

**Expert Opinion on**

**Highlands Applicability Determination**  
**- Highlands Exemption #11 for**  
**Tennessee Gas Pipeline Company, L.L.C.**  
**East 300 Upgrade Project**

by Ian Goodman and Brigid Rowan



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# 1 Introduction

Ian Goodman and Brigid Rowan of The Goodman Group, Ltd. (TGG) are providing an expert opinion for submission to the New Jersey Department of Environmental Protection (NJDEP) on behalf of Food & Water Watch, Sierra Club and New Jersey Highlands Coalition, regarding the following issues:

- whether the portion of Tennessee Gas Pipeline, LLC (Tennessee) East 300 Upgrade Project within the Highlands Preservation Area qualifies for Exemption #11 from the Highlands Water Protection and Planning Act (Highlands Act), N.J.S.A. 13:20–1 et seq. This exemption authorizes “the routine maintenance and operations, rehabilitation, preservation, reconstruction, repair, or upgrade of public utility lines, rights of way, or systems, by a public utility, provided that the activity is consistent with the goals and purposes of the [Highlands Act].”
- more specifically, whether construction of a Compressor Station (CS 327) and related facilities (including a 69 kV electrical substation) (referred to collectively as the CS 327 Project) within the Highlands Preservation Area in West Milford, NJ is a “routine upgrade” to Tennessee’s utility system, which qualifies for Exemption #11.

This expert opinion offers an energy economics and regulatory perspective based on TGG’s extensive technical experience and expertise regarding natural gas pipelines (as described in Appendix 1).

This opinion:

- outlines the guidance from the New Jersey Superior Court Decision relevant to the applicability of Exemption #11 to the CS 327 Project (Section 2);
- summarizes Tennessee’s claims that the CS 327 Project is a “routine upgrade,” qualifying for Exemption #11 (Section 3);
- rebuts Tennessee’s claims, provides a meaningful definition of routine upgrade, and demonstrates why CS 327 Project is **not** a routine upgrade (Section 4); and
- concludes the CS 327 Project is **not** a routine upgrade and does **not** qualify for Exemption #11 (Section 5).

This expert opinion is for submission to NJDEP in proceedings pursuant to New Jersey Superior Court, Appellate Division, Docket No. A-3616-20, August 31, 2023 Decision<sup>1</sup> (Superior Court Decision). The Superior Court Decision vacated the Highlands Applicability Determination (HAD) (Exemption) previously issued to Tennessee for CS 327 and remanded the matter back to NJDEP “for further proceedings not inconsistent with this opinion, including but not limited to



consideration of whether Tennessee's proposed compressor station can qualify as a "routine upgrade" to its pipeline system."<sup>2</sup>

This expert opinion is based on the guidance provided in the Superior Court Decision regarding the Highlands Act and potential exemptions for activities undertaken by a public utility. As detailed in Appendix 1, we are subject matter experts in energy economics and regulation (including permitting cases for natural gas pipelines). We are not lawyers, and this expert opinion does not constitute a legal opinion. However, an important aspect of regulation in general, and this permitting case in particular, is understanding the legal and policy context. The Superior Court Decision is especially important in the current proceeding, since this proceeding is specifically in response to that Decision and the remand back to NJDEP. Therefore Section 2 outlines the guidelines from the Superior Court Decision that inform our expert opinion.

## 2 Guidance from Superior Court Decision

### 2.1 Summary of Guidance from Superior Court Decision

This Section provides a summary of guidance from the New Jersey Superior Court Decision relevant to the applicability of Exemption #11 to the CS 327 Project. The Superior Court Decision clearly emphasizes the following:

1. CS 327 (and related facilities) is a Major Highlands Development that would be subject to regulation by the Highlands Act, unless qualifying for an exemption.<sup>3</sup>
2. The Highlands Act is a comprehensive policy designed to protect environmental interests; the Legislature plainly intended to subject Major Highlands Development to strict regulation. Therefore, exemptions must be strictly construed and interpreted narrowly.<sup>4</sup>
3. Public utility upgrades and specifically CS 327 do not qualify for blanket, unrestricted exemptions to the Highlands Act<sup>5</sup> (as elaborated in Section 2.2 below).
4. Exemption #11 from the Highlands Act refers to activity by a public utility which is an "upgrade" and "routine", but neither term is defined in the statute.<sup>6</sup>
5. A utility can engage in a very wide range of activities which could qualify as "upgrades," but can be obviously of vastly different character (e.g., "upgrades" could range from changes to existing transmission lines to building a new nuclear reactor).<sup>7</sup> This point is further elaborated in Section 2.3 below.

6. As interpreted by the Superior Court Decision, “upgrades” must be “routine” in order to qualify for Exemption #11.<sup>8</sup> Moreover, “routine” should be applied as a modifier of “upgrade” so as to plainly differentiate upgrades that are obviously of a vastly different character.<sup>9</sup> This point is further elaborated in Section 2.4 below.
7. The Superior Court Decision did not consider whether Tennessee qualifies as a public utility for purposes of qualifying for Exemption #11.<sup>10</sup>

The following sections elaborate on the guidance of the Superior Court Decision introduced in points 3, 5 and 6.

## **2.2 Public Utility Upgrades and Specifically CS 327 Do Not Qualify for Blanket, Unrestricted Exemptions to the Highlands Act**

This section elaborates on Point 3 from the guidance of the Superior Court Decision summarized above. The Superior Court Decision clearly rejects the position of NJDEP and Tennessee that all public utility upgrades are categorically exempt from regulation by the Highlands Act.

Moreover, the Superior Court Decision specifically rejects the position of NJDEP and Tennessee that CS 327 and appurtenant facilities are exempt from regulation by the Highlands Act, absent a showing that they constitute only “a routine upgrade.”

