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September 14, 2026

VIA HAND DELIVERY AND ELECTRONIC MAIL

Stephanie De La Rosa, Coordinator
Energy Facility Siting Board
89 Jefferson Boulevard
Warwick, RI 02888

Re: **Docket No. SB-2026-03 - The Narragansett Electric Company**
332 West Farnum-Kent County 345 kV Line Rebuild Project
North Smithfield, Smithfield, Johnston, Cranston, West Warwick and Warwick
Responses to EFSB Data Request – Set 1

Dear Ms. De La Rosa:

On behalf of The Narragansett Electric Company (the "Company"), I have enclosed the Company's response to the Rhode Island Energy Facility Siting Board's First Set of Data Requests in the above-referenced docket.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-709-3351.

Sincerely,

George W. Watson III

Enclosures

Copy to: Docket No. SB-2026-03 Service List

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate were electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Heidi J. Seddon

September 14, 2026
Date

SB-2026-03 - The Narragansett Electric Company d/b/a Rhode Island Energy CR12067: 332 West Farnum-Kent County 345 kV Line Rebuild Project – North Smithfield, Smithfield, Johnston, Cranston, West Warwick and Warwick, Rhode Island
Updated 9/4/26

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The Narragansett Electric Company
Docket No. SB-2026-03
In Re: The Narragansett Electric Company
332 West Farnum-Kent County 345 kV Line Rebuild Project
(North Smithfield, Smithfield, Johnston, Cranston, West Warwick, Warwick)
Response to EFSB's First Set of Data Request
Issued on September 3, 2026

EFSB 1-1

Request:

In a NEPOOL Planning Advisory Committee (PAC) meeting on October 23, 2025, ISO NE informed the PAC that it would be performing "interim reviews" of nine asset condition projects while the permanent processes relating to an Asset Condition Reviewer was being developed. See this link: a04_pac_acr_presentation.pdf. On page 15 of the presentation, Rhode Island Energy's "Line 332" project was listed as one of the nine projects. Please confirm whether the referenced "Line 332" is the same project as proposed in this EFSB docket and provide an update regarding the interim review process.

Response:

The referenced Line 332 is the same project as proposed in this EFSB docket. The project's interim review began in late May with an advisory presentation by Rhode Island Energy ("RIE") to the ISO-NE Planning Advisory Committee. At this time, the project is still under review by ISO-NE. Please refer to Attachment EFSB 1-1 for RIE's advisory presentation.

Prepared by or under the supervision of: Steven D. Selkregg

Rhode Island Energy™
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332 345kV Line Rebuild
West Farnum to Kent County

George Nemeh
Rhode Island Energy
ISO-NE Planning Advisory Committee Meeting
May 27, 2026

Project Summary

Rhode Island Energy™
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Project Drivers
• Physical deterioration such as pole deterioration/rot, pole cracking, damaged/contaminated insulators, and other hardware issues • Conductor and shield wire approaching end of useful life and are susceptible to loss of mechanical strength • Numerous broken guy wires, rusted splices, and loose/downed static wires have been identified through inspections • Line does not meet current company lightning performance design standards

Alternatives

Solution	Description	Total Cost Estimate
Alternative 1 – Base Alternative	Targeted Wood Structure Replacements	$62.4M (-50%,+200%)
Alternative 2 – Preferred Alternative	Full Rebuild of the 332 345 kV line	$122.9M (-25%,+50%)

Preferred Alternative

Solution	Reason for Recommendation	Total Cost Estimate
Alternative 2 –	Alternative 2 addresses all concerns related to the line's overall health and condition at lowest long-term cost. Alternative 1 introduces additional risk, such as higher likelihood of future maintenance and unplanned outages, and has a larger long-term environmental, social, and financial impact.	$122.9M (-25%,+50%)

Outline

- Background Information
- Project Needs and Drivers
- Review of Transmission Studies
- Comparative Analysis of Alternatives
- Planned Project Ratings
- Conclusions
- Schedule and Contact Information

