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August 22, 2025

Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Jo-Anne Galarneau
Executive Director and Board Secretary

Re: Application for Approval of Modifications to the Cost of Service Methodology

Please find enclosed Newfoundland and Labrador Hydro's ("Hydro") application for approval of modifications to Hydro's Cost of Service Methodology. Hydro has filed its application for review and approval of the updated Cost of Service Methodology reflecting the terms of the 2018 Cost of Service Methodology Settlement Agreement ("Settlement Agreement").

In the interest of regulatory efficiency and to streamline the process for the upcoming general rate application ("GRA"), Hydro is filing this application to address the outstanding issues, along with other methodology issues, in advance of Hydro's next GRA. The issues listed in the Settlement Agreement that are addressed herein are:

1) A report with recommendations of a review by Hydro to: i) identify any projects and spending in its Conservation and Demand Management ("CDM") plan that are justified in whole or in part based on demand related savings; ii) assess how demand related CDM is classified in other jurisdictions; and iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate.

2) A report of a review by Hydro of the contribution of different customer classes to the uncertainty parameters in its planning studies (e.g., P50 vs P90), to ensure the calculation of peaks used in the Cost of Service Study appropriately reflects the contribution of the different customer classes to the coincident peak used for planning purposes.

3) Details of the results of Hydro's cost tracking for specifically assigned assets and its assessment of the feasibility of using actual expenses in the calculation of specifically assigned charges.

4) A report of a review by Hydro of the methodology for the calculation of the megawatt credit provided to Newfoundland Power Inc. to ensure reasonableness.

5) A proposal for the specific deferral mechanism to account for variations from forecast net export revenues in the test year Cost of Service Study.

The above-noted matters are provided in in Schedule 1 to this application and the attachments thereto.

On May 23, 2025, Hydro requested that the review of the Long-Term SCVDA Application[1] be paused considering its planned Cost of Service filing. Upon the receipt of an Order from the Board of Commissioners of Public Utilities regarding this application, Hydro will make the required revisions to its Long-Term SCVDA Application.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Shirley A. Walsh
Senior Legal Counsel, Regulatory
SAW/kd

Encl.

ecc:

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Dominic J. Foley
Douglas W. Wright
Regulatory Email

Iron Ore Company of Canada
Gregory A.C. Moores, Stewart McKelvey

Teck Resources Limited
Shawn Kinsella

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[1] On April 16, 2025, Hydro filed an application for approval of a deferral account, modifications to Hydro's Cost of Service Methodology related to the long-term plan for the current Supply Cost Variance Deferral Account ("SCVDA") and an accounting deviation necessary as a result of the amalgamation of Nalcor Energy and Hydro ("Long-Term SCVDA Application").

Cost of Service Methodology Application

August 22, 2025

An application to the Board of Commissioners of Public Utilities

newfoundland labrador hydro

IN THE MATTER OF the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 ("*EPCA*") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 ("*Act*"), and regulations thereunder; and

IN THE MATTER OF an application by Newfoundland and Labrador Hydro ("Hydro") for the approval of modifications to Hydro's Cost of Service Methodology.

To: The Board of Commissioners of Public Utilities ("Board")

THE APPLICATION OF HYDRO STATES THAT:

A. Background

1. Hydro is a corporation continued and existing under the *Hydro Corporation Act, 2024*, is a public utility within the meaning of the *Act*, and is subject to the provisions of the *EPCA*.

2. Under the *Act*, the Board has the general supervision of public utilities and requires that a public utility submit for the approval of the Board the rates, tolls, and charges for the service provided by the public utility and the rules and regulations which relate to that service.

B. Application

3. Hydro's Cost of Service Methodology Review was filed with the Board on November 15, 2018, in compliance with a Settlement Agreement within Hydro's 2017 General Rate Application ("GRA"). The application requested approval of proposed revisions to Hydro's Cost of Service Methodology for use in the determination of test year class revenue requirements reflecting the inclusion of the Muskrat Falls Project costs upon full commissioning.

4. A number of revisions to Hydro's Cost of Service Methodology were approved based on a Settlement Agreement reached among the parties in Board Order No. P.U. 37(2019).

5. The approved recommendations regarding the Muskrat Falls Power Purchase Agreement ("PPA"), Transmission Funding Agreement ("TFA") between Labrador-Island Link ("LIL") Partnership and Hydro, and export revenues included:

(i) Power purchase costs resulting from the Muskrat Falls PPA and the TFA shall be functionalized as generation;

(ii) Net export revenues shall be functionalized as generation, which is the same manner as the functionalization of the Muskrat Falls Project costs;

(iii) The classification between demand and energy for the power purchase costs resulting from the Muskrat Falls PPA and the TFA shall be based on the system load factor. For greater clarity, it was agreed that this is inclusive of the costs related to the Muskrat Falls Generation, the LIL, and the Labrador Transmission Assets; and

(iv) Net export revenues shall be classified using the system load factor, which is the same manner as the classification of the Muskrat Falls Project costs.

6. In the Settlement Agreement, the parties agreed that the approved Cost of Service Methodology would be used in the first GRA to address Muskrat Falls Project costs upon full commissioning, except for certain issues identified in the Settlement Agreement for review in the GRA. A further Cost of Service Methodology Review could be conducted after the GRA upon request of any of the parties and approval by the Board.

7. The issues listed in the Settlement Agreement to be filed by Hydro as part of the next GRA are:

(i) A report with recommendations of a review by Hydro to: i) identify any projects and spending in its Conservation and Demand Management ("CDM") plan that are justified in whole or in part based on demand related savings; ii) assess how demand related CDM is classified in other jurisdictions; and iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate.

(ii) A report of a review by Hydro of the contribution of different customer classes to the uncertainty parameters in its planning studies (e.g., P50 vs P90), to ensure the calculation of peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes.

(iii) Details of the results of Hydro's cost tracking for specifically assigned assets and its assessment of the feasibility of using actual expenses in the calculation of specifically assigned charges.

(iv) A report of a review by Hydro of the methodology for the calculation of the megawatt credit provided to Newfoundland Power Inc. ("Newfoundland Power") to ensure reasonableness.

(v) A proposal for the specific deferral mechanism to account for variations from forecast net export revenues in the test year Cost of Service Study.

8. The above-noted matters are addressed in the evidence provided in this application, in Schedule 1 and the attachments thereto. More specifically, CDM is addressed in Schedule 1, Attachment 1; the review of customer class coincident is addressed in Schedule 1, Attachment 2; the results of Hydro's cost tracking for specifically assigned assets and recommendation for using actual expenses is provided in Schedule 1, Attachment 3; and Hydro's report regarding the methodology of calculating Newfoundland Power's Generation Credit is included as Schedule 1, Attachment 4.

9. The deferral mechanism to account for variations from forecast net export revenues in the test year Cost of Service Study was addressed in Hydro's application in July 2021 for a new Supply Cost Variance Deferral Account ("SCVDA"). Hydro currently has an application before the Board regarding a long-term SCVDA, in which the components of the SCVDA, including variations from forecast net export revenues in the test year Cost of Service Study, are proposed to continue.[1]

10. The parties also agreed that the existing Corner Brook Pulp and Paper Limited Pilot Agreement regarding generation credits and the associated cost of service treatment would continue. Schedule 1 to this application provides an update on this issue since the Settlement Agreement.

11. In the interest of regulatory efficiency and to streamline the process for the upcoming GRA, Hydro is filing this application to address the outstanding issues, along with other methodology issues, in advance of Hydro's next GRA.

[1] "Approval of a Proposed Long-Term Supply Cost Variance Deferral Account," Newfoundland and Labrador Hydro, April 16, 2025 ("Long-Term SCVDA Application"). On May 23, 2025, Hydro requested that the Board pause the review of the Long-Term SCVDA Application in light of its planned Cost of Service filing. Hydro requests a pause in the process as the Cost of Service filing would likely have implications for the proposals for the long-term SCVDA and/or require revisions to that application.

12. The Cost of Service Methodology issues that are proposed to be addressed prior to the GRA are in relation to:

    (i) Rate mitigation funding;

    (ii) Transmission tariff revenue;

    (iii) Greenhouse gas credits revenue; and

    (iv) The treatment of the Holyrood Thermal Generating Station ("Holyrood TGS") after commissioning of the Muskrat Falls Project.

13. Hydro proposes the application of the principles noted in paragraph 5 above to other forms of rate mitigation or credits offsetting Muskrat Falls Project costs. In particular, Hydro proposes that rate mitigation funding, transmission tariff revenue, and greenhouse gas credits be functionalized as generation and that the classification between demand and energy for each shall be based on the system load factor.

14. Schedule 1 to this application, and its attachments, provides and addresses the reports and proposals required to be filed as set out in the Settlement Agreement.

C. Newfoundland and Labrador Hydro's Request

15. Hydro requests that the Board approve the following with respect to Hydro's Cost of Service Methodology:

    (i) CDM program costs for the Labrador Interconnected System, including re-allocated amounts, be functionalized as generation;

    (ii) The classification between demand and energy for the CDM program costs in Labrador be based on system load factor;

    (iii) The portion of CDM program costs in Labrador classified as energy be added to the production demand costs for recovery in the generation demand rate charged to the Labrador Industrial customers;

    (iv) Cost allocation for specifically assigned assets to utilize actual operating and maintenance ("O&M") costs, comprised of a Direct O&M Charge calculated as the six-year average of actual O&M expenses recorded against each specifically assigned asset, or estimated costs where historical costs are not available, and an Indirect O&M Charge calculated as the ratio of total indirect transmission O&M to total direct transmission O&M, derived from the Cost of Service Study;

(v) The implementation of a 64 MW Hydraulic Credit for Newfoundland Power, with the process for determination of the thermal generation credit to remain unchanged;

(vi) Rate mitigation funding be functionalized as generation;

(vii) The classification between demand and energy for rate mitigation funding shall be based on the system load factor;

(viii) Transmission tariff revenue be functionalized as generation;

(ix) The classification between demand and energy for transmission tariff revenue shall be based on the system load factor;

(x) Greenhouse gas credit revenue be functionalized as generation; and

(xi) The classification between demand and energy for greenhouse gas credit revenue shall be based on the system load factor.

D. Communications

16. Communications with respect to this application should be forwarded to Shirley A. Walsh, Senior Legal Counsel, Regulatory for Hydro.

DATED at St. John’s in the province of Newfoundland and Labrador on this 22nd day of August 2025.

NEWFOUNDLAND AND LABRADOR HYDRO

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Shirley A. Walsh
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Newfoundland and Labrador Hydro
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Schedule 1

Evidence Supporting Cost of Service Methodology Issues

Contents

List of Attachments

1.0 Introduction

Newfoundland and Labrador Hydro's ("Hydro") Cost of Service Methodology Review was filed with the Board of Commissioners of Public Utilities ("Board") on November 15, 2018, in compliance with the Settlement Agreement to Hydro's 2017 General Rate Application ("GRA"). The application proposed revisions to Hydro's Cost of Service Methodology for use in the determination of test year class revenue requirements, reflecting the inclusion of the Muskrat Falls Project ("Project") costs upon full commissioning.

In accordance with the established schedule for the proceeding, the parties engaged in settlement discussions during the week of September 16, 2019, which were facilitated by Board Hearing Counsel. On October 4, 2019, a Settlement Agreement was filed with the Board setting out the agreement of the parties to the application on all issues arising from the application. The Settlement Agreement stated:

> The Parties agree that the Cost of Service Methodology approved by the Board in this Cost of Service Methodology Application shall be the accepted methodology for use in the first General Rate Application filed to address recovery of Muskrat Falls Project costs upon full commissioning of, except for any particular issues identified in this Settlement Agreement for further review in the GRA, after which a Cost of Service Methodology Review may be conducted upon request of any of the Parties and approval by the Board for such review.[1]

The Settlement Agreement, approved in Board Order No. P.U. 37(2019), also set out the following to be filed by Hydro as part of its next GRA:

1) A report with recommendations of a review by Hydro to: i) identify any projects and spending in its Conservation and Demand Management ("CDM") plan that are justified in whole or in part based on demand-related savings; ii) assess how demand-related CDM is classified in other jurisdictions; and iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate.

2) A report of a review by Hydro of the contribution of different customer classes to the uncertainty parameters in its planning studies (e.g., P50 vs P90), to ensure the calculation of peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes.

[1] "Settlement Agreement," October 4, 2019, p. 2, para. 7.

3) Details of the results of Hydro's cost tracking for specifically assigned assets and its assessment of the feasibility of using actual expenses in the calculation of specifically assigned charges.

4) A report of a review by Hydro of the methodology for the calculation of the megawatt credit provided to Newfoundland Power Inc. ("Newfoundland Power") to ensure reasonableness.

5) A proposal for the specific deferral mechanism to account for variations from forecast net export revenues in the test year Cost of Service Study.

In the Settlement Agreement, the parties also agreed that the existing Corner Brook Pulp and Paper Limited ("CBPP") Pilot Agreement regarding generation credits and the associated cost of service treatment shall continue. This application provides an update on this issue since the Settlement Agreement.