As detailed by the Superior Court Decision, CS 327 and appurtenant facilities are quite extensive and substantial, costing over \$100 million, and including:

- a new compressor station, with a 19,000 hp-rated electric motor-driven compressor unit
- separate office building, with water and septic system, including 1,000 gallon holding tank for waste
- separate electrical building
- separate auxiliary building
- separate 69 kV electrical substation, and power lines connecting to an electric transmission line to be constructed by Orange and Rockland Utilities
- other appurtenant facilities, including
  - pipeline liquids storage tank
  - mainline valve piping
  - suction, discharge, and vent piping
  - heaters, coolers, and separators.<sup>11</sup>

## 2.3 A Very Wide Range of Vastly Different Activities Can Qualify as Utility Upgrades

This section elaborates on Point 5 from the guidance of the Superior Court Decision summarized above. As astutely explained by the Superior Court Decision, a utility can engage in a very wide range of activities which could qualify as “upgrades,” but can be obviously of vastly different character:

An electric utility might, for example, “upgrade” its transmission lines by moving from aluminum and steel conductor cores to carbon fiber or “upgrade” a coal-fired plant by replacing it with a nuclear reactor. Both would readily qualify as “upgrades,” although they are obviously of a vastly different character.<sup>12</sup>

The Superior Court Decision specifically refers to an electric utility with various upgrades ranging from relatively minor changes to existing transmission lines (shifting to newer, better wires)<sup>13</sup> to relatively major changes replacing coal-fired generation with a nuclear reactor. But as will be further discussed in Sections 4.2 and 4.4, a natural gas pipeline system and specifically Tennessee also engages in a very wide range of activities which could qualify as “upgrades,” but can be obviously of vastly different character.

## 2.4 “Upgrades” Must be “Routine” to Qualify for Exemption #11

This section elaborates on Point 6 from the guidance of the Superior Court Decision summarized above. As interpreted by the Superior Court Decision, “upgrades” must be “routine” in order to qualify for Exemption #11.<sup>14</sup> Moreover, “routine” should be applied as a modifier of “upgrade” to plainly differentiate upgrades that are obviously of a vastly different character:

Harkening back to our electric utility example, allowing “routine” to modify “upgrade” would plainly differentiate the upgrade of the transmission wires from the upgrade of the coal-fired plant, although we do not mean to suggest an opinion on whether either would be appropriate for the Preservation Area.<sup>15</sup>

As will be further discussed in Section 4.4, the CS 327 Project (specifically CS 327 and related facilities) is a relatively major change (that is high cost and otherwise potentially highly consequential), which is **not** a routine upgrade potentially qualifying for Exemption #11.

### 3 Tennessee Claims the CS 327 Project is a “Routine Upgrade,” Qualifying for Exemption #11

Tennessee claims that the CS 327 Project (the construction of CS 327 and related facilities) is a “routine upgrade,” which qualifies for Exemption #11 from the Highlands Act. Tennessee’s claim has two major interrelated aspects:

- 1) The CS 327 Project is an upgrade to Tennessee’s existing pipeline system.
- 2) The CS 327 Project is a “routine upgrade”, which qualifies for Exemption #11 from the “Highlands Act.”<sup>16</sup>

Tennessee’s relevant specific claims submitted to NJDEP on September 1, 2023, regarding the Project (defined by Tennessee as the East 300 Upgrade Project), the CS 327 Project (a subset of the Upgrade Project), and Exemption #11<sup>17</sup> are excerpted in Appendix 2.

### 4 The CS 327 Project is Not a Routine Upgrade, Qualifying for Exemption #11

#### 4.1 Introduction

This Section rebuts Tennessee’s claims that that the CS 327 Project is a “routine upgrade” qualifying for Exemption #11. It provides a meaningful definition of routine upgrade, and further demonstrates why CS 327 Project is **not** a routine upgrade and should **not** qualify for Exemption #11.

We have carefully reviewed Tennessee’s specific claims submitted to NJDEP regarding the East 300 Upgrade Project, the CS 327 Project, and Exemption #11 (excerpted in Appendix 2).

We agree with Tennessee that the East 300 Upgrade Project, and specifically the CS 327 Project (construction of CS 327 and related facilities), would typically be considered an upgrade to Tennessee’s existing pipeline system.<sup>18</sup>

However, we disagree with Tennessee on the main issue in dispute in this proceeding. This section explains why the East 300 Upgrade Project (and specifically the CS 327 Project (construction of CS 327 and related facilities) is **not** a routine upgrade to Tennessee’s existing pipeline system, which qualifies for Exemption #11 from the Highlands Act.<sup>19</sup>

Section 4.2 demonstrates why Tennessee’s overly broad definition of “routine upgrade” should be rejected. Section 4.3 lists utility activities clearly qualifying for Exemption #11 in the Highlands Act. Section 4.4 provides a meaningful definition of routine upgrade, based on our expert opinion. Section 4.5 demonstrates that this more meaningful definition of routine upgrade is consistent with Legislative intent and the Superior Court Decision. Finally, Section 4.6 provides further demonstration that the CS 327 Project is not a routine upgrade based on the FERC Review, including the consideration of alternatives.

## 4.2 Tennessee’s Overly Broad Definition of “Routine Upgrade” Should be Rejected

As explained by the Superior Court Decision, Exemption #11 from the Highlands Act refers to activity by a public utility which is “upgrade” and “routine,” but neither term is defined in the statute.<sup>20</sup>

After noting that “routine” is not defined by the Highlands Act, Tennessee has chosen to interpret Exemption #11 based upon a self-selected dictionary definition of routine, as opposed to a definition that is more specialized and customized for the context of Exemption #11 and Tennessee, and thus more meaningful and appropriate.

Tennessee bases its claims regarding Exemption #11 on a self-selected dictionary definition of routine (“**commonplace**” and “**in accordance with established procedure**”).<sup>21</sup> Tennessee claims that the CS 327 Project (the addition of incremental compression to an existing pipeline system) is “commonplace” and “in accordance with established procedure” of Tennessee and other pipeline companies in upgrading their pipeline systems, and that the CS 327 Project is thus a “routine upgrade” qualifying for Exemption #11.<sup>22</sup>

Consistent with this overly broad definition, Tennessee’s claims in this proceeding specify that “routine upgrades” include pipeline “looping,” as well as adding compression at new and existing compressor stations.<sup>23</sup> Tennessee and other pipeline companies also have a long and extensive history of constructing entirely new pipelines along entirely new rights-of-way in New Jersey and elsewhere. So according to Tennessee’s overly broad definition, routine upgrades would also presumably include construction of entirely new pipelines as being “commonplace” and “in accordance with established procedure” of Tennessee and other pipeline companies in upgrading their pipeline systems.