Background Information

332 West Farnum – Kent County

Key Details	
Location	**From:** West Farnum, North Smithfield, RI **To:** Kent County, Warwick, RI
Existing Mainline length	21.4 miles
Operating Voltage	345 kV

Age and upgrade history	• Originally constructed in 1970
	• Wood for Wood Structure Refurbishments
	  • (4) Structures replaced in the 1990s
	  • (17) Structures replaced in the 2000s
	  • (5) Structures replaced in 2015
	• Wood for Steel Structure Refurbishments
	  • (4) Structures replaced in 2010
	  • (16) Structures replaced in 2012

Existing Structures

Material	Configuration	Number	Avg. age
332 West Farnum - Kent County			
Wood	H-Frame Structures	194	53 years
Wood	3-Pole Structures	11	40 years
Steel	Monopole Structures	16	20 years
Steel	H-Frame Structures	6	14 years
Steel	Y-Frame	4	56 Years

Existing Conductor

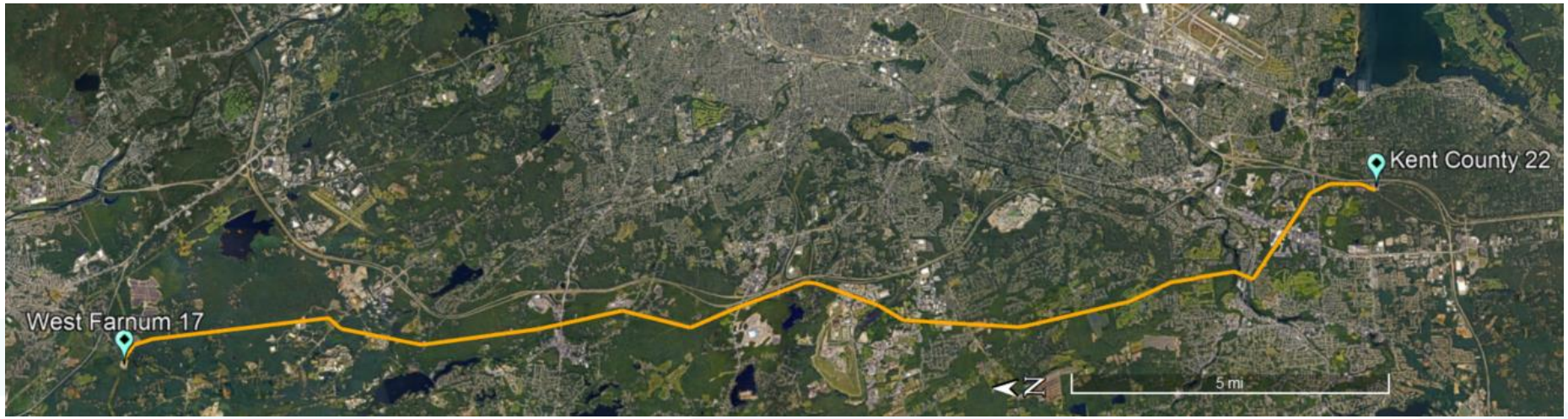
Type	Length	Avg. age
332 West Farnum - Kent County		
2-954 ACSR “RAIL”	21.4 miles	56 years

Existing Shield Wire

Type	Length	Avg. age
332 West Farnum - Kent County		
2 – 7#9Alumoweld	21.4 miles	56 years