1.1 Application

This application addresses the reports and proposals required to be filed as part of the Settlement Agreement, as previously mentioned. The application will also address Cost of Service Methodology issues currently identified and required to be addressed for the Cost of Service to be filed in Hydro's next GRA. These issues have not yet been approved by the Board and are as follows:

1) Allocation of rate mitigation funding;

2) Allocation of transmission tariff revenue;

3) Allocation of greenhouse gas credits revenue; and

4) Confirmation of the treatment of the Holyrood Thermal Generating Station ("Holyrood TGS") costs after commissioning of the Project.

In the interest of regulatory efficiency and to streamline the process for the upcoming GRA, Hydro is filing this application to address the requirements outlined in the Settlement Agreement, along with other methodology issues identified above, in advance of Hydro's next GRA, which is anticipated to be filed in the first quarter of 2026.

2.0 Cost of Service and Cost Allocation Recommendations

2.1 Conservation and Demand Management

The Settlement Agreement required a report to be filed within Hydro's next GRA with recommendations of a review by Hydro to: i) identify any projects and spending in its CDM plan that are justified, in whole or in part, based on demand related savings; ii) assess how demand related CDM is classified in other jurisdictions; and iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate.

Hydro has prepared a report as requested by the Board, included as Attachment 1, "Conservation and Demand Management Cost Allocation Review." Hydro also engaged Christensen Associates Energy Consulting, LLC ("CA Energy Consulting") to complete a jurisdictional scan of CDM classifications, the results of which are outlined in the report "CDM Costing and Pricing Practices in North America," included as Appendix A to Attachment 1.

Hydro's report identifies projects and spending in its current CDM plan, which are justified based on demand-related savings and, using the results of CA Energy Consulting's review, how demand-related CDM is classified in other jurisdictions. Hydro also examined its current practice of allocating CDM costs in light of these findings and CA Energy Consulting's review.

Hydro currently uses an energy allocator to allocate its CDM program costs. CA Energy Consulting's review found that generally, most utilities in Canada allocate CDM costs in a way that is more complex than Hydro's current practice of treating costs as energy-related and recovering them through an energy rider; however, there does not appear to be a common methodology of cost allocation across jurisdictions. In the United States, most utilities allocate costs based on energy and recover through rate riders, similar to Hydro. Further, CA Energy Consulting's review indicated that even though many utilities allocate CDM costs using a combination of demand and energy allocators, many of these utilities still recover the costs using an energy rider.

Hydro's analysis of cost allocation using alternative allocators for CDM program costs incurred from 2019 through 2024 showed that using demand or a combination of demand and energy allocation options yielded little change in cost allocation between customer classes when compared to Hydro's current practice, as a result of the low level of annual program costs on the Island Interconnected System.

CA Energy Consulting concluded that Hydro can retain or modify its CDM cost allocation and revenue recovery approaches to reflect its changing circumstances with flexibility from the perspective of both theory and industry practice. The current low level of costs permits retention of current methods. CA Energy Consulting's findings are consistent with the analysis performed by Hydro on different allocation methods for CDM program costs. Hydro is recommending continuing with the current practice of allocating CDM program costs on the Island Interconnected System using an energy allocator.

As noted in Attachment 1, even when Hydro's costs were double (as noted in 2020, where two years of costs were allocated, 2019 and 2020), the variance produced by using different allocation methodologies was immaterial. Hydro does not expect costs on the Island Interconnected System to significantly exceed annual expenditures to date; therefore, with respect to the provision of options regarding establishing a materiality threshold to assess if a change in approach is appropriate, Hydro is proposing to review the methodology in a future GRA only if expenditures exceed $1,000,000 threshold in a given year.

Costs associated with CDM programming on the Labrador Interconnected System are immaterial to date, at approximately $27,000. Customers on the Labrador Interconnected System currently do not have annual rate updates to adjust for changes in supply costs or to allow for the collection of CDM program costs, like customers on the Island Interconnected System. Therefore, Hydro is proposing the methodology to collect these costs, as well as any re-allocated costs, in rates by reflecting the cost in the Labrador Interconnected System Cost of Service.

Consistent with the cost of service treatment selected by a number of the Canadian utilities surveyed and the classification of Labrador Interconnected power purchase costs in the cost of service, Hydro proposes:

- CDM program costs for the Labrador Interconnected System be functionalized as generation; and
- The classification between demand and energy for CDM program costs on the Labrador Interconnected System be based on system load factor.

Hydro is also proposing that the portion of program costs allocated to energy for the Labrador Industrial customers be added to the production demand costs for recovery in the generation demand rate.

2.2 Review of Customer Class Coincident

The Settlement Agreement required a report of a review by Hydro of the contribution of different customer classes to the uncertainty parameters in its planning studies (e.g., P50 vs P90), to ensure the calculation of peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes.

Hydro studied the class coincident for both the Island Interconnected System and the Labrador Interconnected System and prepared a report on its findings, "Review of Customer Class Coincident: Load Data Analysis," which is included as Attachment 2 to this document.

The results of this study showed that electricity loads from Newfoundland Power, Hydro Rural and Labrador Utility customer classes are strongly correlated with temperature and wind chill values during the winter peak months. Further analysis of Newfoundland Power and Hydro Rural concluded that the historical wind chill at system peak and the time of system peak have little to no correlation with the coincident factors of these classes.

Analysis of the Industrial classes showed almost no correlation with overall load and temperature, or wind chill. These results are aligned with Hydro's experience with the general behaviour of Industrial customer load as well as load forecast input received from these customers.

The P90 weather condition forecast is based on 30 years of historical wind chill values during the winter period. In a P90 forecast, the peak load would be incrementally higher compared to a P50 forecast;[2] however, it would largely be driven by increases in Utility load and not Industrial load, as their peak is not highly correlated with weather. Therefore, Hydro concluded that there would be no material difference in the coincident factor for each customer class on the Island Interconnected System under different uncertainty parameters, such as a P50 versus a P90, and there would also be no material change in the proportions each customer is contributing to Hydro's peak load.

[2] The P50 forecast is also based on 30 years of historical wind chill values during the winter period, but is calculated based on the fiftieth percentile of values, while a P90 uses the tenth percentile.

On the Labrador Interconnected System, only Labrador West and Labrador East Utility loads are highly correlated with weather; using a P50 versus P90 forecast would have an impact on Utility loads only. Consistent with the Island Interconnected System, load increases in a P90 forecast would be driven by increases in the Utility load, as Industrial load is not highly correlated with weather. Therefore, there would be no material difference in the coincident factor for each customer class under different uncertainty parameters.

Hydro concludes that, at the present time, it is appropriate to use the same coincident factors when calculating P50 and P90 system peaks and that no additional coincident factors are needed for the time of peak for both the Island Interconnected System and the Labrador Interconnected System. The coincident peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes.

2.3 Specifically Assigned Assets

In the Settlement Agreement, Hydro agreed to provide details of the results of its costs tracking for specifically assigned assets and its assessment of the feasibility of using actual expenses in the calculation of specifically assigned charges. Attachment 3 provides this assessment and recommendation for cost allocation for specifically assigned assets using actual operating and maintenance ("O&M") costs.

In the 2017 GRA, Hydro allocated O&M costs in the test year based on the determination of test year transmission asset values indexed using Handy Whitman indices. While administratively convenient, this approach was met with criticism from some stakeholders, particularly Hydro's Island Industrial Customer Group. The principal concern was that the method failed to reflect the actual maintenance requirements of the assets in question. In response to those concerns, and as a result of the analysis completed, Hydro is proposing to replace the indexed asset value methodology with a more precise approach that relies on work-order data to track actual O&M at the asset level.

Under the proposed methodology, the O&M charged to a specifically assigned customer will be composed of two components:

1) **Direct O&M Charge:** This will be calculated as the six-year average of actual O&M expenses recorded against each specifically assigned asset. The six-year averaging period aligns with the

typical maintenance cycle for transmission assets, thereby smoothing year-to-year variability while preserving cost causality.

2) **Indirect O&M Charge:** This component will be derived by applying a loader to the direct charge. The loader is calculated as the ratio of total indirect transmission O&M to total direct transmission O&M, derived from the Cost of Service Study. This ratio will then be applied to the customer's Direct O&M Charge to allocate a fair share of system-level overhead and shared costs.

As noted in Hydro's report in Attachment 3, this shift aims to provide more accurate, asset-specific cost attribution while maintaining administrative viability. The proposed method has shown variable impacts across customers, with overall benefits including reduced subsidization and improved equity in cost recovery.

Additionally, as outlined in Attachment 3, Hydro intends to continue its practice of recovering capital costs through direct charges to Industrial customers.

Collectively, these measures are designed to strengthen the cost-of-service framework and ensure that the allocation of costs of specifically assigned assets continues to reflect the actual use and condition of the assets involved.

2.4 Generation Credit provided to Newfoundland Power

The Settlement Agreement required a report of a review by Hydro of the methodology for the calculation of the megawatt credit provided to Newfoundland Power to ensure reasonableness. Hydro's assessment and report is provided as Attachment 4.

In Hydro's 2019 Test Year, Newfoundland Power's generation credit was calculated based on the Island Interconnected System's reserve at criteria. The existing calculation takes the total capacity of Newfoundland Power generation and subtracts a reserve at criteria to arrive at a generation credit. Reserve at criteria is not the same as system reserve; to calculate the reserve at criteria, 240 MW[3] of

[3] To ensure reliable system operation in covering the single worst contingency, Hydro targets a spinning reserve equal to the capacity of the largest online unit. For the 2019 Test Year, this was equal to 170 MW when Unit 1 or Unit 2 at Holyrood was online, and was otherwise 154 MW, which is the capacity of Bay d'Espoir Unit 7. Hydro maintained an additional 70 MW of available reserve above these spinning reserve requirements. This reserve, over and above what is required for the single worst contingency, covers performance uncertainties in generating units, especially wind and other variable generation, transmission equipment and unanticipated increases in demand. This assists in expediting load recovery for a large generation loss, and is required for prudent management of system risks for customers.

reserve margin was subtracted from the total Island Interconnected System capacity at peak, inclusive of capacity assistance contracts, to determine the maximum Island Interconnected System demand that can be supported on peak. The maximum demand that can be supported on peak is then used to calculate the percent reserve at criteria. The Newfoundland Power generation credit for the 2019 Test Year was 118.1 MW; the calculation is shown in Table 1.

Table 1: Newfoundland Power Generation Credit

	Capacity (MW)	Reserve at Criteria	Generation Credit
Hydraulic	94.2	1.128225	83.5
Thermal	39.0	1.128225	34.6
Total	**133.2**		**118.1**

To determine if the current methodology for the calculation of the generation credit to Newfoundland Power is reasonable, Hydro performed an analysis of historical data from January 2020 to December 2024 to determine the amount of hydraulic generation that Newfoundland Power was able to provide during times of high or peak load on the Island Interconnected System following a request from Hydro to maximize hydraulic generation. The study approach and results are contained in the report "Newfoundland Power Generation during Island Interconnected System Peaks," which is included as Attachment 4 to this document.

Based on the results of the analysis completed, Hydro believes that historical generation during Island System Peaks is a more accurate reflection of the available generation from Newfoundland Power than the existing calculation. Hydro proposes a hydraulic credit of 64 MW for Newfoundland Power, which is the five-year historical average, 2020 to 2024, of Newfoundland Power's hydraulic generation at the time of system peak.

Newfoundland Power's thermal generation remains available to be called upon; however, there is a limited data set available to conduct an analysis similar to that conducted for the hydraulic credit. Therefore, Hydro recommends that the process for determining the thermal generation credit remain unchanged, determined by Newfoundland Power's thermal generation capability forecast for the test year, reduced by the reserve at criteria.

2.5 Export Revenues – Deferral Mechanism

The Settlement Agreement required Hydro to file a proposal for the specific deferral mechanism to account for variations from forecast net export revenues in the test year Cost of Service Study.

On July 29, 2021, Hydro filed an application proposing the creation of a new Supply Cost Variance Deferral Account ("SCVDA") that was approved by the Board effective November 1, 2021, in Board Order Nos. P.U. 33(2021) and P.U. 4(2022). The SCVDA enables the deferral of variances for certain components of costs and revenues from Hydro's approved test year, including Hydro's net revenues from exports.

The components of this deferral account, including variations from forecast net export revenues in the test year Cost of Service Study, are proposed to continue in Hydro's long-term SCVDA.[4]

2.6 Corner Brook Pulp and Paper – Pilot Agreement

In the Settlement Agreement, the parties agreed that the existing CBPP Pilot Agreement regarding generation credits and the associated cost of service treatment shall continue. Any future changes will be addressed in the review of the industrial rate structure and/or the existing capacity assistance agreement between Hydro and CBPP.

On December 8, 2020, Hydro filed an application for approval of a Revised Power Service Agreement, Firm Energy Power Purchase Agreement, and Second Amended and Restated Capacity Assistance Agreement between Hydro and CBPP. In this application, Hydro and CBPP agreed to discontinue the Generation Credit Pilot Project and sign a Power Service Agreement, which no longer includes the generation credit features.

The new agreements were approved in Board Order No. P.U. 4(2021).