Put more simply and bluntly, Tennessee’s definition of “routine upgrade” is in practice so broad and unrestricted as to include all (or at least virtually all) activities that Tennessee might ever seek to locate within the Highlands Preservation Area. And all (or virtually all) such activities would therefore qualify for Exemption #11. In effect, utility activities would qualify for blanket, unrestricted exemptions to the Highlands Act.



Tennessee's definition of routine is overly broad in the context of the CS 327 Project and Exemption #11, and inconsistent with the Superior Court Decision guidance. As interpreted by the Superior Court Decision (see Section 2.4):

- exemptions to the Highlands Act are to be strictly construed and interpreted narrowly
- “upgrades” must be “routine” in order to qualify for Exemption #11
- “routine” should be applied as a modifier of “upgrade” to plainly differentiate upgrades that are obviously of a vastly different character.

Tennessee's overly broad definition of “routine” is also inconsistent with Legislative intent. If the Legislature had intended that utility activities would be eligible for blanket, unrestricted exemptions, this could and should have been clearly indicated in the Highlands Act. But absent clear Legislative intent to provide such a broad categorical exemption, the Highlands Act should be properly applied (notably by NJDEP), so that exemptions are strictly construed and interpreted narrowly (consistent with the Superior Court Decision). See Section 2.2 for further discussion on why public utility upgrades and specifically CS 327 do not qualify for blanket, unrestricted exemptions to the Highlands Act. See also Section 4.5 for further discussion of the consistency of the definition of “routine” with Legislative intent.

### 4.3 Utility Activities Clearly Qualifying for Exemption #11

According to the Highlands Act,<sup>24</sup> Exemption #11 specifies that the following types of activities by a public utility are potentially qualifying:

- maintenance and operations
- rehabilitation
- preservation
- reconstruction
- repair
- upgrade.

Furthermore, according to the Highlands Act,<sup>25</sup> in order to qualify for Exemption #11, utility activities must have all of the following attributes:

- routine<sup>26</sup>
- of public utility lines, rights of way, or systems
- consistent with the goals and purposes of the Highlands Act.

## 4.4 Meaningful Definition of a Routine Upgrade, Qualifying for Exemption #11

In our expert opinion (based on extensive technical experience in energy regulation), a meaningful definition of “routine upgrade,” and more generally the utility activities which potentially qualify for Exemption #11, must consider the highly specialized nature of utility activities. When properly considered, the various types of activities potentially qualifying for Exemption #11 are shown to be overall somewhat similar and often overlapping. Such activities are a small subset of the huge range of upgrade activities that would qualify under Tennessee’s overly broad definition of routine.

Utility systems<sup>27</sup> are often highly specialized, customized, and differ substantially from other (non-utility) systems.<sup>28</sup> In turn, utility systems often have extensive requirements for (and utilization of) the types of activities listed in the Highlands Act as potentially qualifying for Exemption #11. Utility “projects” can involve a mix and overlap of the types of activities listed. Notably, the various utility activities listed in Exemption #11 often include aspects which provide an upgrade. When older systems are rehabilitated or replaced with newer systems, these often provide better performance and features, and thus can be defined as upgrades.<sup>29</sup>

Utility systems sometimes fail and then need to be repaired or replaced as quickly as possible to enable restoration of utility services.<sup>30</sup> But even when the focus is on rapid restoration of utility services following unplanned outages, there can (and typically are) associated utility activities that can be defined as upgrades. Older systems are changed to incorporate now available newer systems, which often provide better performance and features.

In this highly specialized utility context, Exemption #11 should be understood and interpreted as applicable and limited to routine utility activities, which are typically:

- minor changes to existing utility systems
- at the same locations as existing systems
- lower cost
- faster and simpler to implement
- otherwise less potentially consequential.

Exemption #11 should be further understood and interpreted to include a full range of routine utility activities enabling rapid restoration of utility services following outages, including activities which provide an upgrade.

Similarly, Exemption #11 should be understood and interpreted as **not** applicable to major utility upgrade activities, which are typically:

- major changes to existing and new utility systems
- at locations that can differ substantially from existing systems

- higher cost
- slower and more complex to implement
- otherwise more potentially consequential.

The proposed PennEast natural gas pipeline provides a notable example of major utility upgrade activities which were **not** routine upgrades potentially qualifying for Exemption #11. PennEast was a large new pipeline along new rights-of-way in New Jersey and Pennsylvania.<sup>31</sup>

As detailed by the Superior Court Decision (see Section 2.2), the CS 327 Project (CS 327 and related facilities) is quite extensive and substantial, costing over \$100 million, and including:

- a new compressor station, with a 19,000 hp-rated electric motor-driven compressor unit
- separate 69 kV electrical substation, and power lines connecting to an electric transmission line to be constructed by Orange and Rockland Utilities
- various other buildings, equipment, and facilities.

As such, in our expert opinion, the CS 327 Project (specifically CS 327 and related facilities) in no way conforms to this meaningful definition of a routine upgrade, qualifying for Exemption #11. As will be elaborated in the next section, this conclusion is consistent with the guidance of the Superior Court Decision (summarized in Section 2.4). Relatively major changes (that are high cost and otherwise potentially highly consequential) are **not** routine upgrades potentially qualifying for Exemption #11.

#### 4.5 The More Meaningful Definition of Routine Upgrade is Consistent with Legislative Intent and Superior Court Decision

The more meaningful interpretation of routine upgrade and Exemption #11 provided in Section 4.4 is consistent with Legislative intent and the Superior Court Decision.

It is reasonable to assume that the Legislature intended that the Highlands Act would **not** unduly interfere with routine utility activities and operations. And it is further reasonable to assume that the Legislature particularly intended that the Highlands Act would **not** unduly impede restoration of utility services following unplanned outages due to severe weather and other emergencies.