Background Information

Maps and Diagrams



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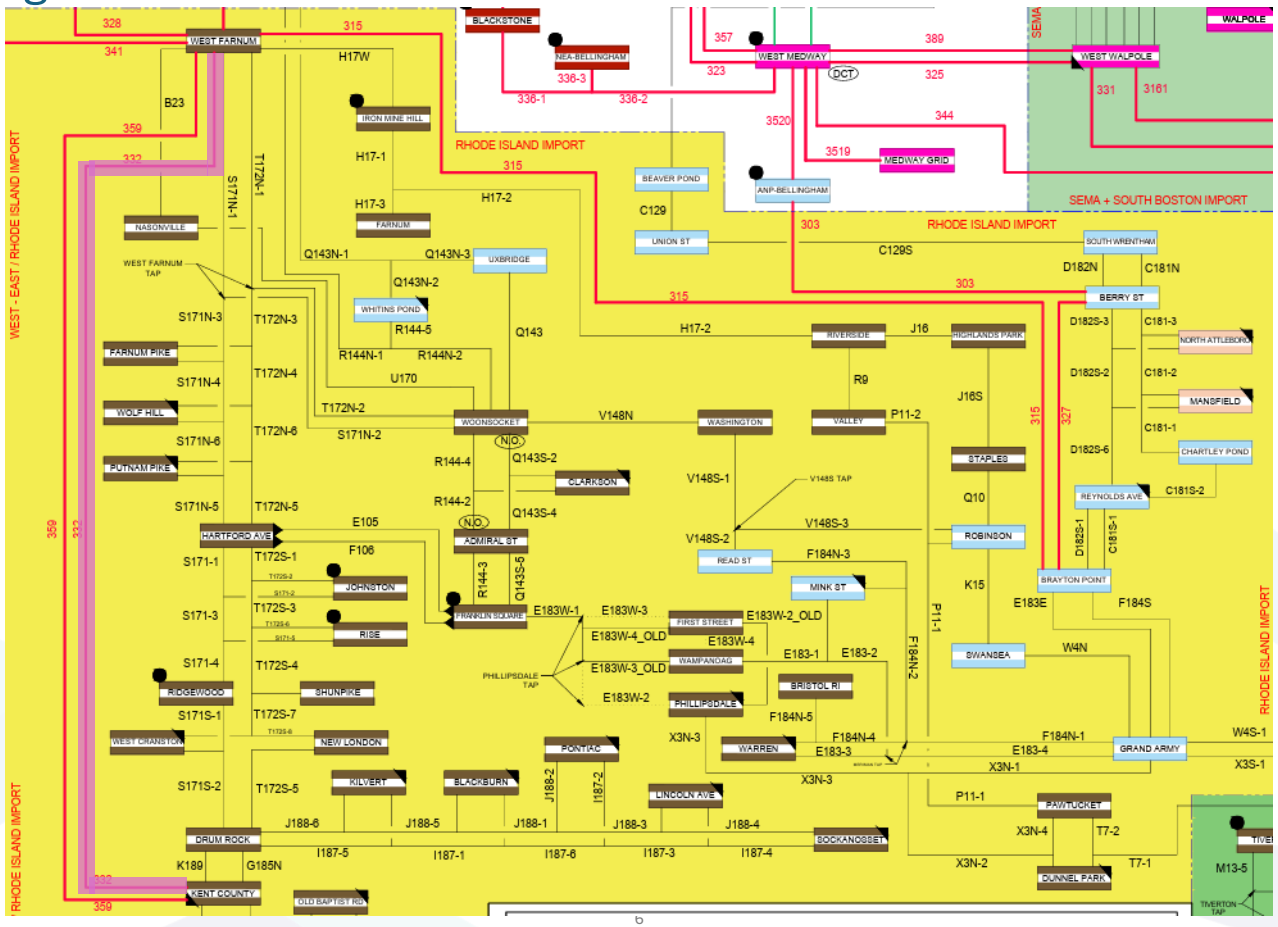
Background Information

Maps and Diagrams



Project Needs and Drivers

Primary Concerns

Primary Needs and Drivers	
Primary Concerns	

Structure Deterioration	• Approximately 80% structures and hardware are original vintage with identifiable deterioration and defects
	  • Significant defects identified on 77% of structures identified within the last 7 years of inspections
	  • Physical deterioration identified such as pole rot, pole top cracking, woodpecker damage, and exposed through bolts

