency measures for cost-effectiveness using the societal cost test and the discount rate reflects the value energy efficiency measures bring to society as a whole.³⁹ When the Board first adopted this practice, it concluded that the use of a utility weighted-average cost-of-capital discount rate is appropriate for a utility-based screening test, whereas for society as a whole, the discount rate is often lower because an individual or company's investment decisions have impacts on others (such as the effects of a company's increased spending or savings on a company's other customers or other local businesses).

Investigation into Establishing Rates for Power Sold to the Purchasing Agent Pursuant to Public Service Board Rule 4.100, 16 U.S.C. s 824a-3 and 30 V.S.A. s 209(a)(8), Vermont Public Service Board Docket No. 8010, p. 24 (underlining added).

The Board adopted the Hearing Officer's recommendation, confirming that it is only when screening energy efficiency measures that the societal discount rate should be used. Dr. Dismukes supports Mr. Kumar's, and the Board's reasoning, at length in his prefiled testimony at pages 22-24, 27 and his prefiled rebuttal testimony at pages 4, 8-9, 12-17, 21-25, 35, 38.

Using the discount rate that Mr. Kumar said is appropriate, Dr. Dismukes concludes that the NPV of the project is deeply negative (-\$100 million) over 20 years, 35 years or 70 years even if \$100 a ton is assigned to the value of avoided GHG emissions. Dismukes prefiled rebuttal testimony page 42.

Dr. Hopkins, when using Mr. Kumar's weighted average cost of capital as the discount rate, concludes that the NPV of the project is likely to be \$23 to \$33 million. Hopkins prefiled rebuttal p.15. This range falls between a quarter and a third of the \$87 million NPV that the Board found justified the project in 2013. (Board Finding 246, finding an \$87 million NPV using the weighted average cost of capital and the preferred efficiency case.) Of course, in 2013, when NPV was calculated as \$87 million, the total project cost was estimated to be only \$86 million.

VGS' proposed findings rely on the testimony of VGS' sole expert economist, Mr. Heaps, who disagrees with Dr. Dismukes (and necessarily with Mr. Kumar), but Mr. Heaps is testifying outside his area of expertise. He agreed on cross-examination that he is not a utility economist (6/22/15 Tr. p. 157). His prefiled rebuttal testimony presented a glowingly optimistic prediction of the NPV of the project. "Over its life, the project will clearly result in a net economic benefit to the Vermont economy. *The present value of the output impacts total a positive \$157 million over 35 years ... and \$407 million over 55 years.*" (Heaps rebuttal testimony at page 5, emphasis added.) But he conceded on cross-examination that his analysis included neither lost disposable income by ratepayers nor the economic impacts of lost job opportunities, and he admitted that "I did not conduct my own analysis of the net economic benefits of this project." 6/22/15 pp. 140-141, 159.

Specifically with respect to the discount rate, his prefiled testimony and cross-examination responses belie a fundamental misunderstanding of utility regulation. Mr. Heaps advocates for use of the societal discount rate because the economic benefit criterion affects society as a whole. He says no decision is being made as to how VGS should use its capital. Heaps rebuttal pft pp.5-6. Mr. Heaps does not understand § 248. By statute, every Board decision under § 248 must consider societal externalities such as aesthetics, climate change or the economy of the state as a whole while regulating how a private utility spends its capital. Under Mr. Heaps analysis, every § 248 case would use the societal discount rate. Dr. Dismukes' prefiled rebuttal testimony, at pages 18-20, explains in detail the difference between a public good, which should be discounted at the societal rate, and a private investment with public externalities, which should be discounted using the cost of capital.

Yet, VGS unabashedly asks the Board to rely on Mr. Heaps' opinions and reasoning about discount rates (although VGS has abandoned Mr. Heaps' opinions about NPV).³ Proposed Findings 205, 207.

