

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: **The Public Utilities Act and the Maritime Link Act and the
Maritime Link Cost Recovery Process Regulations**

- and –

IN THE MATTER OF: **An application by NSP Maritime Link Inc. to end the holdback
mechanism in accordance with the parameters set by the Nova
Scotia Utility and Review Board in Matter M11009**

**EVIDENCE OF
JOHN D. WILSON
ON BEHALF OF
THE CONSUMER ADVOCATE**

Grid Strategies, LLC

MAY 7, 2026

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1 **I. Identification & Qualifications**

2 **Q: Mr. Wilson, please state your name, occupation, and business address.**

3 A: I am John D. Wilson. I am the Vice President of Grid Strategies LLC, Bethesda, MD.

4 **Q: Summarize your professional education and experience.**

5 A: I received a BA degree from Rice University in 1990, with majors in physics and history, and
6 an MPP degree from the Harvard Kennedy School of Government with an emphasis in
7 energy and environmental policy, and economic and analytic methods. I have been
8 employed by Grid Strategies since 2023, and previously I performed similar duties as an
9 employee of Resource Insight.

10 Prior to entering consulting in 2019, I was deputy director of regulatory policy at the
11 Southern Alliance for Clean Energy (“SACE”) for more than twelve years, where I was the
12 senior staff member responsible for SACE’s utility regulatory research and advocacy, as well
13 as energy resource analysis. I engaged with southeastern utilities through regulatory
14 proceedings, formal workgroups, informal consultations, and research-driven advocacy.

15 My work has considered, among other things, the cost-effectiveness of prospective new
16 electric generation plants and transmission lines, retrospective review of generation-
17 planning decisions, conservation program design, prudency review, ratemaking and cost
18 recovery for utility efficiency programs, allocation of costs of service between rate classes
19 and jurisdictions, design of retail rates, and performance-based ratemaking for electric
20 utilities.

21 My professional qualifications are further summarized in Attachment 1.

22 **Q: Have you testified previously in utility proceedings?**

23 A: Yes. I have testified more than seventy-five times before utility regulators in twelve U.S.
24 states and Nova Scotia, and appeared numerous additional times before various regulatory
25 and legislative bodies.

26 **Q: Have you previously provided evidence in other matters before this Board?**

27 A: Yes. I have filed evidence in over twenty-five matters on behalf of the Consumer Advocate
28 and one matter on behalf of the Minister of Energy. I have also assisted the Consumer
29 Advocate in preparing comments and developing positions in numerous proceedings and
30 stakeholder processes.

31 **Q: On whose behalf are you providing evidence?**

32 A: My evidence is sponsored by the Nova Scotia Consumer Advocate.

II. Introduction and Summary

Q: Please summarize the scope of your evidence.

A: My evidence reviews NSPML's application for release of the Holdback effective April 2024 and recovery of carrying costs associated with Holdback that has occurred since that date.

Q: Please summarize your findings and recommendations.

A: NSPML's application is justified as it would have met the Board's first condition, but for four outage events that I find meet the Board's standard for relief as they represent good utility practice (events 1-3) or exceptional circumstances (event 4), and meets the Board's second condition outright.

I have also considered evidence regarding the relatively high outage rate on the NS Block delivery path since April 2024. Despite several concerns regarding the causes of the outage rate discussed in my evidence, I recommend the Board accept NSPML's request to end the Holdback effective April 2024. The Board may also wish to direct NSPML to undertake some action in response to icing events, as discussed in my evidence.

Regarding NSPML's request to recover carrying costs at the full WACC for Holdback costs since April 2024, I find that the Board may wish to consider whether NSPML recovering full WACC on deferred balances reflects risk-appropriate compensation. NSPML's application is unusual in that there was a 21-month period between April 2024 and filing the application for recovery of the funds.

Furthermore, there are precedents from at least one jurisdiction regarding the application of debt-only carrying charges to deferral account recovery.

For these reasons, I recommend that the Board direct release of the Holdback as discussed above plus a carrying charge calculated at NSPML's approved cost of debt through the date of the Board Decision on this matter. If the Board adopts my recommendation, NSPML's proposed carrying charge of \$1,148,502 through December of 2025 would be reduced to approximately \$878,573. This amount would need to be updated through the date of the Board Decision on this matter.

III. Holdback Release

Q: Has NSPML met the Board's two conditions for meeting the monthly Holdback conditions?

A: No, not directly. In the 2023 Holdback proceeding, the Board set two quantified conditions for ending the Holdback.

The Board's first condition is that "at least 90% of the NS Block, measured in MWh (excluding Make-up Energy), is received during each of 12 consecutive months."¹ NSPML states that the 90% threshold was met during only 8 months during what it terms the "Compliance Period" of May 2023-April 2024,² so this condition was not directly met.

The Board's second condition is that "the net outstanding balance of undelivered energy is less than 10% of the contracted annual amount of the NS Block."³ NSPML provides evidence that the total deliveries during this period did exceed 90% of the expected Nova Scotia Block Energy,⁴ with the net outstanding balance being below 10% in March and April of 2024.⁵

However, the Board further provided that "NSPML/NS Power may apply to the Board for relief if it considers that good utility practice or exceptional circumstances caused it to fail to meet the consecutive 12-month requirement."⁶ The Board also referred to this as an allowance for "some margin for interruptions."⁷

Q: What do you understand may be meant by the Board's allowance for relief?

A: In my evidence in the 2023 Holdback proceeding, I recommended a similar opportunity for NSPML and NS Power to apply for relief, stating:

The Board should also allow NS Power and NSPML to file a joint application to end the Holdback if the conditions to end the Holdback would have been met, but for special circumstances. For example, a monthly delivery requirement might be missed only because of planned maintenance. As another example, insufficient market-priced energy deliveries could occur due to short-term hydrological limitations, with ample evidence that such deliveries will occur in the future. As a third example, NS Power might determine that it is economically advantageous to defer makeup energy redelivery opportunities for more than 120 days.⁸

¹ NSUARB, 2023 NSUARB 175, M11009, para. 96, p. 44.

² Exhibit N-3, CA RIR-02(b).

³ NSUARB, 2023 NSUARB 175, M11009, para. 96, p. 44.

⁴ Exhibit N-3, CA RIR-02(b).

⁵ Exhibit N-1, Application, Appendix A, p. 33.

⁶ NSUARB, 2023 NSUARB 175, M11009, para. 96, p. 45.

⁷ NSUARB, 2023 NSUARB 175, M11009, para. 93, p. 43.

⁸ Exhibit N-21, Consumer Advocate Evidence, M11009, p. 29.

I also agree with NSPML that the Board should apply an objective test in determining whether “good utility practice” and “exceptional circumstances” has been demonstrated.⁹

Q: What evidence has NSPML provided to justify its request for relief?

A: NSPML has identified four events that resulted in the four months in which less than 90% of the NS Block was received.