Hardware Deficiencies	• 38% of structures have broken/flashed/contaminated/misaligned insulators, backed-out cotter keys, missing X-Brace brackets identified within the last 5 years

Summary of Current Structure Grades

Category	Recommended Action	Number of structures
A	No replacement required due to deterioration	22
B	Consider replacement in conjunction with other structure replacements	84
C	Initiate planned structure replacement project **or** Replace as part of upcoming structure replacement project	125
D	Replace immediately (emergency replacement)	0
Total		231

Project Needs & Drivers

Structure Deterioration

Heavy Pole Top Rot on 332 Str 39 Wood Monopole (1970)

Heavy Pole Top Rot (Exposed Through Bolt) on Str 33 3 – Wood Pole (1971)

Project Needs & Drivers

Structure Deterioration

Woodpecker Damage on 332 Str 164
Wood H-Frame (1970)

Pole Top Crack on 332 Str 129
Wood H-Frame (1999)

Project Needs & Drivers

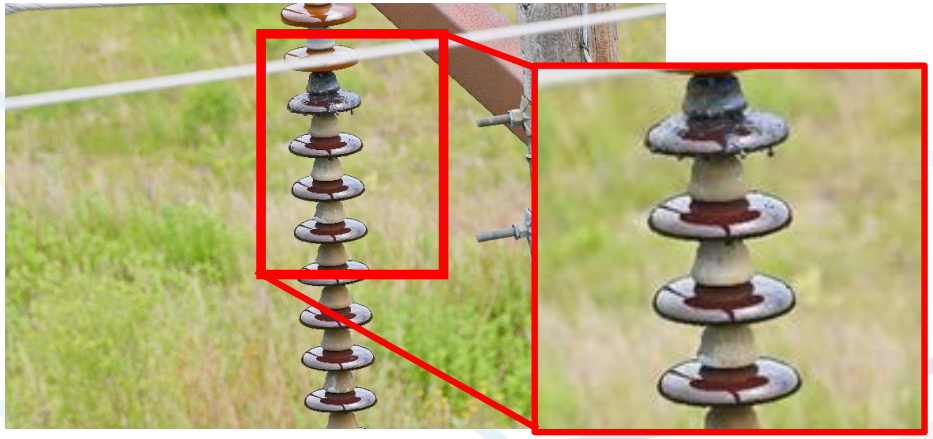
Structure Deterioration

Pole Top Deteriorating on 332 Str 112
Wood H-Frame (1970)

Woodpecker Damage on 332 Str 103
Wood H-Frame (1971)

Project Needs & Drivers

Hardware Deficiencies



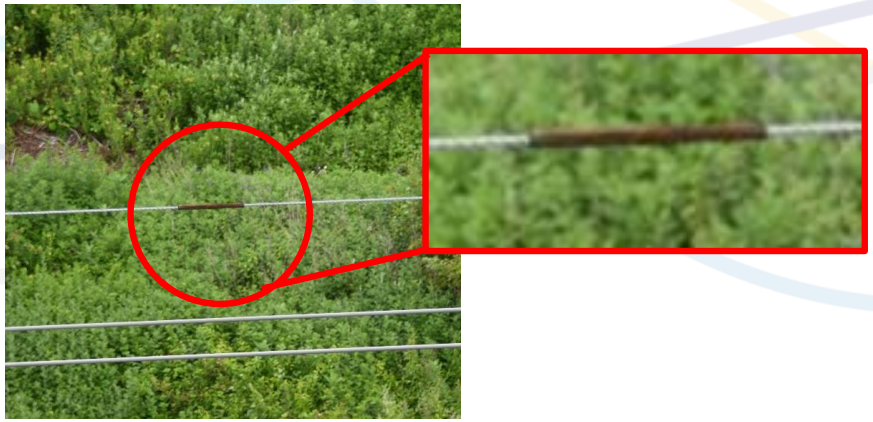
Tar on Insulator on 332 Str 88
Wood H-Frame (2003)