³ VGS's proposed findings do not mention Mr. Heaps' testimony about NPV. However, proposed findings 127, 182, and 216 rely on Ms. Simollardes' calculations of NPV. Unlike Mr. Heaps, she is not an economist. Like Mr. Heaps, Ms. Simollardes did not consider the economic impacts of job losses or of lost disposable income by ratepayers. 6/22/15 Tr. p.248-249, 6/23/15 Tr. pp.72-73. As a result, her projections are no more useful than Dr. Heaps', and conflict with those of both Dr. Hopkins and Dr. Dismukes. Her calculations also assume that existing businesses in Middlebury lack access to CNG.

The Office of Management and Budget study Mr. Heaps relies upon (Circular A4, Heaps Exh. 4), and which VGS' proposed findings 205-217 likewise rely upon, contradict his and VGS' argument. The OMB report says the cost of capital, presumptively 7%, should be used, "whenever the main effect of a regulation is to displace or alter the use of capital in the private sector." Mr. Heaps denied that that is the main effect of a § 248 decision. Resorting to the same logic as is in his prefiled testimony, he argued that § 248(b)(4) affects the public and therefore the societal rate should be used. 6/22/15 Tr. p.162-164. The "main effect" of § 248 regulation affects the use of capital in the private sector. VGS does not propose a public good such as highway or a public park but a privately owned gas pipeline, the capital for which will be supplied by private investors. See Dr. Dismukes' prefiled rebuttal testimony at pages 18-20.

If VGS were to concede that Mr. Heaps is wrong about the discount rate, VGS would have to address the fundamentally changed NPV of the project. One would think that a regulated utility represented by an experienced team of lawyers would submit proposed findings that address at least what the Department of Public Service believes is the fundamental change in the economics of the project in its proposed findings. VGS's lengthy proposed findings do not. Instead, they count on Mr. Heaps to convince the Board that only the societal rate should be used.

As a result, nowhere does the VGS' lengthy submission address the fact that in 2013 the Board found that an NPV of \$87 million justified a project costing

about \$87 million and now the NPV is \$23 to \$33 million for a project of \$154 million - and even that NPV assumes that CNG is not already available to Middlebury businesses, as discussed in the next section.

Regrettably, the Department's Proposed Findings and Conclusions fare no better. Its own utility economist, Mr. Kumar, testified at page 16 of his prefiled:

Q. WHAT IS THE APPROPRIATE DISCOUNT RATE?

A. As acknowledged by Mr. Carr in his response to PSD:VGS.2-12, his computed benefits relate to VGS customers. Therefore, it would not be unreasonable to use the customers' marginal cost of capital, which is generally close to the credit card interest rates and which therefore could be as high as 25%. At the very least, the discount rate should not be below VGS's cost of capital. In response to PDS:VGS.2.12(c), Mr. Carr stated, "VGS' current rate of return is 9.75% and the weighted cost of capital is 7.69%." Accordingly, these numbers reflect the possible minimum discount rate that should be used in computing the NPV.

The Department (Proposed Findings p.15) ignores the testimony of its own utility economist, and Board precedent, and instead urges the Board not to reopen the project on the basis of a 3% discount rate. Like VGS, the Department has chosen not to respond to the dramatic drop in NPV that becomes evident upon use of the weighted average cost of capital to determine the discount rate -- other than to argue that Dr. Dismukes' discount rate (*i.e.*, Mr. Kumar's discount rate) was wrong.

6. VGS Relied on the Customer Savings and GHG Reductions of Replacing Commercial and Industrial Use of Oil in Middlebury, But Now Ask the Board to Ignore the Changed Baseline of the Project.

AARP Cross Exhibits 10, 21, 27 and 44 demonstrate that VGS relied on the replacement of oil and propane by natural gas, by businesses in Middlebury, as

the basis for their submissions to the Board in 2013, and that VGS has not revised their NPV or GHG analyses to take into account the fact that these businesses are now using CNG. Approximately *half of the proposed replacement of oil by natural gas which formed the basis for all of VGS's and NPV and GHG calculations and therefore for the Board's December 23, 2013 ruling, is no longer going to occur.* 6/22/15 Tr. p 227-237, esp. p. 237 lines 17-20.