1. July 2023 Planned Outage – The outage included Labrador Island Link (LIL) software updates, testing of line fault indicator, and testing of SCADA.¹⁰ Absent the 5-day July planned outage, NSPML states that NS Block deliveries exceeded 97%.¹¹
2. September 2023 Planned Maintenance – Annual scheduled planned maintenance.¹² Absent the outage, Concentric states that NS Block deliveries exceeded 99%.¹³
3. March 2024 Corrective Maintenance – Two-day outage to repair various systems.¹⁴ Absent the corrective maintenance outage (but including the subsequent icing outage), Concentric states that NS Block deliveries exceeded 90%.¹⁵
4. March-April 2024 Unplanned Outage – Ice-accumulation event caused damage to the LIL during an event that exceeded design standards.¹⁶ Absent the outage, Concentric states that NS Block deliveries exceeded 98% in April.¹⁷

In my opinion, these four events meet the Board’s standard for relief as they represent good utility practice (events 1-3) or exceptional circumstances (event 4).

Q: Please describe the Holdback and its causes since April 2024, the end of NSPML’s “Compliance Period.”

A: The Holdback amount from May 2024 through December 2025 totalled \$15.4 million. Further, the NS Block did not achieve 90% delivery in five of the six months following the “Compliance Period.”¹⁸

Over half of this amount appears to be related to work necessary to complete the full commissioning of the LIL at 900 MW. The largest of these outages was a LIL converter station update outage that lasted from July 29 to September 14, 2024.¹⁹ There were also planned outages related to system testing and software updates on October 10-11 and

⁹ Exhibit N-5, NSEB RIR-08.

¹⁰ Exhibit N-1, NSPML Holdback Review Application, p. 18-19.

¹¹ Exhibit N-3, CA RIR-03(e)(i).

¹² Exhibit N-1, NSPML Holdback Review Application, p. 19.

¹³ Exhibit N-4, IG RIR-26(c)(iii).

¹⁴ Exhibit N-1, NSPML Holdback Review Application, p. 20.

¹⁵ Exhibit N-4, IG RIR-26(c)(iii).

¹⁶ Exhibit N-1, NSPML Holdback Review Application, p. 20-21.

¹⁷ Exhibit N-4, IG RIR-26(c)(iii).

¹⁸ Exhibit N-5, NSEB RIR-17.

¹⁹ Exhibit N-3, CA RIR-03, Attachment 1.

1 October 16-18, 2024, and April 13-19, 2025. It is not clear whether all of the testing and
2 updates were “non-critical punch list items from commissioning” or related to the long-
3 delayed full commissioning test at 900 MW, which was completed on March 26, 2026.²⁰
4 These outages totalled 57 days, or approximately 9% of the time period.

5 Most of the rest of the Holdback accumulated during LIL outages for annual planned
6 maintenance from September 21 - October 2, 2024 and September 20-30, 2025.²¹ These
7 outages totalled 23 days, or approximately 4% of the time period.

8 There was also one forced outage on January 13-19, 2025 due to icing-related damage on
9 NLH-owned transmission near Muskrat Falls.²² NSPML did not indicate whether the wind
10 and ice accumulation exceeded design standards during this event, this outage totalled 7
11 days, or approximately 1% of the time period, which is less than NLH’s eqFOR target of 5%.²³

12 In total, the NS Block was not delivered approximately 14% of the time period from the end
13 of the “Compliance Period” in April 2024 through December 2025. NSPML reports that the
14 LIL had a post-commissioning monopole availability rate at a much lower level than the
15 Maritime Link, which had monopole availability (at least) dropping below 99.9% in only one
16 year since 2018 (in 2021, it was 97%).²⁴

17 **Q: Does the frequency of continued under-deliveries of the NS Block since April 2024 concern**
18 **you?**

19 **A:** Yes, the NS Block 14% outage rate (both planned and forced) seems concerning. However,
20 it is not concerning enough to undermine my opinion that NSPML has met its burden to
21 demonstrate that deliveries are occurring consistent with good utility practice. I have three
22 specific concerns.

23 First, the length and impact of continued software update and testing outages for the LIL
24 appears quite high. NSPML states that “LIL performance in delivering energy to Nova Scotia
25 customers since commissioning [in April 2023] has been strong and should not be described
26 as underperforming.”²⁵ It seems unusual if not exceptional for there to be a 9% outage rate
27 to continue software updates and facility testing.

28 Second, there have now been at least two icing events leading to sustained interruptions
29 of NS Block deliveries. One of these was an event that exceeded LIL design standards. There
30 may be reasonable questions about whether transmission design standards for the NS Block
31 delivery path are sufficient, even if they were, as NSPML suggests, consistent “with good

²⁰ Exhibit N-2, BW RIR-05(c); Exhibit N-5, NSEB RIR-11(a).

²¹ Exhibit N-3, CA RIR-03, Attachment 1.

²² Exhibit N-3, CA RIR-03, Attachment 1.

²³ Exhibit N-5, NSEB RIR-18.

²⁴ Exhibit N-2, BW RIR-03; Exhibit N-2, BW RIR-4, Attachment 1.

²⁵ Exhibit N-3, CA RIR-03(e).

1 utility practice at the time of project approval.”²⁶ NLH has published investigation results
2 regarding icing events on the LIL,²⁷ but it may be appropriate for NSPML to conduct its own
3 review or collaborate with NLH to commission a third-party review of the design, in order
4 to proactively identify potential additional mitigation.

5 Third, it also seems unusual that the LIL is being taken fully out of service for planned
6 outages. For example, the Maritime Link’s annual planned maintenance outage is taken
7 sequentially for Pole 1 and then Pole 2.²⁸

8 **Q: What is your recommendation to the Board?**

9 A: I recommend the Board accept NSPML’s request to end the Holdback effective April 2024.
10 The Board may also wish to direct NSPML to undertake some action in response to the two
11 icing events.

²⁶ Exhibit N-5, NSEB RIR-15(a).

²⁷ Newfoundland Labrador Hydro, *Analysis of Recommendations, Mitigations, and Enhancements of the Labrador-Island Link* (July 9, 2024), p. 5-17. Note that NLH has commissioned Halder to complete two reports regarding icing in 2021. These reports did not, of course, review the incidents that led to the NS Block delivery interruptions discussed above. *Id.*, p. 1.

²⁸ Exhibit N-5, NSEB RIR-05(a).

1 **IV. Ratepayer Responsibility for Paying Accrued WACC**

2 **Q: Please summarize NSPML's request to recover accrued WACC.**

3 A: NSPML requests "updated WACC consideration to the date of the Board's Decision."²⁹ The
4 total amount depends on the date of the Board's decision; NSPML provides a total of
5 \$1,148,502 through December of 2025.³⁰

6 NSPML further confirmed that its request "would not result in customers paying WACC on
7 the balance twice."³¹

8 **Q: Why does NSPML view WACC accrual as appropriate?**

9 A: NSPML states:

10 WACC is a standard financing mechanism that compensates for the cost of
11 capital. WACC is paid to customers when money is owed to them and WACC is
12 paid to the utility when customers owe money. Should the Board agree with
13 NSPML's request in this Application, the \$15.3 million should have been paid to
14 NSPML in 2024 and 2025.³²

15 NSPML further cites the Board Decision in M11009, which discusses the Board's historical
16 approach to allow for recovery of financing costs in a reciprocal manner, using WACC.