2.7 Rate Mitigation Funding

Rate mitigation funding results from a number of initiatives by the Government of Newfoundland and Labrador ("Government") to limit the impact of Project costs on ratepayers, including the financial restructuring of the Lower Churchill Projects, the term sheets signed by the Government, Hydro and the

[4] "Application for Approval of a Proposed Long-Term Supply Cost Variance Deferral Account," Newfoundland and Labrador Hydro, April 16, 2025.

Government of Canada in February 2022[5] and the Government's rate mitigation plan, which was announced in May 2024.[6]

As part of the financial restructuring, a number of commercial agreements were executed that effectively reduce the charges to Hydro under the Muskrat Falls Power Purchase Agreement ("PPA"), including a reduction in the rate of return earned under the Muskrat Falls PPA and the removal of the requirement to pay a debt guarantee fee on Federal Loan Guarantee debt proceeds.

As part of the same financial restructuring, on December 22, 2022, a commercial agreement between the Government of Canada and the Labrador-Island Link ("LIL") (2021) Limited Partnership was executed, enabling access to $1.0 billion in rate mitigation funding in the form of a convertible debenture. These funds are to be used for rate mitigation and are available in accordance with the terms of the convertible debenture. LIL (2021) Limited Partnership is entitled to make drawings in accordance with the terms and conditions of the convertible debenture and then transfers this funding to Hydro for the purpose of rate mitigation, to offset Project costs owed from customers. To date, approximately $295 million has been transferred to Hydro from LIL (2021) Limited Partnership and used to pay down the balance owing from customers in the existing SCVDA. This funding will continue on an annual basis until the convertible debenture is fully drawn.

The rate mitigation plan announced by the Government on May 16, 2024, included direction on rates for customers on the Island Interconnected System and funding for balances in the SCVDA. The rate mitigation plan, as directed in Order in Council OC2024-062, requires that any additional funding required to reduce the balance in the SCVDA and achieve the 2.25% targeted increase come from Hydro's own resources. Orders in Council OC2024-062 and OC2024-063 directed the Board of Directors of Nalcor Energy and Hydro[7] that any additional funding required to mitigate Lower Churchill Project

[5] "Financial Restructuring Agreement for the Third Federal Loan Guarantee and LIL Investment Finalized," Newfoundland and Labrador Hydro, March 31, 2022. https://nlhydro.com/financial-restructuring-agreement-for-third-federal-loan-guarantee-and-lil-investment-finalized/

[6] "Provincial Government Announces Finalization of Rate Mitigation Plan," Government of Newfoundland and Labrador, May 16, 2024. https://www.gov.nl.ca/releases/2024/iet/0516n01/.

[7] In December 2024, the *Hydro Corporation Act, 2007*, was repealed and replaced by the *Hydro Corporation Act, 2024*, which served to finalize the legal merger of Nalcor Energy into Hydro ("Amalgamation"). As a result of the Amalgamation, Nalcor's and Hydro's assets, liabilities, obligations and agreements continue under the new Hydro, and all Nalcor subsidiaries are now Hydro subsidiaries. These subsidiaries will continue to operate as they did prior to Amalgamation.

costs or to retire the 2023 SCVDA balances of $271 million be through Nalcor Energy's and Hydro's own sources.

Rate mitigation initiatives described above have resulted in reductions in amounts charged to Hydro through the PPAs, as well as providing sources of rate mitigation funding to be used by Hydro to offset the rate impacts of Project costs.

Given that the purpose of rate mitigation is to offset the rate impacts of Project costs, and that Project costs are functionalized as generation and allocated in the Cost of Service Methodology using Hydro's system load factor, for the purpose of cost of service functionalization and classification of rate mitigation funding, Hydro proposes:

- Rate mitigation funding be functionalized as generation; and
- The classification between demand and energy for rate mitigation funding shall be based on the system load factor.

2.8 Transmission Tariff Revenue

The export of energy through the Newfoundland and Labrador Transmission System involves the payment of a "point-to-point" transmission tariff by the transmission customer that requires the transportation of the export energy. The payment of the published transmission tariff to the Newfoundland and Labrador System Operator provides additional revenues to Hydro to partially offset Project costs. The amount of additional revenues will be dependent upon the transmission bookings each year.

Transmission Tariff Revenue, similar to Net Revenue from Exports, is revenue that Hydro is proposing to be credited to partially offset Project costs. This revenue, like Net Revenue from Exports, is available to Hydro as a direct result of the Project and the resulting Interconnection to the North American grid.

Hydro recommends that Transmission Tariff Revenue be treated the same as Net Revenue from Exports for cost of service functionalization and classification. Hydro proposes:

- Transmission tariff revenue be functionalized as generation; and
- The classification between demand and energy for transmission tariff revenue shall be based on the system load factor.

2.9 Greenhouse Gas Credits

The Government's *Management of Greenhouse Gases Act* came into effect on January 1, 2019. This legislation provides for Hydro to receive performance credits as the Holyrood TGS uses less fuel and decreases greenhouse gas emissions. Under the *Management of Greenhouse Gases Act*, Hydro may sell these performance credits to certain other facilities in the province, of which there are 14, excluding the Holyrood TGS.

Hydro has two regulated facilities under the *Management of Greenhouse Gases Act*: the Holyrood TGS and the Holyrood Combustion Turbine ("CT"). For the Holyrood TGS, baseline production was set at the isolated island level projected by Hydro in the 2012 study that informed the development of Muskrat Falls, therefore providing the facility the opportunity to earn performance credits for overachieving its greenhouse gas reduction target in a year. The Holyrood CT was assumed to have minimal operation and is required to meet on-site greenhouse gas reduction targets through reduced generation.

Since the performance credits are based on the difference between generation in a year as if the Holyrood TGS had continued to operate in the absence of the Project (as projected in 2012) and actual generation in that year, Hydro recommends consistent cost of service functionalization and classification of the revenue from the sale of these credits as the cost of service functionalization and classification of Project costs. Hydro proposes:

- Greenhouse gas credit revenue be functionalized as generation; and
- The classification between demand and energy for greenhouse gas credit revenue shall be based on the system load factor.

2.10 Holyrood Thermal Generating Station

In the Cost of Service Methodology Review, the parties agreed on the following treatment for the Holyrood TGS:

- The Holyrood TGS Unit 3 shall be functionalized as transmission after the unit is permanently converted into the role of a synchronous condenser;[8]

[8] Hydro's planning assumptions assume that Holyrood TGS Unit 3 will remain as a synchronous condenser post-steam, once the plant is retired. Through the *RRA Study Review*, Hydro is evaluating post-steam Avalon synchronous condenser requirements, which will inform the future role of Holyrood TGS Unit 3.

- The classification of the Holyrood TGS generation costs, excluding fuel, be based on a test year forecast capacity factor; and
- The fuel costs related to Holyrood are currently classified as energy, approved by the Board in P.U. 30(2019).

The Holyrood TGS continues to be operated primarily as a base load plant with two units operating throughout the peak winter months, with the third unit brought on in anticipation of extremely cold weather and associated high levels of demand, then subsequently shut down with the return to normal winter conditions. If units at Holyrood are required to be online, Hydro utilizes energy from the LIL to keep the Holyrood TGS units operating at a minimum to reduce fuel consumption.

In the Reliability and Resource Adequacy ("RRA") Study – 2022 Update, Hydro reviewed the Holyrood TGS as a standby option. Hydro stated the following as part of the assessment:

> To ensure sufficient generation is available on-Island in the event of an extended bipole LIL outage, on-Island generation must operate reliably. Standby generation must be dispatchable and able to synchronize with the grid quickly, ideally with a recall time within 10 minutes. The Holyrood TGS, as designed, is not ideally configured to meet these requirements. It was originally designed to be base loaded (i.e., limited starts, limited cycling), with a unit recall in excess of 24 hours.
>
> In addition to reducing recall time, Hydro must also improve the reliability of the units during start-up. With a typical start-up success rate of only approximately 50% and an average restoration time of three days following an unsuccessful start, resulting in the average time required to successfully recall a unit ranging from approximately two to three days, Hydro does not consider the Holyrood TGS suitable for operation as a standby generating facility to be called upon in the event of an unplanned LIL outage, as it is anticipated that even under the fastest recall scenario analyzed, there is a high probability of issues during start-up, delaying synchronization of the units by several days.[9]

Based on the current operation of the Holyrood TGS, Hydro engaged CA Energy Consulting to provide an opinion on the current cost of service treatment for Holyrood costs, including fuel. The Memorandum prepared by CA Energy Consulting, "Treatment of Holyrood Generating Station Costs," is included as Attachment 5 to this document.

[9] "Reliability and Resource Adequacy Study – 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. III, sec. 5.3.1, pp. 24/9–25/2.

Based on the current operation of the Holyrood TGS, which is anticipated to continue through the Bridging Period,[10] combined with the opinion of CA Energy Consulting, Hydro recommends that the cost of service treatment remain the same for the 2027 Test Year to be included in Hydro's upcoming GRA filing, with the allocation of costs reviewed for each subsequent GRA.[11] Hydro recommends the continuation of the following cost of service treatment of Holyrood TGS:

- The classification of the Holyrood TGS generation costs, excluding fuel, be based on a test year forecast capacity factor; and
- Holyrood TGS fuel costs be classified as 100% energy.

3.0 Summary

Hydro has reviewed the items resulting from the Settlement Agreement and has identified other items to be addressed for the Cost of Service to be filed in Hydro's next GRA. In the interest of regulatory efficiency and to streamline the process for the upcoming GRA, Hydro is filing this application to address these issues in advance.

Our recommendations and conclusions resulting from Hydro's review of these items include:

1) Conservation and Demand Management

Hydro is recommending continuing with the current practice of allocating CDM program costs on the Island Interconnected System using an energy allocator.

Hydro is proposing treatment of CDM costs on the Labrador Interconnected System consistent with cost of service treatment selected by a number of Canadian utilities surveyed and the classification of Labrador Interconnected power purchase costs in the cost of service. For the Labrador Interconnected System, Hydro proposes:

- CDM program costs be functionalized as generation; and

[10] The Bridging Period is defined as the period from present until 2030, the year in which aging thermal assets are planned to be retired. During the Bridging Period, the system would rely primarily on existing sources of generation capacity to maintain reliability until 2030, or until such time that sufficient alternative generation is commissioned, adequate performance of the LIL is proven, and generation reserves are met.

[11] This review of cost allocation in future GRAs would incorporate the latest analysis and recommendations from Hydro's *RRA Study Review*, including the status of the Holyrood TGS and Hydro's evaluation of post-steam Avalon synchronous condenser requirements.

- The classification between demand and energy for CDM program costs be based on system load factor.

Generation costs for Labrador Industrial customers are non-regulated and are currently only allocated to demand costs in the cost of service. Since the Industrial customers will benefit from CDM programs, Hydro is proposing that the portion of program costs classified as energy be added to the production demand costs for recovery in the generation demand rate charged to these customers.

2) Review of Customer Class Coincident

The review determined that the coincident peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes.

3) Specifically Assigned Assets

Hydro is proposing to replace the indexed asset value methodology of allocating O&M to specifically assigned assets with a method that relies on work-order data to track actual O&M charged to a specifically assigned customer. The O&M charged will consist of a Direct O&M Charge calculated as the six-year average of actual O&M expenses recorded against each specifically assigned asset and an Indirect O&M Charge calculated as the ratio of total indirect transmission O&M to total direct transmission O&M, derived from the Cost of Service Study.

4) Generation Credit provided to Newfoundland Power

Based on the analysis completed, Hydro proposes a hydraulic credit of 64 MW for Newfoundland Power, which is the five-year average, 2020 to 2024, of Newfoundland Power's hydraulic generation at the time of system peak.

It is recommended that the process for determining the thermal generation credit remain unchanged, determined by Newfoundland Power’s thermal generation capability forecast for the test year, reduced by the reserve at criteria.

5) Rate Mitigation Funding

Hydro proposes:

- Rate mitigation funding be functionalized as generation; and
- The classification between demand and energy for rate mitigation funding shall be based on the system load factor.

6) Transmission Tariff Revenue

Hydro proposes:

- Transmission tariff revenue be functionalized as generation; and
- The classification between demand and energy for transmission tariff revenue shall be based on the system load factor.

7) Greenhouse Gas Credits

Hydro proposes:

- Greenhouse gas credit revenue be functionalized as generation; and
- The classification between demand and energy for greenhouse gas credit revenue shall be based on the system load factor.

8) Holyrood Thermal Generating Station

Hydro recommends the continuation of the following treatment of Holyrood TGS:

- The classification of the Holyrood TGS generation costs, excluding fuel, be based on a test year forecast capacity factor; and
- Holyrood TGS fuel costs be classified as 100% energy.

Attachment 1

Conservation and Demand Management Cost Allocation Review

newfoundland labrador hydro

Conservation and Demand Management Cost Allocation Review

Executive Summary

In the Settlement Agreement to the 2018 Cost of Service Methodology Review ("Settlement Agreement"),[1] the parties agreed that Newfoundland and Labrador Hydro's ("Hydro") Conservation and Demand Management ("CDM") costs would continue to be allocated based on energy. However, Hydro agreed to: (i) identify any projects and spending in its CDM plan that are justified in whole or in part based on demand-related savings; (ii) review how demand-related CDM is classified in other jurisdictions; (iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate; and (iv) file a report with recommendations with its next general rate application ("GRA").