VGS's proposed findings and conclusions repeatedly ask the Board to rely upon the OMB report which prior testimony by Dr. Dismukes had brought to VGS' attention. Findings 207-219, Discussion p. 43. VGS does not mention page 15 of the OMB report, which defines the baseline that an economic study should use when applying NPV. "This baseline should be the best assessment of the way the world would look absent the proposed action."

Mr. Heaps said he doesn't know if the CNG facilities in place in Middlebury would cease to be used "absent the proposed action." 6/22/15 Tr. p. 159. Ms. Simollardes refused to answer that question, and refused to estimate the savings Agrimark enjoys from the conversion, although she agreed that Agrimark is already saving money. 6/22/15 Tr. pp.231-234, 6/23/15 Tr. pp.59-60. In response to the Board's request, VGS submitted a response on July 8, 2015 which states that Agrimark expended \$4 million for the conversion, and Middlebury College expended \$1.7 million. If the pipeline is not constructed, there would be no reason to cease using this investment. The result would be increased fuel costs.

Dr. Dismukes, a highly experienced utility economist, testified that there is no reason to believe that these businesses will cease using CNG if this project is cancelled. Dismukes rebuttal pft p. 22, line 9. He testified that 42% of the gas that VGS proposes to sell from the project over the next 35 years would be to meet a need that is already being met by CNG. Dismukes rebuttal pft p. 39. Using the calculations that the Department of Public Service provided in discovery but did not incorporate into its NPV testimony, this new baseline results in reduction of the NPV of the project by \$73 million over 20 years, and reduction in NPV by nearly \$103 million over 35 years. Dismukes rebuttal pft p.39. Even if the Department and Dr. Dismukes are off by 50%, Dr. Hopkins estimate of \$23 to \$33 million positive NPV becomes a negative NPV. Yet VGS' proposed findings do not address this change.

7. VGS Has Ignored the Record in Its Proposed Findings on the Economic Losses from Lost Jobs.

VGS's proposed findings adopt Mr. Heaps' bizarre interpretation of Dr. Dismukes' NPV computer modeling. According to Mr. Heaps, and now according to VGS, Dr. Dismukes' computer modeling treated each job loss as the permanent, lifetime unemployment of each displaced worker. Proposed Finding 166. Mr. Heaps explained that the opposite is true in Vermont - in his rosy opinion, any Vermont worker who loses a job soon finds another job, and therefore the Board need not worry about any job losses arising from the replacement of the fuel delivery business by an underground pipe. 6/22/15 Tr.

pp.168-169 (the Vermont economy is doing so well that “people will be able to move and find new jobs” and therefore “I wouldn’t have modeled it.”) and pp. 174-175 (when businesses in Chittenden County have cut jobs, as an economist he could calculate the losses but he wouldn’t because Vermonters “make adjustment to these changes” and therefore the losses are just “hypothetical” not “real.”)

In fact, Dr. Dismukes’ computer model treated each job loss as a one-time loss of an employment opportunity for the identified calendar year. His prefiled testimony explicitly defined a job-year in footnote 60. “A ‘job-year’ simply represents the number of jobs created or lost, multiplied by the number of years that job exists. So, a 100 job-year impact could be interpreted as 100 jobs for one year, or a single job for 100 years.” Dr. Dismukes treated jobs created the same way as jobs lost. The model predicted that 724 job-years would be created by construction. Dismukes pft p. 23 line 13. According to the “permanent job” interpretation, Dr. Dismukes was predicting that 724 people would have lifetime employment in the construction industry. He was not. Taking into account both jobs created and jobs lost, the computer modeling predicted 1,502 job-years lost over 20 years. Dismukes Rebuttal pft pp. 2, 42, Table DED-R-1. Over 70 years, the model predicted 3,651 job-years lost. Dismukes Rebuttal pft p.2, Table DED-R-1.