17 **Q: Why did NSPML wait 21 months after April 2024, when it considers holdback release
18 conditions satisfied, to file the application in this matter?**

19 A: NSPML states:

20 As explained during NSPML's 2026 Assessment Hearing, the primary reason for
21 the timing of the filing is that NSPML has a relatively small contingent of
22 employees to balance competing operational and regulatory obligations.
23 Although NSPML believes it is appropriately resourced to deliver on its
24 obligations, staffing levels occasionally present challenges, such as in this case.

25 Additional factors included the desire to have more complete information from
26 the Compliance Period. As 100 percent of the holdback disallowances relate to
27 NLH's performance and energy delivery information primarily sits with NS
28 Power, a significant amount of information for the Application needed to be
29 sourced from third parties. Specifically, NS Power for delivery information and
30 NLH for information relating to all outages and their asset performance.³³

²⁹ Exhibit N-1, NSPML Holdback Review Application, p. 6. Note that this request is omitted from NSPML's request to the Board (p. 32), but it is confirmed that this is part of NSPML's request. Exhibit N-3, CA RIR-04(a).

³⁰ Exhibit N-1, NSPML Holdback Review Application, p. 34.

³¹ Exhibit N-5, NSEB RIR-01(a).

³² Exhibit N-5, NSEB RIR-01(c).

³³ Exhibit N-5, NSEB RIR-01(b).

1 **Q: Why might the Board wish to consider a different approach?**

2 A: The Board may wish to consider whether NSPML recovering full WACC on deferred balances
3 reflects risk-appropriate compensation. Where a utility's regulatory receivable is essentially
4 a risk-free asset, it may be more appropriate to apply a carrying charge based on the
5 weighted average cost of debt or a short-term commercial lending rate.

6 While the Board has historically used WACC to calculate the carrying charge due to or from
7 customers in a reciprocal manner, in this case there is no opportunity for reciprocity. For
8 example, the Board has not established a “hold-forward” or prepayment opportunity for
9 NSPML to receive its cost assessment from customers in advance of the due date.

10 Recovery of regulatory assets and other deferrals with a debt-only carrying cost can be
11 found in many North American jurisdictions. Furthermore, Nova Scotia Power has recently
12 financed debt with the Federal and Provincial governments. In my experience, such
13 decisions are typically a result of a stipulation or settlement agreement and are driven by
14 what I would characterize as unusual circumstances.³⁴

15 I would characterize NSPML’s holdback recovery request as unusual due to the 21-month
16 delay and I believe it is within the Board’s discretion to direct that the holdback balance
17 should be calculated based on a debt-only carrying charge.

18 **Q: Are you aware of any precedents from other jurisdictions?**

19 A: Yes, this issue has been extensively litigated before the California Public Utilities
20 Commission (CPUC). In a recent series of rate cases, the CPUC decided that Southern
21 California Edison (SCE) should recover interest at only the short-term (90-day) commercial
22 paper rate, not at the utility's full WACC, for deferred cost recovered via certain
23 memorandum accounts and balancing accounts.

24 Most recently, SCE argued that prior CPUC decisions on this topic were flawed because they
25 did “not align with the generally accepted financial principle that an asset should match the
26 *duration* of the liability.” For the deferral accounts in question, SCE argued that assets
27 (including regulatory assets) with amortization periods longer than 12 months are financed
28 using “longer-term financing consistent with the capital structure authorized by the
29 Commission” (i.e., WACC). SCE further argued that, “even without the constraint of SCE’s
30 authorized capital structure, financing of a long-term amortization with debt alone

³⁴ For example: Duke Energy Carolinas recovers costs for coal combustion residuals projects at a reduced rate of equity in North Carolina. After Winter Storm Uri, a number of Texas and Oklahoma utilities’ fuel costs were deferred over a long period, with recovery at a debt-only rate or, in one case, no carrying cost for a two-year recovery period. The Florida Public Service Commission uses a debt-only rate for deferrals under the Nuclear Cost Recovery Charge and related accounts.

1 increases SCE's leverage and degrades its credit metrics, which ultimately increases
2 customers' costs."³⁵

3 The CPUC denied SCE's request, stating:

4 We are persuaded that the lower risk profile of balancing and memorandum
5 accounts generally warrant lower commensurate carrying charges. Long-term
6 debt is associated with more risks, including default risks, than balancing and
7 memorandum accounts amortized over more than months. As such, the
8 commercial paper rate for balancing and memorandum accounts amortized
9 over more than 12 months continues to be appropriate and reasonable.³⁶

10 **Q: What is your recommendation?**

11 A: I recommend that the Board direct release of the Holdback as discussed in Section III plus
12 a carrying charge calculated at NSPML's approved cost of debt through the date of the
13 Board Decision on this matter. This is primarily justified based on the 21-month delay in
14 bringing forward this application.

15 If the Board adopts my recommendation, NSPML's proposed carrying charge of \$1,148,502
16 through December of 2025 would be reduced to approximately \$878,573, as shown in
17 Attachment 2. This amount would need to be updated through the date of the Board
18 Decision on this matter.

19 **Q: Does this conclude your evidence?**

20 A: Yes.

³⁵ Southern California Edison, Testimony in Support of Southern California Edison's Application for Authority to Establish Its Authorized Cost of Capital for Utility Operations for 2026, CPUC Application A.25-03-012, p. 71-72. Emphasis in original. Available from the [SCE Regulatory Sharepoint](#).

³⁶ California Public Utilities Commission, Decision Addressing Test Year 2026 Cost of Capital for Pacific Gas and Electric Company, Southern California Gas Company, Southern California Edison Company, and San Diego Gas & Electric Company, Decision 25-012-043 in Application 25-03-012 and others, p. 59. Available from the [CPUC docket](#).

JOHN D. WILSON

Vice President
Grid Strategies, LLC

SUMMARY OF PROFESSIONAL EXPERIENCE

- 2023–Present* **Vice President, Grid Strategies, LLC.** Provides research, technical assistance, and expert testimony on electric- and gas-utility planning, economics, and regulation. Reviews electric utility prudence, cost allocation and rate design. Designs and evaluates electrification and energy efficiency programs for electric utilities, including cost recovery mechanisms and performance incentives. Evaluates performance of renewable resources and designs performance evaluation systems for procurement. Designs and assesses generation interconnection, load forecasting, resource planning and procurement strategies for regulated and competitive markets.
- 2019–23* **Research Director, Resource Insight, Inc.** Same services as above.
- 2007–19* **Deputy Director for Regulatory Policy, Southern Alliance for Clean Energy.** Directed regulatory policy, including supervision of experts in areas of energy efficiency, renewable energy, and market data. Provided expert witness testimony to utility regulators. Directed litigation activities, including support of expert witnesses. Represented SACE on numerous legislative, utility, and private committees across a wide range of climate and energy related topics.
- 2001–06* **Executive Director, Galveston-Houston Association for Smog Prevention.** Directed advocacy and regulatory policy related to air quality, including ozone, air toxics, and other industrial, utility, and transportation pollutants. Served on the Regional Air Quality Planning Committee, Transportation Policy Technical Advisory Committee, and Steering Committee of the TCEQ Science Committee.
- 2000–01* **Senior Associate, The Goodman Corporation.** Provided transportation and urban planning consultant services to cities and business districts across Texas.
- 1997–99* **Senior Legislative Analyst and Technology Projects Coordinator, Office of Program Policy Analysis and Government Accountability, Florida Legislature.** Author or team member for reports on water supply policy, environmental permitting, community development corporations, school district financial management and other issues – most recommendations implemented by the 1998 and 1999 Florida Legislatures. Edited statewide government accountability newsletter and coordinated online and internal technical projects.
- 1997* **Environmental Management Consultant, Florida State University.** Project staff for Florida Assessment of Coastal Trends.
- 1992–96* **Research Associate, Center for Global Studies, Houston Advanced Research Center.** Coordinated and led research for assessments of environmental and resource issues in the Rio Grande / Rio Bravo basin and the Greater Houston region. Coordinated and edited book on climate change in Texas.