Broken Bell on 332 Str 134
Wood H-Frame (1970)

Project Needs and Drivers

Secondary Concerns

Secondary Needs and Drivers	
Secondary Concerns	
Conductor and Shield Wire Mechanical Strength	• Conductor approaching end of useful life and has splicing installed on 23 unique midspans • Splices and connection points are common areas for corona to occur, which leads to power loss and interference problems • Shield wire has backed out hardware, rusted splices, broken/downed/rusted ground wires
Lightning and Outage Protection	• Does not meet current lightning performance design standards • Substandard insulator bell count resulting in lower creepage distance and higher likelihood for flashover. • Inefficient shielding angle due to H-Frame configuration. Extension arms are an unlikely option due to structure age and condition.
Telecommunication needs	• Fiber needed to support protection networks, relaying, improving grid automation, and other device communications



Medium Rust on Shield Wire Splice Span 126-127

Clevis Pin Backing Out on Shield Wire Str 218 Steel Y-Frame (1970)

Review of Relevant Transmission Studies

Recent Transmission Studies
Was this line overloaded in recent Attachment K studies (Reliability Needs Assessments, Longer-Term Transmission Studies, etc.) or other recent studies?
None
Have modifications or upgrades to this line been identified as potential solutions in any of those studies?
Not Applicable

Evaluated Solution Alternatives

Alternative 1 – Base Alternative

Targeted Wood Pole Replacements	
Description	**Base Alternative** • Replace 125 category C wood structures with in-kind steel H-Frame structures and replace insulators, grounding rods, and other ancillary hardware **Future Project Considerations** • Replace remaining 84 structures in-kind and replace insulators, grounding rods, and other ancillary hardware • Reconductor with new 2-1590 ACSS in approx. 10 years once conductor reaches end of life • Replace existing shield wire with new dual 48 ct OPGW in approx. 10 years once shield wire reaches end of useful life

Primary Concerns Addressed	• Yes. However, some additional complications could arise through transferring of existing conductor to new structures
	  • General handling can result in material fatigue and reduced strength
	  • Transferring aged conductors can result in adverse effects to the radiative properties of the conductor which could result in increased power loss

Secondary Concerns Addressed	• Lightning performance concerns would not be immediately addressed as original H-Frames would not provide 0-degree shield angle until extension arms could be installed which would be challenging on aged assets. • The use of extension arms on the 125 replacement assets would require further splicing of the shieldwire as additional wire would be necessary creating potential failure points. • Fiber needs would be addressed; however, would not be for an extended period of time.
Cost Estimate and Accuracy	**Base Work: $62.4M (-50%,+200%)**
Long-Term Transmission Needs Addressed	• N/A
Design Changes	• No significant design changes would be made

Evaluated Solution Alternatives

Alternative 2 – Preferred Alternative

Full Line Rebuild	
Description	• Replace 205 wood structures with steel monopole structure • Due to optimization efforts only 203 steel monopole structures would need to be installed. • Replace insulators, grounding rods, and other ancillary hardware • Replace existing 2-954 ACSR “RAIL” conductor with 2-1590 ACSS “FALCON” • Replace existing shield wire with new dual 48 ct OPGW
Primary Concerns Addressed	• Yes, all primary concerns would be addressed
Secondary Concerns Addressed	• Yes, all secondary concerns would be addressed
Cost Estimate and Accuracy	**$122.9M (-25%,+50%)**
Long-Term Transmission Needs Addressed	• N/A
Design Changes	• Yes, structures would be converted from H-Frame to monopole structures, similar to adjacent 359 345 kV line