As described in Section 4.3, Exemption #11 includes a full range of routine utility activities, including those that enable utility services to be restored as quickly as possible following outages. As explained above, routine utility activities (including those enabling rapid restoration of utility services) can (and typically do) include aspects which provide an upgrade.

In this context, the Superior Court Decision is highly instructive regarding the wide range of utility upgrades and the subset thereof which could qualify as routine (see Sections 2.3 and 2.4). The Superior Court Decision provides the example of an electric utility with various upgrades ranging from relatively minor changes to existing transmission lines (shifting to newer, better wires), to relatively major changes (replacing coal-fired generation with a nuclear reactor). The Superior Court Decision emphasized that “routine” should be applied as a modifier to plainly differentiate upgrades which are obviously of vastly different character.

In turn, it is highly instructive to consider a situation where electric transmission lines are damaged and forced out of service due to severe weather or some other emergency. In order to rapidly restore service, the older damaged wires are replaced with the newer better wires now readily available. These new wires restore service, but they also provide an upgrade.

As this example helps to illustrate, Exemption #11 includes routine upgrades, so as not to be overly restrictive and disruptive of routine utility activities (including rapid restoration of service after outages). It is reasonable to assume that the Legislature intended that the routine utility activities qualifying for Exemption #11 should not be limited only to activities not providing an upgrade. It would be highly problematic (verging on ludicrous) that qualifying for Exemption #11 be contingent on a utility only replacing old systems with similar old systems that provided no upgrades, especially because those old systems might no longer be readily available.

The Superior Court Decision is particularly instructive, because it is (in large part) directly applicable to the specifics of the CS 327 Project. Tennessee is mainly a gas pipeline company, but the Tennessee pipeline system includes components that would more typically be part of an electric utility system. CS 327 is an electrically driven compressor station, with related facilities including a separate 69 kV electrical substation and power lines connecting to an electric transmission line to be constructed by Orange and Rockland Utilities (see Section 2.2 and endnote 11).

The CS 327 Project includes construction of new electrical systems, with wiring that incorporates currently available technological improvements. The CS 327 Project is a very extensive new construction project, which is **not** a routine upgrade qualifying for Exemption #11.

But the service restoration scenario described above would typically qualify for Exemption #11, even if it did provide a routine upgrade. More specifically, if the wiring at CS 327 (and related facilities) was damaged years after CS 327 was completed and began operating, Tennessee would then replace the damaged systems with the newer, better wiring then available. This would restore service, but it would also provide a routine upgrade.

This meaningful interpretation of routine utility upgrades and other activities (provided in Section 4.4, and elaborated upon here in Section 4.5) is consistent with Legislative intent and

the Superior Court Decision, as well as FERC rules and practices (see Section 4.6.1 and especially endnote 37).

## 4.6 FERC Review and Consideration of Alternatives Further Demonstrates that CS 327 Project is Not a Routine Upgrade

As noted by Tennessee, the East 300 Upgrade Project, including the CS 327 Project (CS 327 and related facilities), was subject to review and permitting by the US Federal Energy Regulatory Commission (FERC).<sup>32</sup> FERC's review of the Project, and specifically CS 327, included:

- an Environmental Assessment (EA)<sup>33</sup>
- an Environmental Impact Statement (EIS), which incorporated by reference and attached the previously prepared EA<sup>34</sup>
- the FERC Order Issuing Certificate ("FERC Certificate") authorizing Tennessee to construct and operate the Project.<sup>35</sup>

The type of routine activities eligible for Exemption #11 would not typically (a) require an extensive FERC review in the first place; or (b) entail a consideration of alternatives as was undertaken in the FERC review. The FERC review and permitting of the East 300 Upgrade Project, including the CS 327 Project, provides additional demonstration that these activities comprise a major upgrade, which is **not** routine and does **not** qualify for Exemption #11.

Section 4.6.1 describes the requirements for a Construction Permit and EA under FERC. Section 4.6.2 describes the consideration of alternatives in the FERC review.

### 4.6.1 FERC Requirements for a Construction Permit, EA, and EIS

FERC has very detailed rules defining the natural gas activities and procedures for review and permitting by FERC.<sup>36</sup> Natural gas pipeline construction projects must apply for a Certificate of Public Convenience and Necessity ("FERC Certificate" or more simply, a construction permit).

Preparation of an EIS is required for major pipeline construction projects using rights-of-way in which there is no existing natural gas pipeline. Preparation of an EA is required for other pipeline construction projects, including:

- adding compression (at new and/or existing compressor stations)
- pipeline looping.

As discussed above, an EA was prepared for the East 300 Upgrade Project, and an EIS was subsequently prepared, which incorporated by reference and attached the previously prepared EA. The FERC EA was required for the Project because the East 300 Upgrade (including the CS 327 Project) adds compression at new compressor stations. The fact that this FERC review was

triggered in the first place is further demonstration that the activities associated with the Project comprise a major upgrade which is non-routine.

The type of FERC review that was required for the East 300 Upgrade Project is **not** required for routine natural gas activities, which are typically:

- minor changes to existing utility systems
- at the same locations as existing systems
- lower cost
- faster and simpler to implement
- otherwise less potentially consequential; and/or
- enable rapid restoration of utility services following outages.<sup>37</sup>

#### *4.6.2 Consideration of Alternatives in the FERC Review*

Environmental assessment includes consideration of a reasonable range of alternatives that can accomplish the purpose and need of the proposed action.<sup>38</sup> FERC's review of the Project, and specifically the CS 327 Project, included consideration of alternatives to CS 327 in the EA,<sup>39</sup> EIS,<sup>40</sup> and the FERC Order Issuing FERC Certificate.<sup>41</sup> It should be understood that these alternatives to CS 327 considered in FERC's review were those developed by Tennessee and submitted to FERC by Tennessee.<sup>42</sup>

As clearly demonstrated by the consideration of alternatives for CS 327, the increased gas transportation capacity that CS 327 would provide could have instead been provided by multiple alternatives at other locations, including:

- a new compressor station at any one of multiple locations other than the West Milford site proposed for CS 327,
- looping the existing pipeline (adding new pipeline along the existing pipeline right of way at locations other than that of CS 327)
- a combination of adding compression at existing compressor stations CS 321 and CS 325, and looping the existing pipeline (all at locations other than that of CS 327).