EDUCATION

BA, Physics (with honors) and history, Rice University, 1990.

MPP, John F. Kennedy School of Government, Harvard University, 1992. Concentration areas: Environment, negotiation, economic and analytic methods.

PUBLICATIONS

“Urban Areas,” with Judith Clarkson and Wolfgang Roeseler, in Gerald R. North, Jurgen Schmandt and Judith Clarkson, *The Impact of Global Warming on Texas: A Report of the Task Force on Climate Change in Texas*, 1995.

“Quality of Life and Comparative Risk in Houston,” with Janet E. Kohlhase and Sabrina Strawn, *Urban Ecosystems*, Vol. 3, Issue 2, July 1999.

“Seeking Consistency in Performance Incentives for Utility Energy Efficiency Programs,” with Tom Franks and J. Richard Hornby, *2010 American Council for an Energy-Efficient Economy Summer Study on Energy Efficiency in Buildings*, August 2010.

“Monopsony Behavior in the Power Generation Market,” with Mike O’Boyle and Ron Lehr, *Electricity Journal*, August-September 2020.

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“Policy Options: Responding to Climate Change in Texas,” Houston Advanced Research Center, US EPA and Texas Water Commission, October 1993.

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Florida Coastal Management Program, *Florida Assessment of Coastal Trends*, June 1997.

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Office of Program Policy Analysis and Government Accountability, *Review of the Community Development Corporation Support and Assistance Program*, Report No. 97-45, February 1998.

Office of Program Policy Analysis and Government Accountability, *Review of the Expedited Permitting Process Coordinated by the Governor’s Office of Tourism, Trade, and Economic Development*, Report No. 98-17, October 1998.

Office of Program Policy Analysis and Government Accountability, *Florida Water Policy: Discouraging Competing Applications for Water Permits; Encouraging Cost-Effective Water Development*, Report No. 99-06, August 1999.

“Smoke in the Water: Air Pollution Hidden in the Water Vapor from Cooling Towers – Agencies Fail to Enforce Against Polluters,” Galveston Houston Association for Smog Prevention, February 2004.

“Reducing Air Pollution from Houston-Area School Buses,” Galveston Houston Association for Smog Prevention, March 2004.

“Who’s Counting: The Systematic Underreporting of Toxic Air Emissions,” Environmental Integrity Project and Galveston Houston Association for Smog Prevention, June 2004.

“Mercury in Galveston and Houston Fish: Contamination by Neurotoxin Places Children at Risk,” Galveston Houston Association for Smog Prevention, October 2004.

“Big Breaks for Big Polluters: Houston Area Industries Escape Fines When Texas Fails to Follow its Policies,” Galveston Houston Association for Smog Prevention, 2005.

“Exceeding the Limit: Industry Violations of New Rule Almost Slid Under State’s Radar,” Galveston Houston Association for Smog Prevention, January 2006.

“Whiners Matter! Citizen Complaints Lead to Improved Regional Air Quality Control,” Galveston Houston Association for Smog Prevention, June 2006.

“Bringing Clean Energy to the Southeastern United States: Achieving the Federal Renewable Energy Standard,” Southern Alliance for Clean Energy, February 2008.

“Cornerstones: Building a Secure Foundation for North Carolina’s Energy Future,” Southern Alliance for Clean Energy, May 2008.

“Yes We Can: Southern Solutions for a National Renewable Energy Standard,” Southern Alliance for Clean Energy, February 2009.

“Green in the Grid: Renewable Electricity Opportunities in the Southeast United States,” with Dennis Creech, Eliot Metzger, and Samantha Putt Del Pino, World Resources Institute Issue Briefs, April 2009.

“Local Clean Power,” with Dennis Creech, Eliot Metzger, and Samantha Putt Del Pino, World Resources Institute Issue Briefs, April 2009.

“Energy Efficiency Program Impacts and Policies in the Southeast,” Southern Alliance for Clean Energy, May 2009.

“Recommendations for Feed-In-Tariff Program Implementation In The Southeast Region To Accelerate Renewable Energy Development,” Southern Alliance for Clean Energy, March 2011.

“Renewable Energy Standard Offer: A Tennessee Valley Authority Case Study,” Southern Alliance for Clean Energy, November 2012.

“Increased Levels of Renewable Energy Will Be Compatible with Reliable Electric Service in the Southeast,” Southern Alliance for Clean Energy, November 2014.

“Cleaner Energy for Southern Company: Finding a Low Cost Path to Clean Power Plan Compliance,” Southern Alliance for Clean Energy, July 2015.

“Analysis of Solar Capacity Equivalent Values for Duke Energy Carolinas and Duke Energy Progress Systems,” prepared for and filed by Southern Alliance for Clean Energy, Natural Resources Defense Council, and Sierra Club in North Carolina NCUC Docket No. E-100, Sub 147, February 17, 2017.

“Seasonal Electric Demand in the Southeastern United States,” Southern Alliance for Clean Energy, March 2017.

“Analysis of Solar Capacity Equivalent Values for the South Carolina Electric and Gas System,” Southern Alliance for Clean Energy, March 2017.

“Solar in the Southeast, 2017 Annual Report,” with Bryan Jacob, Southern Alliance for Clean Energy, February 2018.

“Energy Efficiency in the Southeast, 2018 Annual Report,” with Forest Bradley-Wright, Southern Alliance for Clean Energy, December 2018.

“Solar in the Southeast, 2018 Annual Report,” with Bryan Jacob, Southern Alliance for Clean Energy, April 2018.

“Tracking Decarbonization in the Southeast, 2019 Generation and CO₂ Emissions Report,” with Heather Pohnan and Maggie Shober, Southern Alliance for Clean Energy, August 2019.

“Seasonal Electric Demand in the Southeastern United States,” with Maggie Shober, Southern Alliance for Clean Energy, April 2020.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” with Mike O’Boyle, Ron Lehr, and Mark Detsky, Energy Innovation Policy & Technology LLC and Southern Alliance for Clean Energy, April 2020.

“Municipal Coal in Ohio: Implications of PJM’s Behind-the-Meter Generation,” with Paul Chernick and James Harvey, April 2020.

“Review of Nova Scotia Power’s 2020 Integrated Resource Plan,” prepared for the Nova Scotia Consumer Advocate, NSUARB Matter No. M08059, with Paul Chernick, January 2021.

“Implementing All-Source Procurement in the Carolinas,” prepared for Natural Resources Defense Council, Sierra Club, Southern Alliance for Clean Energy, South Carolina Coastal Conservation League and Upstate Forever, for submission in NCUC Docket E-100, Sub 165, and SCPSC Dockets 2019-224-E and 2019-225-E, February 2021.