Comparative Analysis of Alternatives

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a PPL company

Comparison		
Key Criteria	**Alternative 1 – Base Alternative**	**Alternative 2 – Preferred Alternative**
Addresses Primary Concern(s)	Yes	Yes
Secondary Concern(s) Addressed	No	Yes
Cost	$62.4M (-50%,+200%)	$122.9M (-25%,+50%)
Constructability Concerns or Advantages	• Transferring large amounts of conductor can lead to the need for additional splicing and poses general handling risks; additional damage could lead to increased power loss • High likelihood for increased maintenance costs due to aged assets	• Shorter outage requirements • Gain higher ground clearance • Structure optimization (heights, quantity, clearances)
Siting, Environmental, and Regulatory Concerns	• Project would require additional visits to RoW for replacement of remaining wood structures, reconductoring, OPGW installation, and insulator replacements, resulting in repeated permitting, outage coordination and environmental impact mitigation efforts, increasing project costs	• Siting, permitting, environmental, engineering, and procurement efficiencies

Total Project Costs	• RIE performed cost-of-service analysis to complete Base Alternative work now, plus an additional project in 2035 to replace the 78 remaining structures, conductor, and shield wire
	• Combined Total Project Cost: $136.0M*
	  • 2026: $62.4M
	  • 2036: $73.6M**
		• Total Project Cost: $122.9M*

*Does not include ongoing maintenance costs
**Adjusted for yearly inflation

Scope Summary for Preferred Alternative

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Additional Scope Details	
	Total
Miles of ROW Affected	21.4 miles
Miles of Shield Wire Replacement	21.4 miles
Miles of Conductor Replacement	21.4 miles
Fiber Substation Connections	None
Structure Replacements/Mile	9.49 (203 total, primarily Wood H-Frame)

Cost Breakdown Details		
	Total Cost	**Per Unit**
Reconductoring / Shield Wire	$13.4 M	$0.626M/mile
Structure Replacements	$92.3 M	$0.455M/structure
Access Costs	$4.4 M	$0.206M/mile
Other Costs (engineering, contingency, etc.)	$11.9 M	$0.556M/mile
Total Estimated PTF Costs	**$122.915 M**	$5.744M/mile

Planned Project Ratings

- Preferred Alternative will reconductor 21.4 miles from West Farnum to Kent County with 2-1590 ACSS
- Pre-project and preliminary post-project conductor ratings are listed below
- Conductor is approaching end of useful life; RIE is planning to replace conductor as part of full rebuild to mitigate need for additional project work in near future

Line Section (Pre-Project)	Voltage (kV)	Summer Ratings (MVA)			Winter Ratings (MVA)		
		Normal	LTE	STE	Normal	LTE	STE
332 West Farnum to Kent County*	345	962	962	1024	1529	1529	1641
Line Section (Post-Project)	**Voltage (kV)**	**Summer Ratings (MVA)**			**Winter Ratings (MVA)**		
		Normal	**LTE**	**STE**	**Normal**	**LTE**	**STE**
332 West Farnum to Kent County	345	1805	2108	2464	2213	2340	2889

*Based on April 20, 2026 NX-9 submission to ISO-NE

Conclusion

- 332 line was originally constructed in 1970 and is approaching end of useful life
  - Majority of line equipment is of original vintage and shows signs of significant deterioration
- Alternative 2 – Full Line Rebuild is RIE's preferred alternative
  - Fully addresses all primary and secondary needs, ensuring long-term reliability of the line
  - Improves reliability and safety through replacement of aging assets with more modern and efficient designs
  - Supports current and future operating conditions
  - Minimizes long-term project and maintenance costs by eliminating repetitive interventions and reactive repairs
  - Reduces overall Right-of-Way and natural/social environment impacts through a single, coordinated crew mobilization, improving safety and permitting efficiency
- Project will be subject to interim ISO-NE Asset Condition Reviewer process

Schedule

Planned Schedule	
Comment Deadline	June 11, 2026
Start of Major Construction	Q1 2027
Project in Service	Q2 2029

Please submit any comments to pacmatters@iso-ne.com and:

Transmission Owner Contact	
Contact Name	George Nemeh
Contact Email Address	GJNemeh@pplweb.com

Questions