Hydro's planned CDM programs on the Island Interconnected System contribute to energy reductions during the winter period and therefore also support peak demand reduction. There are currently no programs that are expressly justified based on demand-related savings; however, this may change for future programs.

Hydro engaged Christensen Associates Energy Consulting, LLC ("CA Energy Consulting") to undertake a review of CDM Costing and Pricing Practices in North America. Most Canadian utilities functionalize CDM costs primarily as generation. Those same utilities typically then classify the costs as either demand, energy, or otherwise based on their treatment of similar costs. CA Energy Consulting's review indicated that, even though many utilities allocate CDM costs as both demand and energy related, many of these utilities still recover the costs using an energy rider. The United States utilities reviewed primarily used an energy-based allocation.

Hydro's CDM costs in the 2021–2024 period were approximately $5.4 million, and of this amount, approximately $1.3 million was for programming on the Island Interconnected System, and $4.0 million for Hydro's Isolated Systems.

Hydro reviewed different allocation methodologies for the Island Interconnected System program costs and found immaterial differences in the allocation of costs to customers using demand allocators or a

[1] Approved in Board Order No. P.U. 37(2019).

combination of demand and energy allocators in comparison to Hydro's existing use of an energy allocator.

Hydro, in this evidence, is also proposing the recovery method for CDM costs on the Labrador Interconnected System that were approved for recovery in Board Order No. P.U. 37(2022) effective January 1, 2023.

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List of Appendices

1.0 Background

In the Settlement Agreement, the parties agreed that Hydro's CDM costs would continue to be allocated based on energy. However, Hydro agreed to: (i) identify any projects and spending in its CDM plan that are justified in whole or in part based on demand-related savings; (ii) review how demand-related CDM is classified in other jurisdictions; (iii) provide options regarding establishing a materiality threshold to assess if a change in approach is appropriate; and (iv) file a report with recommendations with its next GRA. This report addresses each of the items identified in the Settlement Agreement.

Considerations and costing issues with respect to the recovery of CDM costs include:

1) Revenue Requirement – addresses how a utility accounts for its CDM costs in line with general accounting principles. The utility may choose to treat these costs as immediate operating expenses or as long-term assets, which are then amortized over time. Some utilities may choose a hybrid approach where overhead costs associated with CDM are expensed and program costs are deferred and amortized.

2) Cost Allocation – focuses on how the utility distributes revenue requirements across its various rate classes and requires a utility to consider functionalization, classification and allocation of costs:

   a. Functionalization refers to the process of categorizing costs based on the primary function they serve within the utility's operations, such as between generation, transmission and distribution.

   b. Classification involves grouping by cost behaviour – i.e., demand related, energy related, etc.

   c. Allocation involves distributing the costs among customer classes based on usage patterns or other relevant metrics.

3) Revenue Recovery – the mechanism of how the costs are ultimately built into customer rates and recovered. This can be achieved by including CDM costs in the cost of service study, allowing them to be recovered through base rates, or the utility may opt to exclude these costs from the cost of service study and recover them separately using a rate rider.

Approaches with respect to revenue requirement, cost allocation and revenue recovery vary in practice and depend on many factors specific to the expenditure and the utility, including cost causation and materiality.

2.0 2021–2024 CDM Program Justification

Table 1 provides a summary of the CDM programs from 2021 to 2024 and the associated costs.

As shown in Table 1, Hydro's CDM programs on the Island Interconnected System contribute to energy reductions during the winter period and therefore also support peak demand reduction.

Table 1: Summary of CDM Program Costs 2021–2024
($000s)

Program Name	2021[2]	2022[3]	2023[4]	2024[5]	Total	Basis of Justification
Thermostat	57	18	4	7	**86**	Demand/Energy
Insulation and Air Sealing	76	64	145	141	**426**	Demand/Energy
Heat Recovery Ventilators	4	2	7	17	**30**	Demand/Energy
Instant Rebates[6]	95	33	68	(2)	**194**	Demand/Energy
Energy Saver Kits	-	17	59	51	**127**	Demand/Energy
Business Efficiency	75	63	112	154	**404**	Demand/Energy
Small Business Direct Pilot	-	-	24	3	**27**	Demand/Energy
Isolated Systems Business Efficiency	43	18	29	11	**101**	Energy
Isolated Community Energy Efficiency	1,124	866	926	983	**3,899**	Energy
Industrial Energy Efficiency	6	14	18	44	**82**	Demand/Energy
	1,480	**1,095**	**1,392**	**1,409**	**5,376**	

Historically, the primary benefit of Hydro's CDM programs was to conserve energy to save on fuel used at the Holyrood Thermal Generating Station, but many of these programs also contributed to limiting peak demand growth as the targeted energy reductions would mostly occur during the winter months.

[2] Consistent with the "2021 Conservation and Demand Management Report," Newfoundland and Labrador Hydro, March 31, 2022, p. 13, Table 6.
[3] Consistent with the "2022 Conservation and Demand Management Report," Newfoundland and Labrador Hydro, March 31, 2023, p. 13, Table 5.
[4] Consistent with the "2023 Electrification, Conservation and Demand Management Report," Newfoundland and Labrador Hydro, April 10, 2024, p. 5, Table 2. Board Order No. P.U. 37(2022) approved the recovery of Labrador Interconnected System program costs effective January 1, 2023, which will be addressed in Hydro's GRA.
[5] Consistent with the "2024 Electrification, Conservation and Demand Management Report," Newfoundland and Labrador Hydro, April 10, 2025, p. 5, Table 2. The difference between the $1,409 and $1,385 in the July 1, 2025 Utility Rates Application reflects additional transfers to be made to the deferral account in 2025.
[6] Program discontinued.

System savings from CDM programs result from energy savings and limiting peak demand growth; this will continue in the future.

3.0 Hydro's Existing CDM Cost Allocation and Recovery Methodology

3.1 Island Interconnected System

Hydro's annual program costs of conservation and demand on the Island Interconnected System are deferred in Hydro's CDM Cost Deferral Account and recovered through an energy charge (i.e., CDM Cost Recovery Adjustment) reflecting a ten-year amortization period and an annual energy allocation. There are separate CDM Cost Recovery Adjustments updated annually for Newfoundland Power Inc. ("Newfoundland Power") and the Island Industrial Customers.[7] The current CDM Cost Recovery Adjustments are relatively low at 0.019¢ per kWh for Newfoundland Power and 0.006¢ per kWh for Island Industrial Customers. Hydro's current approach effectively allocates program costs based on historical energy usage, whereas if the program costs were included in the Cost of Service Study, the program costs to provide fuel savings would normally be allocated on the test year energy forecast. With the completion of the Muskrat Falls Project, energy savings now generally result in an increase of energy available for export rather than fuel savings, which would be allocated based on the system load factor[8] resulting in approximately 54% being allocated to energy and 46% to demand based on the 2019 Test Year.

Hydro includes the portion of CDM costs that are associated with general program administration in its cost of service and treats them as administrative and general expenses that get shared across all utility functions.

3.2 Labrador Interconnected System

Historically, Hydro has not recovered through customer rates the CDM costs incurred on the Labrador Interconnected System, as these CDM initiatives resulted in less power purchases by Hydro from

[7] The CDM Cost Recovery Adjustment for Island Industrial Customers is calculated based upon the Island Interconnected Recoverable Amount allocated for recovery from Island Industrial Customers. The CDM Cost Recovery Adjustment for Newfoundland Power is calculated based upon the allocated Island Interconnected Recoverable Amount to Newfoundland Power (including the allocated Island Interconnected Hydro Rural Amount) plus the allocated Hydro Rural Isolated System to Newfoundland Power. The allocation approach for costs charged to the CDM Cost Deferral Account is provided in the Schedule of Rates, Rules and Regulations on pages CDM-1 and CDM-2.
[8] Board Order No. P.U. 37(2019).

Churchill Falls (Labrador) Corporation Limited and therefore contributed to an increase in available exports of Recapture Energy for which the benefits historically accrued to Nalcor Energy. However, due to the commissioning of the Muskrat Falls Project, there are now some benefits to Hydro's customers associated with the export of Recapture Energy.

On the Labrador Interconnected System, there are transmission capacity constraints in Labrador West for which investment in peak demand management may provide benefits to customers. The completion of the transmission interconnection from the Muskrat Falls Terminal Station to Happy Valley in 2022 provided additional transmission capacity to serve customer growth; however, there are material amounts of load additions that have been requested by potential new customers. Peak demand management is also a focus in Labrador East in an effort to manage transmission constraints.

Board Order No. P.U. 33(2022) approved the revision to the CDM Cost Deferral Account to allow the deferral of CDM costs incurred for customers on the Labrador Interconnected System. These costs have been deferred effective January 1, 2023, and the recovery method is being proposed in this application.

4.0 Classification and Allocation of CDM Costs in Other Jurisdictions

Hydro engaged CA Energy Consulting to undertake a review of how demand-related CDM is classified in other jurisdictions; the results of this review and a complete report of their findings titled "*CDM Costing and Pricing Practices in North America"* is provided as Appendix A.

To determine the classification of costs, many utilities first functionalize the costs as generation, distribution, transmission, etc. and classify based on the functionalization. Most Canadian utilities functionalize CDM costs primarily as generation. Those same utilities typically then classify the costs as either demand, energy, or otherwise based on their treatment of similar costs. For example, Nova Scotia Power ("NS Power"), New Brunswick Power ("NB Power"), and Manitoba Hydro use system load factor to classify generation costs into demand and energy components.

Hydro's methodology of allocating costs applies a hybrid approach of existing industry methods– expensing general overhead costs and recovering them annually through rates (i.e., including them in the cost of service), and deferring and amortizing program-specific costs over ten years. CA Energy Consulting's review determined that both in Canada and the United States, a smoothing mechanism such as the CDM Cost Deferral Account is consistent with generally accepted utility practice. Hydro's ten-year recovery period is relatively short compared with other jurisdictions, but achieves a similar smoothing of cost recovery with the intention of matching recovery with the benefits delivered from the programs.

Generally, most utilities in Canada allocate CDM costs in a way that is more complex than treating costs as energy-related and recovering them through an energy rider; however, there does not appear to be a common methodology of cost allocation across jurisdictions. In the United States, most utilities allocate costs based on energy and recover through rate riders, similar to Hydro. Further, CA Energy Consulting's review indicated that, even though many utilities allocate CDM costs as both demand and energy related, many of these utilities still recover the costs using an energy rider.

Table 2 and Table 3 summarize CA Energy Consulting's findings as they relate to the classification and allocation of CDM costs in other jurisdictions.

Table 2: Classification and Allocation of CDM Costs in Canada[9]

Utility/Jurisdiction	C	R	Functionalization	Classification	Allocation
Hydro	X		OHD:[10] A&G,[11] w/ functional classification as O&M[12]		O&M
		X			Program: kWh
Newfoundland Power	X		OHD: A&G, w/ functional classification as O&M		O&M
		X	100% Generation	Energy	Program: kWh
NS Power		X	100% Generation	SLF[13]	Consistent with other demand and energy costs
NB Power	X		50% Generation, 50% Distribution	Generation: SLF	Demand: CP[14]; Energy: kWh
				Distribution: direct assignment	Share of program expenditures by class
Hydro-Québec	X		100% Customer Service	N/A	Direct assignment
Ontario		X			Class A: peak demand Class B: kWh
Manitoba Hydro	X		100% Generation	SLF	Demand (winter CP), Energy (kWh)
SaskPower	X		100% Generation	50% Demand, 50% Energy	Demand (2CP), Energy (kWh+losses)
BC Hydro	X		90% Generation, 5% Transmission, 5% Distribution	As with other costs	As with other costs

[9] Table 2 summarizes cost allocation practices of utilities in Canada as outlined in CA Energy Consulting's report. The table indicates whether revenue recovery occurs through rates derived from the Cost of Service Study ("C") or a Rider ("R").
[10] Overhead ("OHD").
[11] Administrative and General Expenses ("A&G").
[12] Operating and Maintenance Expense ("O&M").
[13] System Load Factor ("SLF").
[14] Coincident Peak ("CP").

Table 3: Classification and Allocation of CDM Costs in the United States[15]

Utility	C	R	Functionalization	Classification	Allocation
Florida Public Utilities Company		X			Energy
Consolidated Edison	X	X	System Benefits Charge currently energy-only; to be converted to regulatory asset; functionalization, classification and allocation to be determined.		Monthly Adjustment Clause: energy-only
Duke Energy Carolinas		X			Energy
Madison Gas & Electric	X				Energy
Commonwealth Edison		X			Energy
Xcel – Northern States Power	X	X			Energy
Pacific Gas & Electric		X			Energy
Portland General Electric		X			Energy

5.0 Evaluation of Existing CDM Cost Recovery Methodology

As requested by the Board, Hydro has reviewed the concept of establishing a materiality threshold to assess if a change in the approach of CDM program cost allocation is appropriate. To illustrate the materiality of the differences resulting from alternative allocation methodologies, Hydro has compared the current practice of using an energy allocator to alternatives which use a demand allocator or a combination of both energy and demand. Hydro calculated the customer allocation of actual costs for the Island Interconnected System using coincident peak and winter energy[16] to allocate demand costs, functionalizing the costs as generation, then classifying as demand or energy using the 2019 Test Year system load factor and compared the results to the actual energy allocation used in practice.