“Intelligent Feeder Project: Comments on Nova Scotia Power’s Final Report,” prepared for the Nova Scotia Consumer Advocate, NSUARB Matter No. M09984, June 2021.

“MGCC Pricing Formula for PG&E’s Day-Ahead Hourly Real Time Pricing (DAHRTP) Rates,” joint report prepared by PG&E, Small Business Utility Advocates, CPUC Public

Advocates Office, California Large Energy Consumers Association, and Enel X, CPUC Dockets A.20-10-011 and A.19-11-019, March 2022.

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“Generator Interconnection Scorecard: Ranking Interconnection Outcomes and Processes of the Seven U.S. Regional Transmission System Operators,” Grid Strategies LLC and Brattle Group, with Richard Seide, Rob Gramlich, and J. Michael Hagerty, February 2024.

“Review of Mississippi Power Company 2024 Integrated Resource Plan,” with Michael Goggin, Grid Strategies LLC, prepared for Southern Renewable Energy Association, for submission in MPSC Docket No. 2019-UA-231, June 2024.

“Unlocking America’s Energy: How to Efficiently Connect New Generation to the Grid,” prepared for Advanced Energy Institute and Solar and Storage Industries Institute, Grid Strategies LLC and Brattle Group, with Rob Gramlich, Richard Seide, Yorgos Raskovic, J. Michael Hagerty, Joe DeLosa III, and Johannes Pfeifenberger, for submission in FERC Docket No. AD24-9, August 2024.

“Independent Transmission Construction Monitor,” Grid Strategies LLC, with Rob Gramlich and Yorgos Raskovic, November 2024.

“Strategic Industries Surging: Driving US Power Demand,” with Zach Zimmerman and Rob Gramlich, Grid Strategies LLC, prepared for Clean Grid Initiative, December 2024.

“Power Demand Forecasts Revised Up for Third Year Running, Led by Data Centers,” with Sophie Meyer, Zach Zimmerman and Rob Gramlich, Grid Strategies LLC, prepared for Clean Grid Initiative, November 2025.

“Forecasting for Large Loads: Current Practices and Recommendations,” with Sophie Meyer and members of the Energy Systems Integration Group’s Large Load Task Force, December 2025.

“Review of NERC’s 2025 Long-Term Reliability Assessment,” with Adria E. Brooks and Michael Goggin, Grid Strategies LLC, prepared for Earthjustice, NRDC, and Environmental Defense Fund, March 2026.

SELECTED PRESENTATIONS

“Clean Energy Solutions for Western North Carolina,” presentation to Progress Energy Carolinas WNC Community Energy Advisory Council, February 7, 2008.

“Energy Efficiency: Regulating Cost-Effectiveness,” Florida Public Service Commission undocketed workshop, April 25, 2008.

“Utility-Scale Renewable Energy,” presentation on behalf of Southern Alliance for Clean Energy to the Board of the Tennessee Valley Authority, March 5, 2008.

“An Advocates Perspective on the Duke Save-a-Watt Approach,” ACEEE 5th National Conference on Energy Efficiency as a Resource, September 2009.

“Building the Energy Efficiency Resource for the TVA Region,” presentation on behalf of Southern Alliance for Clean Energy to the Tennessee Valley Authority Integrated Resource Planning Stakeholder Review Group, December 10, 2009.

“Florida Energy Policy Discussion,” testimony before Energy & Utilities Policy Committee, Florida House of Representatives, January 2010.

“The Changing Face of Energy Supply in Florida (and the Southeast),” 37th Annual PURC Conference, February 2010.

“Bringing Energy Efficiency to Southerners,” Environmental and Energy Study Institute panel on “Energy Efficiency in the South,” April 10, 2010.

“Energy Efficiency: The Southeast Considers its Options,” NAESCO Southeast Regional Workshop, September 2010.

“Energy Efficiency Delivers Growth and Savings for Florida,” testimony before Energy & Utilities Subcommittee, Florida House of Representatives, February 2011.

“Rates vs. Energy Efficiency,” 2013 ACEEE National Conference on Energy Efficiency as a Resource, September 2013.

“TVA IRP Update,” TenneSEIA Annual Meeting, November 19, 2014.

“Views on TVA EE Modeling Approach,” presentation with Natalie Mims to Tennessee Valley Authority’s Evaluating Energy Efficiency in Utility Resource Planning Meeting, February 10, 2015.

“The Clean Power Plan Can Be Implemented While Maintaining Reliable Electric Service in the Southeast,” FERC Eastern Region Technical Conference on EPA’s Clean Power Plan Proposed Rule, March 11, 2015.

“Renewable Energy & Reliability,” 5th Annual Southeast Clean Power Summit, EUCI, March 2016.

“Challenges to a Southeast Carbon Market,” 5th Annual Southeast Clean Power Summit, EUCI, March 2016.

“Solar Capacity Value: Preview of Analysis to Date,” Florida Alliance for Accelerating Solar and Storage Technology Readiness (FAASSTeR) meeting, Orlando, FL, November 2017.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” Southeast Energy and Environmental Leadership Forum, Nicholas Institute for Environmental Policy Solutions, August 2020.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” Indiana State Bar Association, Utility Law Section, Virtual Fall Seminar, September 2020.

“Resource Adequacy, Reserve Margin, & Seasonal Planning,” 2022 Georgia IRP Training and Roundtable Series, February 2022.

“Six Lessons from the PG&E Real Time Pricing Rate Proceeding,” 45th Peak Load Management Alliance Conference, April 2022.

“The Era of Flat Power Demand is Over,” EFI Foundation, February 2024.

“The Era of Flat Power Demand is Over,” 2024 The Energy Authority Energy Symposium, March 2024.

“RTO Generator Interconnection Scorecard,” 2024 The Energy Authority Energy Symposium, March 2024.

“The Era of Flat Power Demand is Over,” 2024 The Energy Authority Energy Symposium, March 2024.

“Energy Transition Challenges & Opportunities,” Panel Member, 2024 The Energy Authority Energy Symposium, March 2024.

“The Era of Flat Power Demand is Over: 2024 ‘Early Release’,” NERC Large Loads Task Force, October 2024.

“Strategic Industries Surging,” Midcontinent Power Sector Collaborative, February 2025; Institute for State Policy Leaders, August 2025, and others.

“Forecasting for Large Loads: Current Practices and Recommendations,” with Sophie Meyer, Energy Systems Integration Group webinar, December 2025.

“Increasing the Certainty and Transparency of Load Forecasts,” NASEO 2026 Energy Policy Outlook Conference, February 2026.

“Advancing Long-Term Forecasting for Large Loads,” NARUC Bulk Power System Virtual Training Series: Processing Large Load Interconnection Requests, April 2026.

EXPERT TESTIMONY

2008 **South Carolina PSC** Docket No. 2007-358-E, surrebuttal testimony on behalf of Environmental Defense, the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy and the Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

2009 **North Carolina NCUC** Docket No. E-7, Sub 831, direct testimony on behalf of Environmental Defense Fund, Natural Resources Defense Council, Southern Alliance for Clean Energy, and Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

Florida PSC Docket Nos. 080407-EG through 080413-EG, direct testimony on behalf of Southern Alliance for Clean Energy and the Natural Resources Defense Council. Energy efficiency potential and utility program goals.