FERC concluded that:

- all of the above alternatives were technically feasible
- the alternatives offered some relative advantages in terms of reduced impacts compared with CS 327 at the proposed West Milford site
- these advantages were offset by some other greater impacts compared with CS 327
- none of the alternatives provided significant overall environmental advantage over CS 327, so FERC did not choose any of the alternatives.

The consideration of alternatives for the East 300 Upgrade Project, and specifically CS 327 further demonstrates that the CS 327 Project is **not** a routine upgrade eligible for Exemption

#11. The type of routine activities eligible for Exemption #11 would not typically entail this type of consideration of alternatives. In particular, the routine activities eligible for Exemption #11 would be typically constrained to a specific location, notably where existing utility systems are already located. But as clearly demonstrated by the consideration of alternatives for CS 327, the increased gas transportation capacity that CS 327 would provide could have also been provided by multiple alternatives at other locations.

## 5 Conclusion

In our expert opinion, it is clear that the CS 327 Project is **not** a routine upgrade and does **not** qualify for Exemption #11 of the Highlands Act.

This opinion is based on the following:

- guidance from the Superior Court Decision relevant to the applicability of Exemption #11 to the CS 327 Project (Section 2);<sup>43</sup>
- a rebuttal of Tennessee’s claims that the 327 Project is a “routine upgrade,” qualifying for Exemption #11 (Section 3); these claims are largely based on an overly broad definition of “routine upgrade” (Section 4.2);
- a more meaningful definition of routine upgrade, based on our extensive technical experience in energy regulation (Section 4.4); and consistent with Legislative Intent and the Superior Court Decision (Section 4.5);
- further demonstration that the CS 327 Project is not a routine upgrade based on the FERC Review, including the consideration of alternatives (Section 4.6).

## Appendix 1: Qualifications of Ian Goodman and Brigid Rowan

This expert opinion has been co-authored by Ian Goodman and Brigid Rowan of The Goodman Group, Ltd.

### Ian Goodman<sup>44</sup>

Ian Goodman is President and founder of The Goodman Group, Ltd. For over 40 years, he has conducted research and consulted in energy regulation and economics (related to conventional, unconventional and renewable energy, and energy efficiency). His practice has addressed a broad range of issues, including economic development and environmental impacts of large energy supply, infrastructure and transportation projects (including pipelines), North American and global oil, gas, coal and electricity markets, as well as regulation of natural gas and electricity. He also has expertise in the planning and operations of energy systems, as well as interjurisdictional energy trade in North America. Of direct relevance to the Highlands Applicability Determination, Mr. Goodman has extensive experience pertaining to natural gas regulation by federal and state agencies, including issues related to environmental assessment and project permitting, and review of agency decisions in federal and state legal proceedings.

Since 2011, his practice has focused on fossil fuel supply (notably shale oil and gas, Canadian tar sands and coal) and transportation logistics (including pipelines, rail and transloading facilities). Mr. Goodman has authored (or co-authored with Ms. Rowan) 15 expert reports on the most controversial oil, gas and coal projects in North America. These include crude oil pipelines (Keystone XL, Enbridge Line 9B, Trans Mountain Expansion Project), natural gas pipelines (Williams Northeast Supply Enhancement (NESE) Project and PennEast in New Jersey)<sup>45</sup> and energy logistics facilities (Millennium Bulk Terminals (coal), Vancouver Energy Distribution Terminal (crude) and Kalama Manufacturing & Marine Export Facility (shale gas/methanol)).

These expert reports evaluate the economic and environmental impacts of fossil fuel production and transportation (particularly shale oil and gas and tar sands crude production and interjurisdictional pipelines, transloading facilities and crude-by-rail projects). They include analysis of related markets for energy supply produced and/or transported.

Mr. Goodman has provided expert evidence in over 50 regulatory, environmental assessment, and legal proceedings in various North American jurisdictions including California, Washington, Colorado, North Dakota, South Dakota, New York, New Jersey, three New England states, Florida, British Columbia, Manitoba, Ontario, Quebec and before the US Federal Energy Regulatory Commission (FERC) and the Canadian Energy Regulator (CER), and United States District Courts. He has also assisted counsel in those and other proceedings. His clients comprise governments (including Indigenous and tribal authorities) and regulators,





environmental, public interest and customer groups, start-ups and energy sector companies. Mr. Goodman is the author or co-author of over 60 publications and major reports relating to the energy industry.

**Brigid Rowan**<sup>46</sup>

Brigid Rowan, Senior Economist at TGG, is an energy economist with over 25 years of experience in the areas of energy and regulatory economics (related to conventional, unconventional and renewable energy, and energy efficiency). Ms. Rowan's practice is informed by evidence that an energy transition, characterized by structural transformation of our energy systems, is required to address the climate emergency. She has examined economic development and environmental impacts of large energy supply, infrastructure and transportation projects (including pipelines), North American and global oil, gas, coal and electricity markets, as well as regulation of natural gas, electricity and renewables.

Ms. Rowan's work has challenged the economic rationale for large fossil-fuel-based energy projects (notably Canadian tar sands, shale oil and gas, coal, pipelines and rail) and supported the transition to renewables and energy efficiency. With Mr. Goodman, she has co-authored 13 expert reports on the most controversial oil, gas and coal projects in North America. These include crude oil pipelines (Keystone XL, Enbridge Line 9B, Trans Mountain), natural gas pipelines (Williams Northeast Supply Enhancement (NESE) Project and PennEast in New Jersey) and energy logistics facilities (Millennium Bulk Terminal (coal)). She has extensive experience collaborating with Mr. Goodman on cases pertaining to natural gas regulation by federal and state agencies, including issues related to environmental assessment and project permitting. Brigid has also filed evidence and provided support to counsel in over 25 regulatory proceedings before the *Régie de l'énergie du Québec* (Quebec Energy Board) and the Ontario Energy Board (OEB), including 15 in natural gas regulation.