[15] Table 3 summarizes cost allocation practices of utilities in the United States, as outlined in CA Energy Consulting's report. The table indicates whether revenue recovery occurs through rates derived from the Cost of Service Study ("C") or a Rider ("R").
[16] Winter energy is used as a proxy of the coincident peak allocator. Using an energy allocator is administratively practical and may remove some of the volatility associated with peak demand allocators that are impacted by weather conditions and the time of day in which the peak occurs.

Table 4 provides the allocators used by customers to allocate the CDM costs for the purpose of this comparison.

Table 4: Customer Allocators for CDM Costs[17]

	2020		2021		2022		2023		2024	
Allocator/Customer	**Units**	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**
Energy (kWh)										
Newfoundland Power	5,529,011,037	86%	5,432,366,847	86%	5,508,828,724	87%	5,858,252,958	88%	5,701,619,749	87%
Island Industrial	452,051,689	7%	419,058,479	7%	386,269,967	6%	334,067,646	5%	444,804,711	7%
Rural Island Intc.	446,614,812	7%	442,741,405	7%	454,931,226	7%	445,935,437	7%	434,926,546	7%
	6,427,677,538	100%	6,294,166,731	100%	6,350,029,917	100%	6,638,256,041	100%	6,581,351,006	100%
Coincident Peak (MW)										
Newfoundland Power	1,226.7	88%	1,120.2	90%	1,197.9	89%	1,335.0	90%	1,343.8	91%
Island Industrial	75.5	5%	48.9	4%	53.9	4%	52.0	4%	52.2	4%
Rural Island Intc.	91.8	7%	78.2	6%	90.1	7%	92.8	6%	87.3	6%
	1,394.0	100%	1,247.4	100%	1,341.9	100%	1,479.8	100%	1,483.2	100%
Winter Energy (kWh)										
Newfoundland Power	2,669,650,046	87%	2,384,115,130	88%	2,534,409,321	88%	2,621,357,798	89%	2,640,595,521	89%
Island Industrial	196,199,759	6%	150,719,275	6%	144,086,998	5%	132,493,436	4%	140,313,754	5%
Rural Island Intc.	196,539,963	6%	181,465,819	7%	195,211,668	7%	197,973,026	7%	183,400,085	6%
	3,062,389,768	100%	2,716,300,224	100%	2,873,707,987	100%	2,951,824,260	100%	2,964,309,360	100%

Table 5 shows that the allocation of actual program costs from 2020[18] to 2024 based on the current practice using energy ratios, and also provides the calculation for the following alternatives for comparative purposes:

1) Classifying CDM costs as Demand (100%) and allocating using Coincident Peak;

2) Classifying CDM costs as Demand (100%) and allocating using Winter Energy;

3) Using the 2019 Test Year system load factor to classify the costs as demand/energy then allocating the demand costs using Winter Energy and the energy costs using the annual kWh; and

4) Using the 2019 Test Year system load factor to classify the costs as demand/energy, then allocating the demand costs using Coincident Peak and the energy costs using the annual kWh.

[17] Numbers may not add due to rounding.
[18] Order in Council OC2020-081 directed customer rates for the period of July 1, 2020 to June 30, 2021 not change as a result of the application of adjustments arising from the operation of the Rate Stabilization Plan and CDM Cost Recovery Adjustment. The cost reflected in 2020 also includes the 2019 costs not included for recovery commencing July 1, 2020.

1 Table 6 summarizes the variation from the alternative allocation methodologies to the actual results
2 under the existing method.

Table 5: Allocation of Island Interconnected CDM Costs ($000s)[19]

				2020	2021	2022	2023	2024
Island Interconnected Costs				724	313	211	410	390
	Classification	**Allocator**	**Customer**					
Current Practice	Energy	Energy - kWh	Newfoundland Power	671	291	198	388	363
			Island Industrial Firm	51	21	13	21	26
			Rural Island Intc.	2	1	1	1	1
				724	313	211	410	390
Alternative 1	Demand	Coincident Peak	Newfoundland Power	683	300	202	395	375
			Island Industrial Firm	39	12	8	14	14
			Rural Island Intc.	2	1	1	1	1
				724	313	211	410	390
Alternative 2	Demand	Winter Energy	Newfoundland Power	676	295	200	391	371
			Island Industrial Firm	46	17	11	18	18
			Rural Island Intc.	2	1	1	1	1
				724	313	211	410	390
Alternative 3	System Load Factor	Demand - Winter Energy	Newfoundland Power	674	293	199	390	367
		Energy - kWh	Island Industrial Firm	49	19	12	20	23
			Rural Island Intc.	2	1	1	1	1
				725	313	211	411	391
Alternative 4	System Load Factor	Demand - Coincident Peak	Newfoundland Power	678	296	200	392	369
		Energy - kWh	Island Industrial Firm	46	17	11	18	21
			Rural Island Intc.	2	1	1	1	1
				725	313	211	411	391
	Allocation of Costs by System Load Factor		Energy 54%	391	169	114	221	211
			Demand 46%	333	144	97	189	179
				724	313	211	410	390

[19] Numbers may not add due to rounding.

Table 6: Variance from Existing Energy Allocation Methodology ($000s)[20]

	Classification	Allocator	Customer	2020	2021	2022	2023	2024	Total
Alternative 1	Demand	Coincident Peak	Newfoundland Power	12	9	4	6	13	44
			Island Industrial Firm	(12)	(9)	(4)	(6)	(13)	(43)
			Rural Island Intc.	(0)	(0)	(0)	(0)	(0)	(0)
				(0)	(0)	(0)	0	(0)	(0)
Alternative 2	Demand	Winter Energy	Newfoundland Power	5	4	2	2	8	21
			Island Industrial Firm	(5)	(3)	(2)	(2)	(8)	(20)
			Rural Island Intc.	(0)	(0)	(0)	(0)	(0)	(0)
				0	(0)	0	0	0	0
Alternative 3	System Load Factor	Demand - Winter Energy	Newfoundland Power	3	2	1	2	4	12
		Energy - kWh	Island Industrial Firm	(2)	(2)	(1)	(1)	(4)	(9)
			Rural Island Intc.	(0)	(0)	(0)	(0)	(0)	(0)
				1	0	0	1	1	3
Alternative 4	System Load Factor	Demand - Coincident Peak	Newfoundland Power	6	4	2	3	6	23
		Energy - kWh	Island Industrial Firm	(5)	(4)	(2)	(3)	(6)	(20)
			Rural Island Intc.	(0)	(0)	(0)	(0)	(0)	(0)
				1	0	0	0	0	3

The program costs for the Island Interconnected System range from $211,000 to $724,000; however, as shown in Table 6, the annual variances in the allocation of costs using methods other than the existing energy allocation methodology result in immaterial variances annually between customers. Over the six-year period examined, the maximum total variance is $44,000 or an average of $7,000 per year. In 2020, where two years of costs were allocated, both 2019 and 2020, totalling $724,000, using alternative methods of allocation produced a maximum variance of $12,000. Hydro does not expect costs on the Island Interconnected System to significantly exceed annual expenditures to date and is proposing to review the methodology in a future GRA only if expenditures exceed $1,000,000 threshold in a given year.

6.0 Labrador Interconnected System Recovery

Board Order No. P.U. 37(2022) approved recovery of Labrador Interconnected CDM program costs effective January 1, 2023, as well as any portion of costs re-allocated to the Labrador Interconnected System from the Rural Island Interconnected System and the Hydro Rural Isolated System.

Costs associated with CDM programming on the Labrador Interconnected System are immaterial to date, at approximately $27,000. Customers on the Labrador Interconnected System currently do not

[20] Numbers may not add due to rounding.

have annual rate updates to adjust for changes in supply costs or to allow for the collection of CDM program costs, like customers on the Island Interconnected System. Hydro is proposing the methodology to collect these costs, as well as any re-allocated costs, in rates by reflecting the cost in the Labrador Interconnected System Cost of Service.

Consistent with the cost of service treatment selected by a number of the Canadian utilities surveyed and the classification of Labrador Interconnected System power purchase costs in the cost of service, Hydro proposes:

- CDM program costs for the Labrador Interconnected System be functionalized as generation; and
- The classification between demand and energy for the CDM program costs on the Labrador Interconnected System be based on system load factor.

Generation costs for Labrador Industrial customers are non-regulated and are currently only allocated demand costs in the cost of service included in Hydro's GRA. Since the Industrial customers will benefit from CDM programs, Hydro is proposing that the portion of program costs classified as energy be added to the production demand costs for recovery in the generation demand rate charged to Labrador Industrial customers.

7.0 Summary

Hydro's planned CDM programs on the Island Interconnected System primarily focus on energy reductions during the winter period and therefore also support peak demand reduction. An analysis of cost allocation using alternative allocators for CDM program costs since 2020 shows that, based on the low level of annual program costs, using demand or a combination of demand and energy allocation options yielded little change in cost allocation between customers when compared to the existing energy allocation methodology.

From an administrative practicality perspective, the use of an energy allocation in the sharing of CDM costs is preferable and results in little variation in the costs allocated to customer classes. Hydro recommends continuing the current practice of allocating CDM program costs on the Island Interconnected System using annual energy.

As shown in Table 6, even when Hydro's costs were double (as noted in 2020, where two years of costs were allocated), the variance produced by using different allocation methodologies was immaterial. Hydro does not expect costs on the Island Interconnected System to significantly exceed annual expenditures to date and is proposing to review the methodology in a future GRA only if expenditures exceed $1,000,000 threshold in a given year.

In terms of the Labrador Interconnected System, consistent with cost of service treatment selected by a number of Canadian utilities surveyed and the classification of power purchase costs in the cost of service, Hydro is proposing CDM program costs for the Labrador Interconnected System be functionalized as generation and that the classification between demand and energy be based on system load factor.

Given Industrial customer generation costs on the Labrador Interconnected System and resulting energy rates are non-regulated, Hydro is proposing that the portion of program costs allocated to Labrador Industrial customers classified as energy be added to the production demand costs for recovery in the generation demand rate charged to these customers.

Appendix A

CDM Costing and Pricing Practices in North America

newfoundland labrador hydro

Christensen ASSOCIATES

CDM Costing and Pricing Practices in North America

for Newfoundland and Labrador Hydro

By

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August 13, 2025

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CDM Costing and Pricing Practices in North America

for

Newfoundland and Labrador Hydro

by

Christensen Associates Energy Consulting, LLC

August 13, 2025

1. INTRODUCTION

Newfoundland and Labrador Hydro (Hydro) is investigating alternative means of allocating and recovering of its conservation and demand management (CDM) costs. While the utility has an established costing practice in place, the changes that have taken place at the utility in the past decade are influencing the purpose and type of future CDM program investment. Specifically, past programs have been seen as "energy-oriented". That is, the general purpose of conservation was to reduce consumption, or to slow consumption growth, in a broad range of hours. In the future, there may be increased emphasis on programs aimed at the reduction of peak demand.

Since CDM cost recovery is currently based on class energy consumption, the inclusion in future CDM plans of "demand-oriented" conservation measures suggest that the means of cost allocation might best be reviewed. In fact, a past Settlement Agreement included a provision requiring Hydro to inquire into how demand-related conservation programs should be treated for cost allocation and recovery.[1] This report undertakes such a review on Hydro's behalf.

The report begins by outlining the issues that a utility confronts in determining how to recover its costs. We then review current CDM costing practices across various utilities in Canada and the United States. Subsequently, we consider alternative approaches for Hydro, given its current approach and current industry practice and trends. The report concludes with our findings.

A note on definitions and labels is appropriate. Hydro and some few other utilities use the term CDM in preference to the more common industry labels of demand-side management (DSM), energy efficiency (EE), and conservation. Further complicating understanding, these labels and acronyms can mean different things in different jurisdictions. In some cases, DSM includes demand response, programs in which price signals to customers of imminent extreme system conditions prompt customer load reductions for short periods of low system reserves. Other activities may be included as well. For example, Ontario's definition of CDM includes, "… activities

[1] Newfoundland and Labrador Hydro, 2018 Cost of Service Methodology Application, *Settlement Agreement*, Oct. 4, 2019, paragraph 27.

aimed at reducing electricity consumption and reducing the draw from the electricity grid, such as geothermal heating and cooling, solar heating and small scale (i.e., <10MW) behind the meter customer generation."[2]

This report uses the acronyms CDM and DSM to mean the same thing, but applying the CDM acronym to Canadian programs and the term DSM to programs in the U.S., based on labeling habits in each country. We restrict the definition to activities associated with conservation, excluding site generation and demand response. However, the cost allocation practices described herein apply to programs that vary by jurisdiction; it may be that the findings of this report can be applied to definitions of CDM of varying breadth.