South Carolina PSC Docket No. 2009-226-E, direct testimony in general rate case on behalf of Environmental Defense, the Natural Resources Defense Council, the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy and the Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

2010 **North Carolina NCUC** Docket No. E-100, Sub 124, direct testimony on behalf of Environmental Defense Fund, the Sierra Club, Southern Alliance for Clean Energy, and Southern Environmental Law Center. Adequacy of consideration of energy efficiency in Duke Energy Carolinas and Progress Energy Carolinas' 2009 integrated resource plans.

Georgia PSC Docket No. 31081, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2010 integrated resource plan, including cost effectiveness, rate and bill impacts, and lost revenues.

Georgia PSC Docket No. 31082, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2010 demand side management plan, including program revisions, planning process, stakeholder engagement, and shareholder incentive mechanism.

2011 **South Carolina PSC** Docket No. 2011-09-E, allowable ex parte briefing on behalf of Southern Alliance for Clean Energy, South Carolina Coastal Conservation League, and Upstate Forever. Adequacy of South Carolina Electric & Gas's 2011 integrated resource plan, including resource mix, sensitivity analysis, alternative supply and demand side options, and load growth scenarios.

South Carolina PSC Docket Nos. 2011-08-E and 2011-10-E, allowable ex parte briefing on behalf of Southern Alliance for Clean Energy, South Carolina Coastal Conservation League, and Upstate Forever. Adequacy of Progress Energy Carolinas and Duke Energy Carolinas' 2011 integrated resource plans, including resource mix, sensitivity analysis, alternative supply and demand side options, cost escalation, uncertainty of nuclear and economic impact modeling.

2013 **Georgia PSC** Docket No. 36498, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2013 integrated resource plan, including cost effectiveness, rate and bill impacts, and lost revenues, economics of fuel switching and renewable resources.

South Carolina PSC Docket No. 2013-392-E, direct testimony with Hamilton Davis in Duke Energy Carolinas need certification case on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. Need for capacity, adequacy of energy efficiency and renewable energy alternatives, and use of solar power as an energy resource.

2014 **South Carolina PSC** Docket No. 2014-246-E, direct testimony in generic proceeding on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. Methods for calculating dependable capacity credit for renewable resources and application to determination of avoided cost.

2015 **Florida PSC** Docket No. 150196-EI, direct testimony in Florida Power & Light need certification case on behalf of Southern Alliance for Clean Energy. Appropriate reserve margin and system reliability need.

2016 **Georgia PSC** Docket No. 40161, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of renewable energy in Georgia Power's 2016 integrated resource plan, including portfolio diversity, operational and implementation risk, analysis of project-specific costs and benefits (including location and technology considerations), and methods for calculating dependable capacity credit for renewable resources.

2019 **Georgia PSC** Docket Nos. 42310 and 42311, direct testimony with Bryan A. Jacob in Georgia Power's 2019 integrated resource plan and demand side management plan on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of renewable energy in IRP, retirement of uneconomic plants, and use of all-source procurement process. Shareholder incentive mechanism for both renewable energy and DSM plan.

2020 **Nova Scotia UARB** Matter No. M09519, direct testimony with Paul Chernick in Nova Scotia Power's application for approval of the Smart Grid Nova Scotia Project on behalf of the Nova Scotia Consumer Advocate. Cost classification, decommissioning costs, justification for software vendor selection, and suggested changes to project scope.

Nova Scotia UARB Matter No. M09499, direct testimony with Paul Chernick in Nova Scotia Power's 2020 annual capital expenditure plan on behalf of the Nova Scotia Consumer Advocate. Potential to decommission hydroelectric systems, review of annually recurring capital projects, use of project contingencies, and cost minimization practices.

Nova Scotia UARB Matter No. M09579, direct testimony with Paul Chernick in Nova Scotia Power's application for the Gaspereau Dam Safety Remedial Works on behalf of the Nova Scotia Consumer Advocate. Alternatives to proposed project, project contingency factor, estimation of archaeological costs, and replacement energy cost calculation.

Nova Scotia UARB Matter No. M09707, direct testimony with Paul Chernick on Nova Scotia Power's 2020 Load Forecast on behalf of the Nova Scotia Consumer Advocate. Impacts of recession, application of end-use studies, improvements to forecast components, and impact of time-varying pricing.

California PUC Docket A.19-10-012, direct and rebuttal testimony with Paul Chernick in San Diego Gas & Electric's application for the Power Your Drive Electric Vehicle Charging Program on behalf of the Small Business Utility Advocates. Ensuring that utility-installed chargers advance California goal for electric vehicles. Budget controls. Reporting requirements. Evaluation, monitoring and verification processes. Outreach to small business customers.

California PUC Docket A.19-08-013, direct testimony in Southern California Edison's 2021 general rate case (track 2) on behalf of the Small Business Utility Advocates. Reasonableness of remedial software costs to be included in authorized revenue requirement.

Georgia PSC Docket Nos. 4822, 16573 and 19279, direct, rebuttal and surrebuttal testimony in Georgia Power Company's PURPA avoided cost review on behalf of the Georgia Large Scale Solar Association. Reviewing compliance with prior Commission orders. Application of capacity need forecast in projection of avoided capacity cost. Calculation of cost of new capacity. Proposal of standard offer contract.

California PUC Docket A.19-11-019, direct, reply, responsive, and reply to responsive testimony with Paul Chernick in Pacific Gas & Electric's 2021 general rate case (phase 2) on behalf of the Small Business Utility Advocates. Cost of service methods. Rate design, including customer charges, demand charges, real time pricing tariffs, TOU differentials and periods.

Nova Scotia UARB Matter No. M09548, direct testimony on the audit of Nova Scotia Power's Fuel Adjustment Mechanism on behalf of the Nova Scotia Consumer Advocate. Reasonableness of fuel contract costs. Scope of study on dispatch practices. Impact of greenhouse gas shadow pricing. Compliance issues related to resource planning.

2021 **California PUC** Docket R.20-11-003, direct and reply testimony on rulemaking to ensure reliable electric service in the event of an extreme weather event on behalf of the Small Business Utility Advocates. Modifications to Critical Peak Pricing programs and Time of Use periods. Modifications to load management programs.

Nova Scotia UARB Matter No. M09898, direct testimony on Nova Scotia Power's Annually Adjusted Rates on behalf of the Nova Scotia Consumer Advocate. Effect of delays in power contract. Unit modeling assumptions. Variable capital costs. Application of Time-Varying Pricing.

Nova Scotia UARB Matter No. M09920, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2021 on behalf of the Nova Scotia Consumer Advocate. Cost minimization. Project contingency. Economic analysis model. Analysis of specific projects.

Nova Scotia UARB Matter No. M09777, direct testimony with Paul Chernick on Nova Scotia Power's Time-Varying Pricing Tariff Application on behalf of the Nova Scotia Consumer Advocate. Effect of proposed TVP tariffs on load, capacity savings, and energy costs. Recommended CPP tariffs. Treatment of demand charges in TVP tariffs. Implementation and evaluation of TVP tariffs. Lost revenue adjustment mechanism.