Ms. Rowan has provided consulting services in energy economics and regulation and expert evidence in Quebec, Ontario, Manitoba, British Columbia, Washington, California, Colorado, North and South Dakota, New York, New Jersey and New England, as well as at the Canadian Energy Regulator (CER) and the US Federal Energy Regulatory Commission (FERC).

Brigid's clients include environmental, Indigenous and public interest groups, energy companies, start-ups and governments. She has held leadership positions in start-ups and environmental non-profits, and worked in energy marketing and communications in private sector companies.

## Appendix 2: Tennessee’s Specific Claims Regarding the CS 327 Project and Exemption #11

Tennessee’s specific claims submitted to NJDEP on September 1, 2023, regarding the Project (defined by Tennessee as the East 300 Upgrade Project), the CS 327 Project (a subset of the Upgrade Project), and Exemption #11<sup>47</sup> are excerpted below:

Tennessee submits that the construction of CS 327 is a routine upgrade to its existing pipeline system and, therefore, the NJDEP must conclude that Tennessee continues to qualify for Exemption #11.<sup>48</sup>

[...]

**There is no question that the Project is an upgrade to Tennessee’s existing pipeline system**, since the Project, as a whole, would create 115,000 dekatherms per day (Dth/d) of additional firm transportation capacity on Tennessee’s existing pipeline system [...] **The only question is whether the Project, and more specifically, the construction of CS 327, is a “routine upgrade”.**

[...] **“routine” is not defined by the Highlands Act but has been defined to mean “of a commonplace or repetitious character” or “of, relating to, or being in accordance with established procedure.”** Merriam-Webster.com Dictionary [...] In order to understand whether construction of CS 327 is a routine upgrade to Tennessee’s pipeline system, it is important to understand what Tennessee is and how it can upgrade its pipeline system.<sup>49</sup>

[...]

Tennessee (as well as all other interstate natural gas pipeline operators regulated by the FERC) routinely upgrade their existing pipeline systems to meet shippers’ stated needs. One established method to accommodate shipper requests for transportation capacity is the addition of incremental compression by either constructing a new compressor station or upgrading existing compressor stations. [...] Another way pipeline operators routinely upgrade their existing systems is by pipeline “looping”, which is the installation of a pipeline along an existing pipeline that ties in at both ends for the express purpose of increasing the transmission capacity of the existing line. [footnote 3 in original: Examples of projects that involve looping include Tennessee’s 300 Line Project in 2010 and its Northeast Upgrade Project in 2012. Tennessee received a HAD granting Exemption #11 for both projects.] In addition, pipeline operators

routinely upgrade their existing systems through a combination of both adding compression and pipeline looping. See Troutman Cert. Par. 6.

Here, the Project includes several components, including the construction of new CS 327, that add incremental compression to Tennessee's existing pipeline system. The construction of CS 327 is a routine upgrade to Tennessee's existing gas pipeline system (as are the other Project components), as CS 327 will be connected into Tennessee's existing pipeline system that crosses the CS 327 site in order to increase the transportation capacity of the pipeline system [...]. The Project will also assist in eliminating capacity constraints in the region, especially during periods of peak demand, ensuring that the region is able to meet residential, commercial, and industrial heating and cooling needs, and also providing added reliability during planned and unplanned maintenance activities on Tennessee's existing natural gas pipeline system within the State of New Jersey and providing natural gas to customers in the northeastern United States. See Troutman Cert. Par. 11. Thus, **the addition of incremental compression to an existing pipeline system is "commonplace" and "in accordance with established procedure" of Tennessee and other FERC-regulated pipeline companies in upgrading their pipeline systems. Given the limited ways in which a natural gas pipeline system can be upgraded to provide incremental capacity to customers, it is clear that Tennessee's Project is a routine upgrade to its existing pipeline system.**<sup>50</sup>

## Endnotes

<sup>1</sup> Superior Court Of New Jersey, Appellate Division, Docket No. A-3616-20, In the Matter of Proposed Construction of Compressor Station (CS327), Office Building and Appurtenant Structures, Highlands Applicability Determination, Program Interest No.: 1615-17-0004.2 (APD200001), Decided August 31, 2023.

<sup>2</sup> Superior Court Decision, p. 23.

<sup>3</sup> As emphasized in the Superior Court Decision:

The DEP determined construction of the West Milford compressor station "meets the definition of 'Major Highlands Development'" under N.J.A.C. 7:38-1.4, but the project was not "regulated by the Highlands Act" because it qualified for Exemption 11 and was consistent with the Water Quality Management Plan rules. (p. 8)

No party disputes the manifest purpose of the Highlands Act is to reduce "the environmental impacts of sprawl development" in the Highlands Region by subjecting "major development" in the Preservation Area, which all agree the West Milford compressor station indisputably is, "to stringent water and natural resource protection standards, policies, planning, and regulation." N.J.S.A. 13:20-2. (p. 18)

<sup>4</sup> As also emphasized in the Superior Court Decision:

It is thus beyond cavil that the Highlands Act represents "a comprehensive policy designed to protect environmental interests," exemptions from which are to be strictly construed. (pp. 11-12)

Because the Legislature plainly intended to subject major development in the Preservation Area to stringent regulation, we are compelled to interpret exemptions from the Act narrowly. (p. 16)

<sup>5</sup> Superior Court Decision, pp. 5-6 and 22-23.

<sup>6</sup> Superior Court Decision, p. 12.

<sup>7</sup> Superior Court Decision, p. 17.

<sup>8</sup> Superior Court Decision, pp. 4-5, 22-23.

<sup>9</sup> Superior Court Decision, p. 18-19.