2. APPROACH

The report reviews CDM costing issues under three topic groups: 1) revenue requirements; 2) cost allocation; and 3) revenue recovery. The report does not touch on other key issues of CDM such as the organizational structure that implements programs, the cost effectiveness of programs, or the challenges of evaluation, measurement, and verification. For this report, the question remains one of discovering costing and pricing methods in use currently and that might provide useful insights to Hydro.

Revenue requirements involve questions about how the utility chooses to treat its CDM costs from the perspective of general accounting principles. The utility can choose to treat CDM costs as current expenses or as an investment in a durable "good" whose benefits persist over a number of years, and thus whose costs should be amortized over a defined lifespan of the conservation services provided.[3]

Cost allocation concerns the core question of how revenue requirements are to be shared among the utility's rate classes. A simple approach is to share costs on the basis of customer usage by means of a single price, usually in a rider separate from standard rates. However, a broader range of treatments can be considered if CDM costs are to be treated like other utility costs. In these circumstances, the utility first determines what costs should be assigned directly to a specific class, and then treats the remaining costs as common and allocates them across classes. If the utility applies this latter approach, then questions of functionalization, classification, and allocation arise.

Revenue recovery can be undertaken via inclusion of CDM costs in the cost-of-service (COS) study, with the cost being recovered in standard rates. Alternatively, a utility can exclude costs from the COS study and use a rate rider to recover costs separately. Riders can use a single

[2] Definition quoted in Ontario Energy Board, *Conservation and Demand Management Requirement Guidelines for Electricity Distributors*, EB-2014-0278, December 19, 2014 (Updated August 11, 2016), p. 3.

[3] A note on the term "amortization": the financial literature describes amortization as "the practice of spreading an *intangible* asset's cost over that asset's useful life". Depreciation, on the other hand, is "the expensing of a *fixed* asset over its useful life". However, "in some countries, such as Canada, the terms amortization and depreciation are often used interchangeably to refer to both tangible and intangible assets". The source for all the above quotes is: https://www.investopedia.com/ask/answers/06/amortizationvsdepreciation.asp. This report uses the term amortization exclusively in referring to CDM costs, in keeping with these definitions and with practice in the literature and utility documentation reviewed for the report.

charge common to all classes or apply charges that differ by rate class or individual rate. Pricing employs energy charges typically, but the use of a demand charge is feasible.

3. HYDRO'S COSTING PRACTICES

3.1 Island Interconnected System

Because Hydro has traditionally undertaken programs that it has considered energy-oriented, it seems appropriate that the utility has recovered its costs via energy-only pricing. Current *costing* practice, as approved in the 2013 GRA Settlement Agreements, engages in rather more complex cost allocation than the simple energy price might suggest. The utility splits its CDM costs into those specific to programs and those associated with general program administration. These general costs are treated as common administrative and general (A&G) expenses to be shared across all utility functions. More specifically, these costs are allocated to regional systems on the basis of customer numbers and then functionalized, classified, and allocated in the same manner as other A&G expenses. These general program costs are recovered through the utility's rates.

Program-specific costs are treated separately from the COS study and recovered through a CDM Cost Recovery Rider from Newfoundland Power (NP) and Island Industrial customers. Hydro does not recover CDM program costs in the year they are incurred, but instead makes use of a deferral account mechanism that recovers costs over a ten-year period. The amount to be recovered each year is calculated as one-tenth of the amount transferred to the deferral account in the previous year, plus the sum of one-tenth of each of the previous nine years' transfers. The subsequent year-end balance is just the previous balance less the amortized amount collected plus additional CDM program-specific expenses incurred during the year. This approach smooths cost recovery patterns relative to any fluctuations over time in program costs and moves the time pattern of cost recovery in the direction of the pattern of benefits delivered and away from cost incurrence timing.

Based on a review of the history of CDM cost recovery, both in Canada and the U.S., a smoothing mechanism is generally consistent with generally accepted utility practice. An article in 2011 reported wide swings in both nations' expenditures on CDM over the period 1990-2007. In Canada, expenditure peaked in 1993 at $500 million ($2005), declined to near zero in 1998-2001, then rebounded to about $250 million in 2005. (Newfoundland and Labrador's peak was in about 1995 and no subsequent rebound from the low levels of the late 1990s was recorded.)[4]

Subsequent reporting, undertaken by Efficiency Canada beginning in 2017, reveals annual expenditures of between $411 and $752 million over the period 2017 to 2023.[5] As these figures are in current dollars, it appears that growth in CDM program expenditure has been modest at best. Variability over time is still a prominent feature of expenditures.

At Hydro, deferred program cost allocation to rate class occurs in a two-stage process. First, the Island Interconnected cost recovery total is allocated to NP, Island Industrial customers, and

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[4] N. Rivers and M. Jaccard, *Electric Utility Demand-Side Management in Canada*, The Energy Journal, Vol. 32, No. 4, 2011, pp. 93-116, See Figures 1 and 2.
[5] Efficiency Canada, *2024 Canadian Efficiency Scorecard: Provinces and Territories*, Figure 2, p. 19.

Island Rural Interconnected customers based on the previous year's energy consumption totals. Second, the Rural Interconnected costs are added to Rural Island Isolated customer costs and then reallocated via the Rural Deficit mechanism to NP and Labrador Interconnected customers.

In practice, the prices of the resulting CDM Cost Recovery Rider are small at present: just $0.00019 per kWh for NP and $0.00006 per kWh for Island Industrial customers, as stated in the current tariff book.[6] Similar prices in 2024 yielded about $0.9 million in recovered revenues via the rider. Additionally, approximately $510 thousand in A&G expenses not subject to deferral are recovered through rates.[7] In summary, Hydro's process itself is of interest in that the utility recovers CDM costs both through rates (A&G costs) and a rider (program-specific costs) and each is treated differently, one using current expensing and the other deferral accounting.

3.2 Labrador Interconnected System

Hydro also offers its CDM programs to customers in the Labrador Interconnected System, but that system's unique circumstances alter the way CDM cost recovery has operated in the past. Due to the fact that generation needs have historically been met by supply from blocks of power related to Churchill Falls, energy saved by CDM activities has not resulted in reduced production, either immediately or in the long term. Instead, such conservation has merely made available power from Hydro's hydraulic reserves to be exported through Quebec.

Financially, this has meant that program expenditures for CDM immediately translate into incremental export sales. Because the benefit of increased exports from the Labrador Interconnected System have historically flowed to Nalcor, CDM program costs have not been proposed to be recovered from Hydro's customers on the Labrador Interconnected system.

Rising demand in Labrador is leading to the emergence of transmission constraints in power delivery to Labrador West and, on a transitional basis, to Labrador East. Over time, CDM investment could help to delay a need to respond to these constraints. This suggests that the value of CDM activities to Hydro's customers of the Labrador Interconnected customers is increasing. As well, following the commissioning of the Muskrat Falls Project, some of the benefits of exports of Recapture Energy accrue to Hydro's Island customers.

CDM program costs for customers on the Labrador Interconnected System, including their portion of the Rural Deficit Allocation related to CDM programming for Hydro Rural customers, are being deferred as of January 1, 2023. Hydro has not yet selected a revenue recovery method for these costs.

3.3 Isolated Systems

Hydro promotes its CDM programs to isolated system customers as it attempts to limit growth in the rural deficit incurred in serving these customers. The price of the lifeline block of energy to Hydro's isolated system customers is set to equal the residential energy price charged to the customers of Newfoundland Power (i.e., a rate which reflects the recovery of CDM program

[6] Newfoundland and Labrador Hydro, *Schedule of Rates, Rules and Regulations*, Updated July 1, 2025, pp. UT-4 and IND-1.
[7] Hydro's 2019 Test Year Compliance Cost of Service Study, the most recent test year available.

costs). However, there is no explicit recovery of CDM costs from Hydro's customers on the isolated systems as the revenue to cost ratio for customers on these systems is approximately 25%.

4. CANADIAN UTILITY PRACTICES

4.1 Revenue Requirements

Canadian utilities and jurisdictions develop their CDM revenue requirements by means of both current expensing and amortizing approaches, as revealed in Table 1. (The utilities reviewed are arranged in geographical order, from east to west, with jurisdictions nearest to Hydro at the top of the table.)

Table 1
Accounting Approach to Determination of Revenue Requirements

Utility/Jurisdiction	Approach
Newfoundland & Labrador Hydro	mixed current expensing and amortization
Newfoundland Power	mixed current expensing and amortization
Nova Scotia Power	amortization
NB Power	current expensing
Hydro-Quebec	amortization
Ontario	current expensing
Manitoba Hydro	amortization
SaskPower	current expensing
BC Hydro	amortization

Hydro uses an approach that acts as a hybrid between expensing and amortization. The utility expenses its current overhead costs for CDM and uses deferral to influence the timing of its program costs, averaging over ten years. Newfoundland Power applies a similar methodology for its own CDM costs.

Other utilities and jurisdictions each appear to have selected a single approach for all program costs, including administrative expenses and customer incentives. BC Hydro's treatment is likely representative in that the utility defers its DSM costs and includes in its recovery via amortization certain costs not eligible for capitalization, such as labor and support costs.

Utilities that amortize costs have a range of amortization periods. BC Hydro and Hydro-Quebec use a 15-year period, while Manitoba Hydro opts for a 10-year duration. Nova Scotia Power currently uses a 13-year period.[8] However, their structure is presently under

[8] Sources: combination of telephone interviews and extracts from a document included in NS Power's 2016-2018 DSM Plan Evidence, April 10, 2015, entitled, *Review of Nova Scotia's Energy Savings Portfolio*, April 8, 2015, by ICF International. See Exhibit 4, page 7 (p. 110 of 160). This is the source of the combined NP and NLH estimate.

review, with the transfer of program implementation and management responsibility to EfficiencyOne (E1), a third-party implementer created by the province. A utility's choice of aggregate program duration is influenced by the nature of programs that the utility selects and by estimates of the duration of the period that those programs' measures are effective. The measure lifespans of the above-mentioned utilities are somewhat higher than the implicit lifespan for NLH (and of NP) of ten years.

4.2 Cost Allocation

While most utilities engage in some form of CDM cost allocation that goes beyond simply treating costs as energy-related and recoverable via an energy rider, there is no common methodology of cost allocation. However, there are some shared features: a tendency to functionalize costs as generation and to use classification and allocation rules for CDM costs that apply to other more significant line items in the cost of service.

Cost allocation occurs in part because there are relatively few cases of cost assignment. Before revising its COS methodology in 2016, Manitoba Hydro assigned CDM costs to the rate class of customers eligible for each program, but that approach was abandoned upon revision of the methodology.[9] Hydro-Quebec is the leading exception, directly assigning each CDM program's costs to the rate class of customers eligible for that program.

Table 2 summarizes cost allocation practices, where they can be identified. The table first indicates whether revenue recovery occurs through rates derived from the COS study (C), or a rider (R), then presents how functionalization, classification, and allocation occur. Practice varies considerably across jurisdictions. (The next section reviews the relative prevalence of rates and riders in revenue recovery.)

Regarding functionalization, three utilities, Nova Scotia Power, Manitoba Hydro, and SaskPower, simply deem all CDM costs as generation-related. BC Hydro considers 90% of its CDM costs to be generation-related, with the remaining 10% shared equally between transmission ("Tr" in the table) and distribution ("Dist"). NB Power splits its costs evenly between generation- and distribution-related functions. In contrast, Ontario neither functionalizes nor classifies due to its use of a rider, simply allocating costs to customers on the basis of usage. (However, they use peak demand as a basis for *pricing* for large customers.)

(Please see next page.)

[9] This issue is not the same as that of utility funding limitations associated with each customer or program that some utilities utilize to control funding of CDM. For example, Nova Scotia Power requires that participating customers fund 75% of CDM-related expenditures, reserving at most 25% for system contributions. Similarly, BC Hydro funds up to 75% of expenditures. The costs not picked up by the utility are "assigned" to the actual participants, rather than to the eligible class.

Table 2
Canadian Utilities' Cost Allocation Practices

Utility/Jurisdiction	C	R	Functionalization	Classification	Allocation
Newfoundland & Labrador Hydro	X		OHD: A&G, w/ functional classification as O&M		as O&M
		X			Program: kWh
Newfoundland Power	X		OHD: A&G, w/ functional classification as O&M		as O&M
		X	100% Gen	energy	Program: kWh
NS Power		X	100% Gen	SLF	as with other D, E costs
NB Power	X		50% Gen, 50% Dist	Gen: SLF	D: CP; E: kWh
				Dist: direct assignment	share of program expenditures by class
Hydro-Quebec	X		100% Customer Service	NA	Direct assignment
Ontario		X			Class A: pk dem. Class B: kWh
Manitoba Hydro	X		100% Gen	SLF	D (winter CP), E (kWh)
SaskPower	X		100% Gen	50% D, 50% E	D (2CP), E (kWh+losses)
BC Hydro	X		90% Gen, 5% Tr, 5% Dist	as with other costs	as with other costs

Regarding classification, utilities appear to use conventional systems that rely on their treatment of similar costs. Two Atlantic Canada utilities, Nova Scotia Power and NB Power, use system load factor (SLF) to classify generation costs into demand and energy components. Manitoba Hydro adopts a similar approach. SaskPower uses a 50-50 split instead. BC Hydro classifies its generation-related CDM costs based on the shares of all generation costs in their COS study, and then classifies the other functions' costs in the same manner as transmission- and distribution-related costs. This approach reflects the relative insignificance of T&D-related CDM costs, suggesting that the use of alternative means of classification would not be cost effective.