South Carolina PSC Docket Nos. 2019-224-E and 2019-225-E, surrebuttal testimony on 2020 Integrated Resource Plans filed by Duke Energy Carolinas and Duke Energy Progress. All-source procurement process. Process for resolution of disputed issues in IRP proceedings.

California PUC Docket A.20-10-011, direct and reply testimony with Paul Chernick in Pacific Gas & Electric's Commercial Electric Vehicle Day-Ahead Hourly Real Time Pricing Pilot on behalf of the Small Business Utility Advocates. Rate design for real time pricing tariff. Marketing to small businesses. Evaluation plan.

California PUC Docket R.20-08-020, direct and reply testimony with Paul Chernick in rulemaking to revisit net energy metering (NEM) tariffs on behalf of the Small Business Utility Advocates. Rate design for NEM tariff. Method for analyzing NEM tariff program.

California PUC Docket A.20-10-012, direct testimony with Paul Chernick in Southern California Edison's 2021 general rate case (phase 2) on behalf of the Small Business Utility Advocates. Cost of service methods. Rate allocation and design, including customer charges and real time pricing tariffs.

Nova Scotia UARB Matter No. M10176, direct testimony on Nova Scotia Power's Smart Grid Nova Scotia Solar Garden Pilot Rate Rider on behalf of the Nova Scotia Consumer Advocate. Addressing risks associated with future cost changes.

Nova Scotia UARB Matter No. M10110, direct testimony on Nova Scotia Power's Wreck Cove hydroelectric project on behalf of the Nova Scotia Consumer Advocate. Reasonableness of project and unresolved issues.

California PUC Docket A.19-08-013, direct testimony in Southern California Edison's 2021 general rate case (track 3) on behalf of the Small Business Utility Advocates. Reasonableness and prudence of remedial and replacement software costs to be included in authorized revenue requirement.

Nova Scotia UARB Matter No. M10197, direct testimony on Nova Scotia Power's Tusket Main Dam Refurbishment Authorization to Overspend

application on behalf of the Nova Scotia Consumer Advocate. Whether the project should proceed and whether full cost recovery is justified.

Colorado PUC Proceeding No. 21AL-0317E, answer testimony in Public Service Company of Colorado's 2021 general rate case (phase 1) on behalf of Energy Outreach Colorado. Reasonableness of capital project costs, choice of test year, adjustment to load to reflect effects of pandemic.

2022 **California PUC** Docket A.21-05-017, direct testimony with Paul Chernick in Liberty Utilities Calpeco 2022 general rate case on behalf of the Small Business Utility Advocates. Marginal cost study, revenue allocation, rate design.

Nova Scotia UARB Matter No. M10366, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2022 on behalf of the Nova Scotia Consumer Advocate. Alignment with IRP and new regulation. Cost minimization. Project contingency. Post-project review. Total cost of ownership. Economic analysis model. Decommissioning. Analysis of specific projects.

California PUC Docket A.21-10-010, direct testimony on Pacific Gas and Electric's proposed Electric Vehicle Charge 2 Program on behalf of the Small Business Utility Advocates. Program scale and unit costs. Cost controls. Cost Allocation.

Nova Scotia UARB Matter No. M10569, direct testimony on Nova Scotia Power's 2022 Load Forecast Report on behalf of the Nova Scotia Consumer Advocate. Impact of multi-hour average temperatures and wind speed on load. Use of multiple weather stations in load forecast. Electrification forecast. Load Research Sample model. DSM adjustment.

Nova Scotia UARB Matter No. M10400, direct testimony on Nova Scotia Power's Work Management and Scheduling & Dispatch Application on behalf of the Nova Scotia Consumer Advocate. Economic analysis. Additional applications for software. Contingency guidelines. Total cost of ownership.

Massachusetts DPU Docket No. 22-22, direct, surrebuttal and supplemental testimony on Eversource Energy's 2022 Base Distribution Rate Case on behalf of the Cape Light Compact. Allocation of distribution revenue requirement.

Nova Scotia UARB Matter No. M10431, direct testimony on Nova Scotia Power's 2022 General Rate Application on behalf of the Nova Scotia Consumer Advocate. Board directives. Fuel costs. Capital project revenue requirements. Deferral accounts and riders. Cost allocation. Residential customer charge.

2023 **Nova Scotia UARB** Matter No. M10959, direct testimony on Nova Scotia Power's 2023 Application for Annually Adjusted Rates on behalf of the Nova Scotia Consumer Advocate. Seasonal and time-varying rates. Impact of Maritime Link power delivery. Cost of service study updates.

California PUC Docket R.22-07-005, direct testimony on Rulemaking to Advance Demand Flexibility Through Electric Rates. Income-graduated fixed charge: cost categories, rate design, and impacts on electrification, low-income ratepayers, and energy efficiency.

Nova Scotia UARB Matter No. M10960, direct testimony on Eastward Energy's 2023 General Rate Application on behalf of the Nova Scotia Consumer Advocate. System Expansion Investments. Customer connection incentive program. Impacts on electrification programs.

Nova Scotia UARB Matter No. M10416, direct testimony on the audit of Nova Scotia Power's Fuel Adjustment Mechanism on behalf of the Nova Scotia Consumer Advocate. Reasonableness of biomass fuel costs. Shortfall in expected customer benefits from Maritime Link transmission project. Regional joint dispatch. Accounting issues related to coal supplies and wind farm tax credits. Impact of demand response and time-varying rates on fuel costs.

Nova Scotia UARB Matter No. M11009, direct testimony on the disposition of the Nova Scotia Power Maritime Link Inc's Holdback. Benefits of Maritime Link, including energy- and capacity-related benefits. Offset of replacement energy costs. Sufficiency of regulatory process to recover customer benefits.

Nova Scotia UARB Matter No. M11017, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2023 on behalf of the Nova Scotia Consumer Advocate. Capital projects with risk. Reliability investments. Cost minimization practices, including project contingency, total cost of ownership, project delivery model, and post-project reviews. Analysis of specific projects.

Kentucky PSC Case No. 2022-00402, direct testimony on Kentucky Utilities and Louisville Gas and Electric's application for the retirement of seven fossil-fired generation units on behalf of Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association. Demonstration that retirement of units meets statutory standard to overcome rebuttable presumption against retirement. Consideration of utility replacement portfolio and membership in PJM. Definition of dispatchable electric generating capacity. Use of dispatch practices including full flexibility operating mode for renewables. Updates to resource adequacy methods. Economic test for investment in small-frame CT units.

Nova Scotia UARB Matter No. M11108, direct testimony on Nova Scotia Power's 2023 Load Forecast Report on behalf of the Nova Scotia Consumer Advocate. Use of lagged temperatures and wind speed to forecast/normalize load. Use of multiple weather stations in load forecast. Electrification forecast, including backup to heat pumps and electric vehicle demand. Load research sample model. DSM adjustment.

Washington UTC Docket No. UE-230172, response and cross-answer testimony on PacifiCorp's 2024 General Rate Case on behalf of the WUTC Staff. Net power costs. Revision to power cost adjustment mechanism (PCAM).

2024

Nova Scotia UARB Matter No. M11017, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2023 on behalf of the Nova Scotia Consumer Advocate. Capital projects with risk. Reliability investments. Distribution routine budgets. IT routine budgets. Cost minimization practices, including project contingency, project delivery model, post-project reviews, and quality control. Analysis of specific projects.