Dr. Dismukes’ analysis was even-handed. He reported that a much greater source of new jobs from the project would arise from reduced energy costs than

from construction. He found that reduced energy costs would cause an increase in employment by 1,873 job-years. Dismukes pft p.28. Again, the model did not predict 1,873 new lifetime or permanent jobs, but 1,873 job-years created. These are all indirect job-year gains. The model accounted for these gains, netted out the gains and losses, and predicted 1,502 job-years lost in 20 years and 3,651 job-years lost over 70 years.

Confusion arose during his live testimony, at pp. 197-98. The exhibit he was asked about included direct and indirect job gains and direct and indirect job losses. However, he was asked about the total *direct* job-year losses over 70 years. Because the *direct* job-year gains occur only during construction, over 70 years the comparison of *direct* job-year losses versus *direct* job-year gains becomes lop-sided. Dismukes pft pp.23-24. Summed up over 70 years, including partial impacts and not just full-time jobs, the *direct* job-year losses are large, 13,799. Schedule DED-R-1, column M. These average to about 197 a year. But once the *indirect* job-year gains are included, the 70-year figure for job-years lost is 3,651. Schedule DED-R-1 column AB; Table DED-R-1; Dismukes Rebuttal pft p.2. That is a yearly average of 52 job-years lost.

The Department conducted its own computer modeling of job losses, and its model predicted far higher losses than Dr. Dismukes' modeling had. Dismukes Rebuttal pft pp 37-38, Schedules DED-R-4a, 4b. Neither Dr. Dismukes nor Dr. Hopkins was predicting gain or loss of permanent jobs. They were predicting net gain or loss of total direct and indirect job opportunities.

Dr. Hopkins attempted to reconcile his modeling with that of Dr. Dismukes on page 15 of his rebuttal, resulting in a NPV of \$23 to \$33 million.

8. VGS's Proposed Findings On Cold Climate Heat Pumps Quote Mr. Neme Out of Context.

Mr. Neme approaches his work carefully and methodically. Based upon his review of all the available evidence, including the Department's fuel price reports and the Department's analyses of cold climate heat pump efficiency, he demonstrated that the average cost per unit of gas heat resulting from natural gas conversion (\$16.41 per MMBtu) is slightly higher than the average cost for a cold climate heat pump (\$16.28 per MMBtu). This is shown in his rebuttal Exhibit A, which corrects Dr. Hopkin's Exhibit A. Moreover, that is at today's (actually April 2015's) fuel prices. As noted in his testimony, gas prices are projected to grow faster than electricity prices in each of the next three decades, meaning that the slight advantage that cold climate heat pumps have today will grow over time. Neme rebuttal pft p.2.

Mr. Neme's testimony also demonstrated that when one takes into account the impact of distribution system losses the average cost per MMBtu of gas increases to \$17.76, or about 9% more than the cost of a cold climate heat pump (\$16.28). Again, that is at today's (April 2015's) fuel prices. Gas prices are projected to grow faster than electricity prices in each of the next three decades, meaning that the 9% advantage that cold climate heat pumps have over natural gas today will grow over time. Neme rebuttal pft p.3.

Mr. Neme also established that cold climate heat pumps produce vastly

greater societal benefits than conversion to natural gas — by two orders of magnitude. Neme May 6, 2015 Attachment B (Report) Table 4 and pp.6-7. Looking at GHG reductions alone, cold climate heat pump installation produces significantly greater benefits than switching to natural gas. Neme May 6, 2015 Attachment B (Report) Tables 7 & 9 and pp.7-9.