NB Power is somewhat unusual in that it classifies 50% of its CDM costs as distribution-related, and then directly assigns those costs to class based on the share of program costs that supports programs for which each class is eligible. Hydro-Quebec also makes use of assignment to class, for all program costs, in similar fashion, while functionalizing these costs as customer service. Overhead costs are prorated based on overall EE expenditure.

Regarding allocation, most utilities simply use familiar allocators that are used on similar costs. Costs classified as energy-related are allocated typically via class usage (kWh) while demand-related costs are allocated based on a utility's peak demand (kW) measures.

In comparison with this pattern, Hydro's approach appears to be different due to the use of deferral. This method results in a blend of the common approaches of expensing and amortization. The majority of Hydro's costs, those related to specific programs, are simply allocated on the basis of usage, while the minority of costs, which are overhead, are allocated in the same manner as other O&M costs. This is certainly a practical approach, although it differs from that of other Canadian utilities in that it shares A&G costs across all four functions instead of concentrating them in generation.

Newfoundland Power adopts a similar approach to that of Hydro. Program-specific costs are recovered via deferral over a ten-year period and the deferred costs are allocated on the basis of energy.[10] (Note that the functionalization, classification, and allocation approaches used on CDM costs are included in the COS study and recovered in rates, which differs from Hydro's approach. Hence their representation in the table, in contrast to the representation of Hydro's CDM program cost recovery. See the revenue recovery description immediately below.) Overhead costs are expensed, functionalized initially as customer service, then subjected to functional classification in the same manner as A&G costs.[11]

4.3 Revenue Recovery

Table 2 also reveals that there is no preferred method of revenue recovery in Canada. Both recovery through rates, via COS-based cost allocation, and through a rider, predominantly through simple energy allocation, occur. Only in the case of Ontario is there use of the simplest possible mechanism: an energy charge applicable to all customers. In their case, the simplicity is extended by applying the same recovery factor to all distributors in the province. This approach is in line with the administration of these activities at a central source, the provincial system operator.

The blended revenue recovery approaches used in Newfoundland and Labrador deserve specific attention. Hydro recovers its general costs through rates, reflecting these costs' inclusion in the COS study. The remainder (specific program costs) are recovered on a deferred basis via the CDM rider. Newfoundland Power's approach is similar, except that the deferred program costs are incorporated in rates, and the CDM component (as part of the Rate Stabilization Account) of those rates is adjusted annually. In essence, the program costs are recovered in a rider, but the rider is part of the rates. Table 2, above, represents this formulation as a rider, as a result.

More generally, it appears that there is scope for recovery of demand-oriented CDM program costs in several jurisdictions across the country. In Atlantic Canada, both Nova Scotia Power and NB Power incorporate demand in their CDM cost allocation, while in western Canada, Manitoba Hydro, SaskPower, and BC Hydro all have demand-related components in their cost allocation. At present, demand-based costs are a feature of utilities that recover CDM costs through rates rather than riders, Nova Scotia Power being the exception.

5. U.S. UTILITY PRACTICES

In order to identify illustrative significant U.S. demand-side management (DSM) programs, we reviewed a number of sources. The Energy Information Administration possesses data on DSM program expenditure and size of service territory, which permitted selection of several jurisdictions in which energy efficiency programs are significant relative to the national average. Table 3 presents the utilities selected, their jurisdictions, and an indicator of program scale: annual DSM expenditures per customer.

Geographically, these utilities are roughly equally divided among west coast, east coast, and Midwest regions. These utilities are mostly relatively large (with Florida Public Utilities and Madison Gas and Electric being the exceptions, chosen because of the attributes of their

[10] NP also includes its Curtailable Service Option costs under the CDM umbrella, but classifies those costs as 100% demand-related.
[11] The A&G weights are based on a 50:50 weighting of capital and O&M shares.

jurisdiction rather than on the basis of size). In most cases, these jurisdictions have a long history of DSM support. Florida is included because it imposes relatively similar structures on its utilities. Wisconsin is included because this jurisdiction has a DSM program management organization (Focus on Energy) that provides service to all of the state's investor-owned utilities. Oregon has a similar institution. Under such conditions, we wanted to allow for possible differences in cost allocation practice from jurisdictions in which program management remains fully in utility hands.

Table 3
Annual DSM Expense per Customer
Illustrative U.S. Utilities and Jurisdictions

Utility	Jurisdiction	Expense per Customer
Florida Public Utilities Company	Florida	$5.50
Consolidated Edison	New York	$24.39
Duke Energy Carolinas	North Carolina	$33.08
Madison Gas & Electric*	Wisconsin	$31.79
Commonwealth Edison	Illinois	$92.09
Xcel – Northern States Power	Minnesota	$60.83
Pacific Gas & Electric	California	$51.15
Portland General Electric*	Oregon	$74.89

*Data from 2019

The table provides estimates of expense per customer, but does not fully allow for differences in average monthly bill across service territories (or for differences in customer mix, which can influence the average). For comparative purposes, a simple national average annual expense per customer in 2023 was about $25, suggesting that most of these utilities are more intensive investors in DSM than the average utility.[12] As well, it should be noted that there are differences within jurisdiction. Even in Florida, where DSM rate structure is relatively similar across utilities, some utilities invest more than others. For example, the average expense per customer of the largest utility, Florida Power & Light, (not otherwise part of this review) was just $2.20 in 2023.[13]

5.1 Revenue Requirements

Table 4 presents the manner in which these utilities undertake cost accounting for DSM expenditures. Neither expensing of current costs nor amortization dominates, although for this small sample, expensing is more prevalent. In addition, it appears that the use of deferral accounting is accepted in several jurisdictions.

(Please see next page.)

[12] Source: EIA data Form 861, 2023.
[13] We selected the far smaller Florida Public Utilities Company due to its higher level of investment in DSM and our knowledge of staff there who are well versed in Florida's DSM regulatory history.

Table 4
U.S. Utilities' Accounting Approach
to Determination of Revenue Requirements

Utility	Jurisdiction	Approach
Florida Public Utilities Company	Florida	current expensing
Consolidated Edison	New York	mixed
Duke Energy Carolinas	North Carolina	amortization
Madison Gas & Electric	Wisconsin	amortization
Commonwealth Edison	Illinois	amortization
Xcel – Northern States Power	Minnesota	current expensing
Pacific Gas & Electric	California	amortization
Portland General Electric	Oregon	current expensing

Consolidated Edison of New York previously expensed all costs but has since moved to a system that uses both expensing and amortization. Some costs are recovered through their Monthly Adjustment Charge, and these are expensed. Other costs are recovered via their System Benefits Charge (including lost revenue) that are capitalized and treated as a regulatory asset.

Commonwealth Edison's case involves capitalization that yields a regulatory asset. The utility earns a return on the asset's value, with the result that the revenue requirement includes amortization of the asset plus that return.

Pacific Gas & Electric expenses its DSM costs but applies a form of deferral through its five-year energy plan budgeting in which year-end balances carry over into the next year. Additionally, the utility undertakes a more complex form of true-up than others. Costs that vary with the size of a program have a "two-way" true-up, in which cost overruns are recovered subsequently from customers and under-budget surpluses are returned to customers. Cost overruns that are associated with program overhead are borne by shareholders but under-budget surpluses are rebated to customers.

5.2 Cost Allocation

Our review of U.S. utilities revealed that most make use of riders (column "R") (rather than standard rates governed by COS studies (column "C")) and resort to energy-based allocation. The exception of note is Consolidated Edison of New York, which has costs that are currently recovered in its System Benefits Charge (SBC) converted into a regulatory asset. Consolidated Edison has not filed a publicly available Cost of Service report between the decision to convert the System Benefits Charge and the writing of this report so it is unclear how the SBC will be functionalized and classified.

Despite the apparent simplicity and uniformity of cost allocation practices, there are several details that offer insights in costing and, hence, cost recovery. Duke Energy Carolinas makes use of two riders for revenue recovery.

Table 5
U.S. Utilities' Cost Allocation Practices

Utility	C	R	Functionalization	Classification	Allocation
Florida Public Utilities Company		X			Energy
Consolidated Edison	X	X	System Benefits Charge currently energy-only; to be converted to regulatory asset; FCA to be determined		Monthly Adjustment Clause: energy-only
Duke Energy Carolinas		X			Energy
Madison Gas & Electric	X				Energy
Commonwealth Edison		X			Energy
Xcel – Northern States Power	X	X			Energy
Pacific Gas & Electric		X			Energy
Portland General Electric		X			Energy

Columns 2 and 3: - C: COS-based costing and standard rate recovery; R: revenue recovery via rider

It is interesting to compare this pattern with U.S. DSM costing practices reported in 1993 by NARUC.[14] At that time, the authors detected a trend toward direct assignment of DSM costs to classes of eligible customers. For example, the costs of home energy audit programs would be assigned to residential customers only. This trend does not seem to have continued, perhaps due to the fact that the benefits of any DSM program arising from avoided costs are generally enjoyed by all customers.

A second feature of programs at the time noted by the authors was that utilities that conducted cost allocation on the basis of marginal cost "have been able to readily incorporate conservation and load management costs into their system of cost allocation".[15] In contrast, cost allocation for embedded cost-based programs had proved more difficult, resulting in resorting to direct assignment or to cost allocation on an "energy-only" basis.

This point may be of interest to Hydro in that marginal cost-based cost allocation, at least of generation services, has been discussed of late. If the utility makes a transition to the marginal cost-based approach, then incorporation of CDM costs might be readily undertaken by functionalizing CDM costs as generation and allocating to class on the basis of marginal cost-weighted load profiles. This possibility is worthy of note, but is of secondary concern, since incorporation of CDM costs, including those deemed demand-related, by Hydro does not require abandonment of embedded cost-based COS studies.

5.3 Revenue Recovery

As Table 5 shows, the small sample of utilities indicates the use predominantly of riders as vehicles for revenue recovery. In the case of the east coast utilities, customers of all classes pay at the same rate, usually via an energy rider, but via a demand rider in the case of Consolidated Edison's large customers. In other cases, rates are differentiated by rate class. As with Canadian utilities, there does not appear to be a concern to recognize demand-related DSM costs in demand-related pricing. In fact, in the US case, Table 5 appears to reveal that energy pricing through riders predominates.

[14] National Association of Regulatory Utility Commissioners, *Cost Allocation for Electric Utility Conservation and Load Management Programs*, February 1993.
[15] *Ibid*, p.2.

6. FINDINGS

Canadian and U.S. practice offers Hydro experience that may be useful in determining how to revise or update its practices with regard to CDM costing and pricing. There is wide variety in costing practices, especially in Canada, suggesting that Hydro is free to select an approach that suits its plans.

6.1 Revenue Requirements

Hydro's approach to the time pattern of recognizing revenue requirements is a hybrid of recovery of general expenses in rates and amortization for future recovery of program-specific expenses. This hybrid approach is in line with industry practice in that the utilities reviewed provide examples of both strategies of expensing and of amortization or expense deferral. Hydro's current ten-year recovery period is on the lower end of the lifespans of other Canadian jurisdictions that amortize, but the effect is similar to that of other jurisdictions: smoothing the time pattern of cost recovery and causing the time pattern of CDM cost recovery to coincide better with the time pattern of benefit delivery than is the case with the expensing approach.

Expense deferral may be seen in a limited way as merely an expense smoothing device. However, deferral produces a need to amortize the resulting regulatory asset that is created when current CDM expenses produce a promise of future revenues. Industry practice appears to show that even if deferred revenues are recovered in a rider, the regulatory asset is usually included in rate base and earns a return. The conservation "asset" is intangible, but there is explicit precedent for such a return at Commonwealth Edison. This approach helps to place CDM investment on a parallel footing with conventional investment in generation facilities.

6.2 Cost Allocation

Hydro's current cost allocation rules apply existing industry methods using a hybrid of expensing administration costs and amortization of program costs by means of deferral. General CDM program administration costs, being treated as A&G costs, receive conventional allocation in the COS study. These costs are fully allocated via conventional methods. Downstream, these costs are fully recovered through rates.

Program-specific CDM costs at Hydro are currently treated differently by region. Island Interconnected CDM costs are fully allocated implicitly on an energy basis. Cost recovery is deferred and smoothed over time via the CDM rider to match the timing of the flow of benefits of reduced consumption. Historically, Labrador Interconnected CDM costs did not need to be allocated since they were not recovered, since the Labrador costs were set against compensatory incremental export earnings. Labrador Interconnected CDM cost were approved to be deferred effective January 1, 2023. Isolated system CDM costs are allocated to the Utility and Labrador Interconnected customer classes. (Isolated customers, whose rates are tied to Newfoundland Power's, experience an indirect impact.)

The current approach has two problems, one of which has emerged in recent years. First, costs are increasingly demand-related, since CDM expenditure is increasingly targeted to reduce peak demand, but is still treated as energy-related for cost allocation purposes.