Nova Scotia UARB Matter No. M11621, direct testimony on Nova Scotia Power's Smart Grid Nova Scotia Final Report on behalf of the Nova Scotia Consumer Advocate. Classification of capital expenditures. Completion of business plan.

Washington UTC Docket No. UE-240006, response and cross-answer testimony on Avista's 2024 General Rate Case on behalf of the WUTC Staff. Net power expenses. Impact of carbon emissions policy. Revision to energy recovery mechanism (ERM).

Nova Scotia UARB Matter No. M11689, direct testimony on Nova Scotia Power's 2024 Load Forecast Report on behalf of the Nova Scotia Consumer Advocate. Consideration of weather trends. Hybrid scenario for electrification. Forecast for peak demand impact of time-varying pricing tariffs. Forecast peak demand for electric vehicle charging. Inconsistencies between load forecast and distribution planning.

Washington UTC Docket No. UE-240004, response and cross-answer testimony on Puget Sound Energy's 2024 General Rate Case on behalf of the WUTC Staff. Net power costs. Impact of carbon emissions policy. Prudence of power purchase agreement.

Nova Scotia UARB Matter No. M11533, direct testimony on the audit of Nova Scotia Power's Fuel Adjustment Mechanism on behalf of the Nova Scotia Consumer Advocate. Regional joint dispatch. Net benefits of hedging. Recommended disallowances related to maintenance, human error, and uneconomic dispatch issues.

2025

Nova Scotia UARB Matter No. M11150, direct testimony on Nova Scotia Power's Appeal of Minister's Decision on behalf of the Nova Scotia Minister of Energy. Lack of independent assessment of project schedule. Due diligence in compliance with renewable energy standard.

Nova Scotia UARB Matter No. M11989, direct testimony on Nova Scotia Power's 2025 Application for Annually Adjusted Rates on behalf of the Nova Scotia Consumer Advocate. Forecasts of power imports. Impact of scheduling

uncertainty for new generation. Seasonal and time-varying rates. Stakeholder engagement on updating methods.

Nova Scotia UARB Matter No. M12012, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2025 on behalf of the Nova Scotia Consumer Advocate. Capital projects with insufficient support. Reliability investments. Cost minimization practices, including project contingency, project delivery model, post-project reviews, and Mersey Hydro. Progress on planned renewable resources.

Louisiana PSC Docket No. 37425, answer testimony on Entergy Louisiana's Application for Approval of Generation and Transmission Resources in Connection with Service to Single Customer on behalf of the Southern Renewable Energy Association. Compliance with Commission orders. Failure to evaluate renewable and storage resources. Corporate sustainability rider and expedited certification process.

Colorado PUC Proceeding No. 24A-0442E, answer and cross-answer testimony on Public Service Company of Colorado's 2024 Just Transition Solicitation on behalf of Interwest Energy Alliance. Just Transition incentives. Utility ownership target. Bid flexibility. Transmission planning. Procurement contingencies. Systemic risks to generation developers.

Georgia PSC Docket No. 44280, direct testimony on Georgia Power Company's stipulation on extending its alternate rate plan on behalf of Natural Resources Defense Council, Sierra Club, and the Southern Alliance for Clean Energy. Sufficiency of information and opportunity for review. Assurances regarding impact of large loads on existing customer rates. Need for an illustrative cost of service study.

Virginia SCC Case No. PUR-2025-00058, direct and surrebuttal testimony on Dominion Virginia's 2025 rate case on behalf of Appalachian Voices. Minimum system method and monthly customer charges. Review of proposed new large energy user rate class and related standard energy service agreement terms. Generation and transmission cost allocation methods.

South Carolina PSC Docket No. 2025-154-E, direct and surrebuttal testimony on Duke Energy Progress's 2025 rate case on behalf of South Carolina Coastal Conservation League and three other organizations. Large load tariffs and contract terms. Generation and transmission cost allocation methods. Treatment of interruptible load.

South Carolina PSC Docket No. 2025-172-E, direct and surrebuttal testimony on Duke Energy Carolinas' 2025 rate case on behalf of South Carolina Coastal Conservation League and three other organizations. Large load tariffs and contract terms. Generation and transmission cost allocation methods. Treatment of interruptible load.

North Carolina UC Docket Nos. E-2, Sub 1383 and E-7, Sub 1332, direct testimony on Duke Energy's proposal to combine its two operating companies on behalf of the Southern Alliance for Clean Energy and three other organizations. Rate consolidation, including jurisdictional cost allocation effects. Large load tariff. Cost minimization strategy.

2026 **South Carolina PSC** Docket No. 2025-230-E, direct and surrebuttal testimony on Duke Energy's proposal to combine its two operating companies on behalf of the South Carolina Coastal Conservation League and three other organizations. Rate consolidation, including jurisdictional cost allocation effects. Large load tariff. Class allocation of jurisdictional revenue sharing. Cost minimization strategy.

Nova Scotia UARB Matter No. M12012, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2026 on behalf of the Nova Scotia Consumer Advocate. Cost forecasting and minimization in distribution routine capital projects. Reliability investments. Revisions to capital cost estimate practices.

Nova Scotia UARB Matter No. M12691, direct testimony on Eastward Energy's 2026 General Rate Application on behalf of the Nova Scotia Consumer Advocate. Marketing and sales cost allocation. CRP deferral cost recovery.

Attachment 2: Calculation of Recoverable Return on Holdback Based on Approved Cost of Debt

Adapted from: NSPML 2026 Holdback Mechanism NSEB IR-06 Attachment 2

Month	Beginning Balance	Holdback Retained	Accumulated Interest (semi-annual, July and January)	Ending Balance	Debt Cost
Jul-24	0	1,092,306	-	1,092,306	4,733
Aug-24	1,092,306	4,000,000	-	5,092,306	22,067
Sep-24	5,092,306	3,791,208	-	8,883,514	38,495
Oct-24	8,883,514	1,324,945	-	10,208,459	44,237
Nov-24	10,208,459	-	-	10,208,459	44,237
Dec-24	10,208,459	-	-	10,208,459	44,237
Jan-25	10,208,459	1,084,196	198,005	11,490,660	49,793
Feb-25	11,490,660	-	-	11,490,660	49,793
Mar-25	11,490,660	-	-	11,490,660	49,793
Apr-25	11,490,660	700,101	-	12,190,761	51,811
May-25	12,190,761	-	-	12,190,761	51,811
Jun-25	12,190,761	-	-	12,190,761	51,811
Jul-25	12,190,761	-	304,811	12,495,572	53,106
Aug-25	12,495,572	-	-	12,495,572	53,106
Sep-25	12,495,572	3,360,000.00	-	15,855,572	67,386
Oct-25	15,855,572	-	-	15,855,572	67,386
Nov-25	15,855,572	-	-	15,855,572	67,386
Dec-25	15,855,572	-	-	15,855,572	67,386
Total Debt Cost					878,573

Period	Debt Cost	Monthly (Divide by 12)	
Apr24-Mar25	5.20%	0.433%	Source: Exhibit N-1, M11563, Appendix A, p. 1.
Apr25-Dec25	5.10%	0.425%	Source: Exhibit N-1, M11990, Appendix A, p. 1.