Only when considering the out of pocket costs of installing a heat pump, as compared to the out of pocket costs of converting to natural gas, does the comparison result in a gray area. On the one hand, if one uses the costs of conversion advocated by VGS, conversion is less expensive and the payback is sooner than for heat pumps. Neme May 6, 2015 pft pp.5-6. On the other hand, if one uses the costs of conversion submitted by Mr. Cota, conversion to natural gas is a loser by either a small margin (Neme Attachment B p.5) or a huge margin (Cota pft pp.5-8). But even if Mr. Cota is wrong, the financial advantage of gas conversion over heat pumps is fictional, from society's perspective. Mr. Neme explained that this advantage "does not account for the costs of either the pipeline extension, the distribution mains or the cost of connecting homes the distribution system." If such costs were to be allocated to new residential customers based on their forecast share of new gas sales resulting from the pipeline, "it would be the equivalent of more than \$20,000 per home..." Neme May 6, 2015 Attachment B (Report) p.5. There are no such unaccounted-for costs associated with heat pump installation.

VGS's proposed findings quote Mr. Neme out of context. In proposed

findings 70, 71 and 73, they refer to his studies as reporting the advantages of switching to gas from oil - without mentioning that his studies find that even greater advantages would arise from installing heat pumps. In proposed finding 108, VGS cites to Mr. Neme's statement in his report that comparing full conversion to natural gas with partial adoption of a heat pump results in a cost advantage for natural gas - but without mentioning the next sentence of the report, which states that if Mr. Cota's cost figures are correct, gas conversion loses its advantage.

VGS's findings 112-114 make Mr. Neme's point. VGS argues that Mr. Neme was wrong to mention the costs of the pipeline extension, the distribution mains and the cost of connecting homes the distribution system, because these are to be paid by ratepayers and will become part of system overhead. But that was Mr. Neme's point - the heat pump alternative has no costs to ratepayers. That is AARP's point as well. It is these same costs that VGS does not want compared to the costs of heat pumps that *are predicted by VGS to increase rates by 15%* (and by 19.8% if the SERF funds are not used). Simollardes 6/23/15 pp. 77-78; Rendall testimony 6/22/13 pp. 18-20.

9. VGS Asks that the Board Ignore Its Undisputed Nondisclosures to the Board and Accept VGS' Promises of Future Actions Based on VGS's Trustworthiness.

In findings 153 and 154, VGS asks that the Board find that VGS is going to propose a plan in the future that will successfully avoid disruptive rate impacts. In the record, however, VGS discussed only *possible* future actions, committing

to none of them and submitting no analysis of their likelihood of success. On cross-examination, Mr. Rendall and Ms. Simollardes conceded that the one plan that they had been counting on and had studied – use of the SERF fund to smooth over rate increases – would no longer work. When the project was initially approved, the SERF fund was predicted to suffice to avoid any significant rate increase, but now, *even with full usage of the SERF fund, rates are predicted by VGS to increase by 15%* (and by 19.8% if the SERF funds are not used). Simollardes 6/23/15 pp. 77-78; Rendall testimony 6/22/13 pp. 18-20. VGS’s position boils down to a request that the Board rule that there is no need to reopen the case, despite its failures to disclose material facts, because VGS has earned the Board’s trust.

Similarly, finding 61 and the factual allegations on page 19 about a new contract should be rejected because they allege *VGS’s belief* that the future mainline construction contract will be signed soon and will be within budget – VGS does not cite *evidence* of who that future contract will be with nor what its price or other terms will be. The Board’s role is to ascertain whether there is a basis *in the record*, at a hearing on the merits to address the Rule 60(b) criteria, for VGS’s belief⁴.

10. Conclusion and Requests for Relief

VGS’ proposed findings and conclusions fail to provide useful guidance to the

⁴ After the record was closed, VGS announced it had selected a new contractor, but VGS has yet to submit to the Board or the parties a signed contract.

Board. They ignore the inconvenient facts in the record and they ask the Board to rely on speculation and allegations that are without foundation in the record.

AARP respectfully asks that the Board grant its pending motions under Rule 60(b) and order VGS to immediately cease all further expenditure of funds on construction of this project other than those necessary to stabilize or secure construction sites or otherwise protect the public.

Dated at Bristol, Vermont, this 10th day of August, 2015.

AARP

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