<sup>10</sup> Exemption #11 is restricted to activities by a public utility, with public utility defined in the Highlands Act as "the same as that term is defined in N.J.S.A. 48:2-13." Tennessee must qualify as a public utility for purposes of qualifying for Exemption 11, but this issue was not addressed in the Superior Court Decision:

We do not consider whether Tennessee qualifies as a public utility for purposes of qualifying for Exemption 11 as appellants only challenged Tennessee's status in their reply brief. (p. 5, footnote 4)

<sup>11</sup> See the following relevant excerpts from the Superior Court Decision:  
(endnotes continued on next page)

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Guided by the Legislature's express declaration "that it is in the public interest of all the citizens of the State" that the Preservation Area be subject "to stringent water and natural resource protection standards, policies, planning, and regulation," *ibid.*, we cannot accept the Department and Tennessee's position that the Legislature intended Exemption 11 for "the routine maintenance and operations, rehabilitation, preservation, reconstruction, repair, or upgrade of public utility lines, rights of way, or systems" in the Preservation Area to exempt any upgrade a utility might propose and, specifically, to exempt Tennessee's construction of a new compressor station and appurtenant facilities, including its own electric substation, at a cost of over \$100 million with no showing it constituted only a "routine upgrade" [footnote 15 in original omitted] of its gas pipeline system. Neither the language and structure of the Exemption nor the history and purpose of the Highlands Act support that result.  
(pp. 22-23)

Tennessee intends [...] to construct a new station and appurtenant facilities in West Milford

[...]

The new station would house a 19,000 hp-rated electric motor-driven compressor unit and connect to Tennessee's 300 Line pipeline just south of the station on the same site. [footnote 6 in original:

In addition to the compressor building, Tennessee plans to construct a new 3,500-square-foot office building with potable water and a septic system, including a 1,000-gallon holding tank for waste, as well as a new 925-square-foot electrical building to house the variable frequency drive and motor control center for its compressor unit. Tennessee also plans to install the following auxiliary equipment:

(1) an electric motor ventilation system; (2) vent silencers; (3) gas coolers; (4) a lube oil cooler and piping; (5) filter separators; (6) an auxiliary building fitted with automation control panels; (7) an air compressor; (8) a 375-kilowatt emergency generator; (9) domestic fuel gas skid; (10) pipeline liquids storage tank; (11) building heaters; (12) mainline valve piping; and (13) suction, discharge, and vent piping.

Tennessee will also be building its own 69-kilovolt electrical substation on the site and constructing an electrical conduit from that electric substation to connect to an electric transmission line to be constructed by Orange and Rockland Utilities along Burnt Meadow Road, which borders the site. Tennessee estimates the cost of its East 300 Upgrade Project will be \$246 million. The West Milford compressor station is estimated to make up nearly \$108 million of those costs.]

(pp. 5-6)

(endnotes continued on next page)

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<sup>12</sup> Superior Court Decision, p. 17.

<sup>13</sup> Transmission lines with carbon and/or composite cores, instead of conventional conductors (aluminum with steel wire cores) can carry more capacity while maintaining better performance at higher operating temperatures. See e.g., [https://acore.org/wp-content/uploads/2022/03/Advanced\\_Conductors\\_to\\_Accelerate\\_Grid\\_Decarbonization.pdf](https://acore.org/wp-content/uploads/2022/03/Advanced_Conductors_to_Accelerate_Grid_Decarbonization.pdf)

<sup>14</sup> Superior Court Decision, pp. 4-5, 22-23.

<sup>15</sup> Superior Court Decision, pp. 18-19.

<sup>16</sup> As previously explained in Section 2.1 (and especially endnote 10), Exemption #11 is restricted to activities by a public utility, as defined in the Highlands Act. Tennessee's claims that CS 327 qualifies for Exemption #11 are thus premised on a claim that Tennessee qualifies as a public utility. The Superior Court Decision (p. 5, footnote 4) did not consider whether Tennessee qualifies a public utility as defined in the Highlands Act.

<sup>17</sup> Letter to Jennifer Moriarty, Director, NJDEP from Christine A. Roy, Rutter & Roy, LLP, on behalf of Tennessee, September 1, 2023.

<sup>18</sup> Activities that are considered an upgrade by a gas pipeline company can also have adverse impacts. Specifically, the East 300 Upgrade Project will result in higher operating pressures within Tennessee's existing pipeline system. And all else being equal, when operating pressures are higher, an existing pipeline is more likely to encounter various problems (including ruptures, leaks, and accidents).

The East 300 Upgrade Project adds incremental compression to Tennessee's existing pipeline system (at new CS 327 and at existing compressor stations (CS 321 and CS 325 in NJ and PA)). Compared with operations with currently available facilities, the Project will result in operating pressures within Tennessee's existing pipeline system that:

- are higher at some times and on average;
- should still be within currently authorized MAOP (Maximum Allowable Operating Pressure), which Tennessee has not to date proposed to increase.

<sup>19</sup> As previously explained (in Sections 2.1 and 3, and especially endnotes 10 and 16), Exemption #11 is restricted to activities by a public utility, as defined in the Highlands Act. Tennessee's Claims that CS 327 qualifies for Exemption #11 are thus premised on a claim that Tennessee qualifies as a public utility. The Superior Court Decision (p. 5, footnote 4) did not consider whether Tennessee qualifies a public utility as defined in the Highlands Act. Likewise, this expert opinion has not considered this issue. We have concluded that that the Project, and specifically construction of CS 327, is **not** a routine upgrade to Tennessee's existing pipeline system, which qualifies for Exemption #11 from the Highlands Act, even if Tennessee is a public utility as defined in the Highlands Act.

<sup>20</sup> Superior Court Decision, p. 12.

<sup>21</sup> Letter to Jennifer Moriarty, Director, NJDEP from Christine A. Roy, Rutter & Roy, LLP, on behalf of Tennessee, September 1, 2023, pp. 5-7; see also Appendix 2 for the full relevant excerpt from the Letter.

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<sup>22</sup> Ibid.

<sup>23</sup> Ibid. Pipeline looping is the installation of a new pipeline along an existing pipeline that ties in at both ends for the express purpose of increasing the transmission capacity of the existing line.

<sup>24</sup> Highlands Water Protection and Planning Act (Highlands Act), N.J.S.A. 13:20–1 et seq.

<sup>25</sup> Ibid.

<sup>26</sup> As interpreted in the Superior Court Decision (especially pp. 3-5, 20-23), upgrade and all other types of utility activity must be routine in order to qualify for Exemption #11.

<sup>27</sup> For simplicity and brevity, the discussion in this section refers to “utility systems.” But it should be understood that “utility systems” can and typically do involve some mix of facilities, equipment, and sub-systems.

<sup>28</sup> Utility systems often have some mix of the following attributes:

- high cost and value
- requirements for high performance, reliability, and quick restoration of service after outages
- potential significant adverse impacts (including relating to outages, accidents, emissions, noise, and safety)
- extensive regulatory requirements
- supply chains and requirements for labor and services which are complex, specialized, and could have long lead times
- long service lives.

<sup>29</sup> As elaborated in endnote 28, utility systems are often highly specialized, customized, and have long service lives. So when older utility systems are rehabilitated, repaired, or otherwise modified, these changes typically incorporate the significant technological and other improvements then available.

<sup>30</sup> Unplanned outages can occur owing to severe weather, accidents, and other contingencies which are difficult to predict and avoid.

<sup>31</sup> The PennEast Pipeline project was subject to review and permitting involving NJDEP and the Highlands Act. See e.g., Order Issuing Certificates, PennEast Pipeline Company, L.L.C., FERC Docket No. CP CP15-558-000, January 19, 2018, 179 162 FERC ¶ 61,053 (2018).

<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=01F2131E-66E2-5005-8110-C31FAFC91712>

<sup>32</sup> Letter to Jennifer Moriarty, Director, NJDEP from Christine A. Roy, Rutter & Roy, LLP, on behalf of Tennessee, September 1, 2023, pp. 3-5.

<sup>33</sup> Environmental Assessment, East 300 Upgrade Project, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, February 2021.

<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=020BDC6B-66E2-5005-8110-C31FAFC91712>

<sup>34</sup> Final Environmental Impact Statement, East 300 Upgrade Project, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, September 2021, FERC/EIS-0304F.

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<sup>35</sup> Order Issuing Certificate, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, April 21, 2022, 179 FERC ¶ 61,041 (2022).

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<sup>36</sup> <https://www.ecfr.gov/current/title-18/chapter-I/subchapter-E/part-157> Applications for Certificates of Public Convenience and Necessity [...] under Section 7 of the Natural Gas Act <https://www.ecfr.gov/current/title-18/chapter-I/subchapter-W/part-380> The regulations which implement FERC's procedures under the National Environmental Policy Act of 1969 (NEPA).

<sup>37</sup> For an existing gas pipeline with a previously issued FERC Certificate authorizing construction and operations, projects (to make miscellaneous rearrangements of any facility, or acquire, construct, replace, or operate any eligible facility) are automatically authorized, if the project meets either of the following conditions:

- **required to restore service in an emergency;**
- **does not exceed cost limitations: \$14 million in 2023**, adjusted for inflation annually; projects should not be segmented to meet these cost limitations.

Ibid, specifically <https://www.ecfr.gov/current/title-18/section-157.208>

Certain natural gas activities are categorically excluded from requirements to prepare an EA or EIS, including projects with all of the following attributes:

- limited to ancillary facilities (taps, meters, and regulating facilities);
- located completely within an existing natural gas pipeline right-of-way or at a compressor station if company records show the land use of the vicinity has not changed since the original facilities were installed;
- no significant nonjurisdictional facilities would be constructed in association with construction of the interconnection facilities;
- not subject to exceptions to categorical exclusion (such as when projects may have an effect on Indian lands).

Ibid, specifically <https://www.ecfr.gov/current/title-18/section-380.4>

<sup>38</sup> See e.g.,

<https://www.ecfr.gov/current/title-18/chapter-I/subchapter-W/part-380> The regulations which implement FERC's procedures under the National Environmental Policy Act of 1969 (NEPA).

<https://www.epa.gov/nepa/national-environmental-policy-act-review-process#ea>

<https://www.epa.gov/nepa/national-environmental-policy-act-review-process#EIS>

<sup>39</sup> Environmental Assessment, East 300 Upgrade Project, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, February 2021, especially pp. 98-99.

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<sup>40</sup> Final Environmental Impact Statement, East 300 Upgrade Project, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, September 2021, FERC/EIS-0304F, especially p. 11.

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<sup>41</sup> Order Issuing Certificate, Tennessee Gas Pipeline Company, L.L.C., FERC Docket No. CP20-493-000, April 21, 2022, 179 FERC ¶ 61,041 (2022), especially p. 38.

<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=054FCAE7-C3B7-CDD9-97AA-804E4DE00000>

<sup>42</sup> East 300 Upgrade Project, Tennessee Gas Pipeline Company, L.L.C., Resource Report 10: Alternatives, June 2020.

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<sup>43</sup> Our conclusion appears to be consistent with the guidance of the Superior Court Decision, which implies that relatively major changes (that are high cost and otherwise potentially highly consequential) are not routine upgrades potentially qualifying for Exemption #11.

<sup>44</sup> For Ian Goodman's full CV, please see:

<https://thegoodman.com/wp-content/uploads/2021/09/TGG2020821IanGoodman.pdf>

<sup>45</sup> For a full description of relevant pipeline projects for which Ian Goodman and Brigid Rowan have submitted expert reports and/or testimony, please see

<https://thegoodman.com/project/?filter=pipeline>. For more information on: TGG's extensive range of work, please see <https://thegoodman.com/project/>; or a description of projects specific to natural gas, please see <https://thegoodman.com/project/?filter=natural-gas>.

<sup>46</sup> For Brigid Rowan's full CV, please see:

<https://thegoodman.com/wp-content/uploads/2021/09/TGG20210409BrigidRowan.pdf>

<sup>47</sup> Letter to Jennifer Moriarty, Director, NJDEP from Christine A. Roy, Rutter & Roy, LLP, on behalf of Tennessee, September 1, 2023

<sup>48</sup> Ibid, p. 2.

<sup>49</sup> Ibid, p. 5, emphasis added.

<sup>50</sup> Ibid, pp. 6-7, emphasis added.