Second, the increasing likelihood that Labrador CDM impacts afford capacity savings suggests consideration of cost allocation in preparation for possible cost recovery.

Hydro could maintain its current practices should CDM program-specific cost recovery continue to be relatively small in value. The utility could also extend this practice to the CDM costs of the Labrador Interconnected rate zone if costs were to become significant. This would move toward explicit full recovery but would not recognize the demand component of cost allocation problem.

As seen in the survey of Canadian and US jurisdictions, utilities have not seen the possibility that some CDM costs are demand-related as a barrier to undertaking simplified cost allocation on an energy-only basis. This suggests that the introduction of CDM programs specifically designed to reduce peak demand would not immediately render the current system inappropriate. The status quo approach is administratively practical and does not create material fairness issues as well, assuming that program-specific cost recovery continues at the current low levels of one or two tenths of a cent per kWh.

An alternative cost allocation approach would be to recover all costs via a uniform scheme of cost classification and allocation that parallels the COS study. This approach would combine all regions' program-specific CDM costs, deferred according to the current method, functionalize them as generation, and then classify them based on a generation cost classification approach in use by Hydro (e.g., system load factor). Hydro would then allocate each type of cost according to a conventional demand or energy allocator. The demand allocator could be either a coincident peak allocator or a proxy using winter energy consumption. (Isolated system CDM costs could still be reallocated to other classes.) Note that this does not dictate pricing and rate design strategy other than to require that the CDM Cost Recovery Adjustment rider pricing continue to be customer class-specific.

A variant of this approach would recognize that good demand data are not always available for all classes. Demand-related costs could be allocated on a demand proxy such as winter season consumption, i.e., consumption by class in the four peak winter months of December through March. This proxy might not match a coincident peak demand metric common in generation demand calculations, but would be a more reliable allocator of demand-related cost than energy on its own.

This alternative approach (or its variant using winter consumption for demand cost allocation) would respond to the three concerns with the current system. The approach would strive for full recovery, would recognize demand-related costs in cost allocation, and would include Labrador Interconnected and Isolated customer contributions to reducing peak demand. The approach would be compatible with current COS study methodology and would make use of available data. More generally, the approach would standardize the treatment of CDM costs across the service territory under a methodology consistent with COS methodology and adaptable to expected changes in CDM program purpose and influence. The cost to Hydro of this approach is the increase in CDM rider complexity, with separate pricing by class.

Another consideration associated with this approach is that it gives Hydro the flexibility to treat CDM costs as recoverable either through rates, by including deferred costs in required revenues or through the current CDM rider. The utility would be indifferent to where costs resided from the perspective of cost allocation. Instead, policy on cost recovery could focus on timing issues, e.g., frequency of change in CDM cost recovery amount, and pricing issues associated with rider price structure.

These conclusions appear to be independent of the computations associated with Hydro's Rural Subsidy. If all CDM costs become part of the cost of service, then the size of the subsidy is modestly augmented by CDM costs and demand-oriented costs would shift slightly in the direction of the peak-coincident rate class (NP). Retaining the CDM Cost Recovery Adjustment but adding a demand component would yield a similar result.

6.3 Revenue Recovery

Hydro's current energy-only method of CDM cost recovery via an energy rider is the most common form of CDM cost recovery in the industry. While this approach is only partly used in Canada, it is the predominant approach in the US. The utility's differentiation of costs between rate classes is also common. Introducing new CDM programs with demand-oriented objectives does not appear to obligate the utility to convert to a different pricing mechanism, based on industry practice.

If Hydro decides to retain its current CDM cost allocation methods, then retaining its revenue recovery approach would be cost effective. General administrative costs would be recovered through rates as part of A&G cost recovery. Deferred program-specific costs associated with the Island Interconnected system would be recovered through the CDM Cost Recovery Adjustment rider as an energy-only charge per kWh specific to class. (Island Rural Interconnected costs would continue to be reallocated via the Rural Deficit.)

Extension of cost recovery to Labrador Interconnected and Isolated CDM costs under the current approach would likely be manageable as either additions to rates (with costs included in the COS study) or kept separate and recovered via an energy-only rider. (Isolated region CDM costs would need to be reallocated to other classes.)[16]

If program-specific deferred costs were ever to be classified as demand- and energy-related, Hydro would need to determine whether an energy-only approach to pricing should continue to be used. If Hydro were to incorporate all program-specific costs into the COS study, then rates would be able to recover costs in prices that match demand- and energy-related unit costs.[17] Alternative, if Hydro were to retain recovery of these costs in a rider, the rider could take on demand and energy components, with prices differentiated by class. However, pricing could still be energy-only in structure. Each approach would fully recover each class's costs, but the demand-and-energy pricing plan would recognize load factor differences across customers in revenue recovery. Given the current small size of CDM cost recovery, differences in customer bills across pricing designs would likely be small.

In summary, Hydro can retain or modify its CDM cost allocation and revenue recovery approaches to reflect its changing circumstances with flexibility from the perspective of both theory and industry practice. The current low level of costs permits retention of current methods, with perhaps extension to the Labrador Interconnected and Isolated regions as appropriate.

If Hydro would like to revise its CDM cost recovery in anticipation of possible increases in cost recovery requirements or extensions to additional regions, and to reflect better the

[16] A possible complication for Labrador Industrial customers might be a requirement that the rider not take the form of an energy charge, but instead might be required to be demand-based.
[17] This is not mandatory. Some demand-related costs could still be recovered in part by the energy charge.

increase in demand-related cost causation, the utility can modify its cost allocation practices and still retain energy-only pricing, or it can extend its pricing to add a demand element.

Regarding cost allocation, an alternative to the current approach would be to extend cost classification practices of the COS study to deferred program-specific CDM costs. These costs could be included in the COS study or retained separately in the rider. (If these costs are expected to vary between rate applications, a rider provides flexibility in adjusting prices at annual frequency.)

Regarding revenue recovery, energy-only pricing can be retained if the rider is continued, with (likely small) reductions in the accuracy of matching customer billing to customer cost responsibility (due to variation in load factor across customers within a class). If pricing accuracy matters increasingly, then a demand-and-energy price structure can be adopted. There is precedent for the use of demand in riders, but this pricing scheme risks being excessively complex, especially at low levels of cost.[18]

[18] It is worth mentioning, as well, that the Labrador Interconnected case is complicated by the fact that Labrador Industrial customer energy prices are not regulated. Accordingly, extension of CDM cost recovery to these customers would likely best be undertaken via inclusion of CDM program-specific costs in the COS study, classification on the basis of system load factor, and recovered via a demand charge. This approach makes sense in that the extension of CDM costs to these customers would likely apply in the case of demand-reducing CDM programs, whose benefits would be enjoyed by all Labrador customers.

Attachment 2

Review of Customer Class Coincident

Review of Customer Class Coincident

Load Data Analysis

November 2024

newfoundland labrador hydro

Contents

List of Appendices

1.0 Overview

The allocation of demand-related costs cannot be accomplished without determining the demands of the various rate classes and their interrelationships with a utility's total system demand. Since demand-related costs constitute a large portion of a utility's fixed costs, it is important that the means of determining these demands yield accurate results. These demand estimates are often established by periodic studies of system loads.

Load research studies require load data collection using time-recording meters for each customer class.[1] Generally, the following data is of interest for determining the total system peak forecast, which in turn contributes to cost allocation:

1) Coincident Customer Class Demand: This is the demand of a customer class at the time of a specified system peak hour(s).

2) Non-Coincident Customer Class Demand (Class Peak): This is the maximum demand of a customer class, regardless of when it occurs.

3) Coincident Factor (“CF”): This is the ratio of the coincident customer class demand to the non-coincident customer class demand. It is the percent of customer maximum demand used at the time of the system peak. As defined, this can never be greater than one.

4) System Peak:[2] The entire Hydro system experiences a maximum peak each month, one of which will be the annual maximum peak.

In the Settlement Agreement to the 2018 Cost of Service Methodology Review (“Settlement Agreement”),[3] the parties agreed that Hydro would file, as part of its next general rate application (“GRA”), a report of a review by Hydro of the contribution of different customer classes to the uncertainty parameters of its planning studies (e.g., P50 vs P90), to ensure the calculation of peaks used in the Cost of Service Study appropriately reflect the contribution of the different customer classes to the coincident peak used for planning purposes. This report addresses this request.[4]

[1] Customer class refers to all customers served at a particular rate by Newfoundland and Labrador Hydro (“Hydro”).
[2] For the Cost of Service and this report, system peak refers to the Hydro system peak on the Island Interconnected System or the Labrador Interconnected System.
[3] Approved in Board Order No. P.U. 37(2019).
[4] This report is dated November 2024 and includes data that was available to this date.

2.0 Island Interconnected System

2.1 Peak Demand Forecast

Historically, Hydro would forecast a single winter peak in its planning process, more commonly referred to as the P50 forecast. The system peak can occur in any of the four winter months (December to March). The timing of Hydro's system peak is highly coincident with the system peak of Newfoundland Power Inc. ("Newfoundland Power" or "NP"). Newfoundland Power's peak forecasting methodology also forecasts a single winter peak with no certainty on which month the system peak will occur.

In recent years, Hydro began reporting a P90 forecast as a sensitivity load in its planning studies to assist in the assessment and reporting on forecast exposure.[5] The P90 peak demand forecast reflects an associated increase in demand over an average, or P50, peak demand forecast resulting from instances of more severe wind and/or cold temperatures. During P90 weather conditions, the peak demand will exceed the average (P50) demand level.

As referenced in the Reliability and Resource Adequacy Study – 2022 Update,[6] Hydro states that the Island Interconnected System capacity requirements are based on a P50 peak demand forecast. Hydro maintains that basing supply planning decisions on a P50 peak demand forecast, while continuing to assess and report to the Board of Commissioners of Public Utilities on forecast exposure under the P90 peak demand forecast, balances system reliability and investment cost at this time. Further, embedding load forecast uncertainty in the determination of planning reserve margin increases the conservatism embedded in forecast modelling compared to modelling only the P50 and P90 discreetly.

To determine what classes were impacted by weather, Hydro used exploratory data analysis and the measures of correlation coefficients between class loads and weather values in °C.[7] Figure 1, Figure 2, and Figure 3 present customer class load versus an island-weighted weather value for the winter periods between 2018 and 2024. As evident in the figures, Newfoundland Power and Hydro Rural Island

[5] A P90 forecast implies there is a 90% probability that the actual load will be lower than the forecast in any given year, with a 10% chance the actual load will be higher than the forecast (i.e., once in ten years).
[6] "Reliability and Resource Adequacy Study – 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022.
[7] The weather value refers to an island-weighted temperature or wind chill value, based on the percentage of Newfoundland Power energy sales in the eastern, central, and western regions. For island-weighted temperatures above 0°C, the temperature value is presented, and for values below 0°C and wind speed greater than 4.8 kilometres per hour, a wind chill value was calculated. Please refer to Appendix A. Due to the calculation of wind chill, a gap in the figures may be present at the transition between temperature and wind chill values. The island-weighted wind chill value is used by Hydro to forecast the system winter peak.

1 Interconnected ("Hydro Rural") loads are strongly correlated with weather, while the Industrial class
2 does not show correlation.

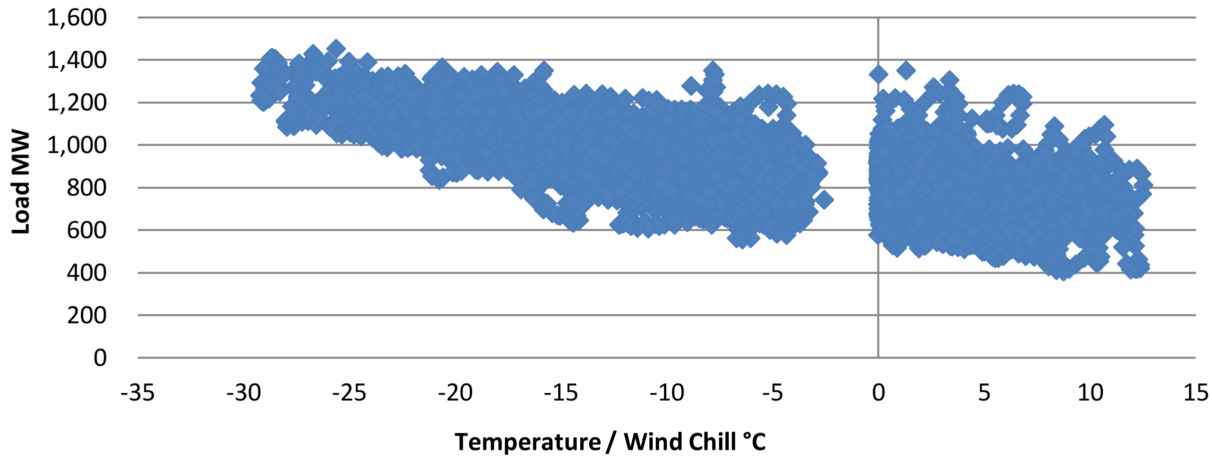

Figure 1: Newfoundland Power Load vs Island-Weighted Weather

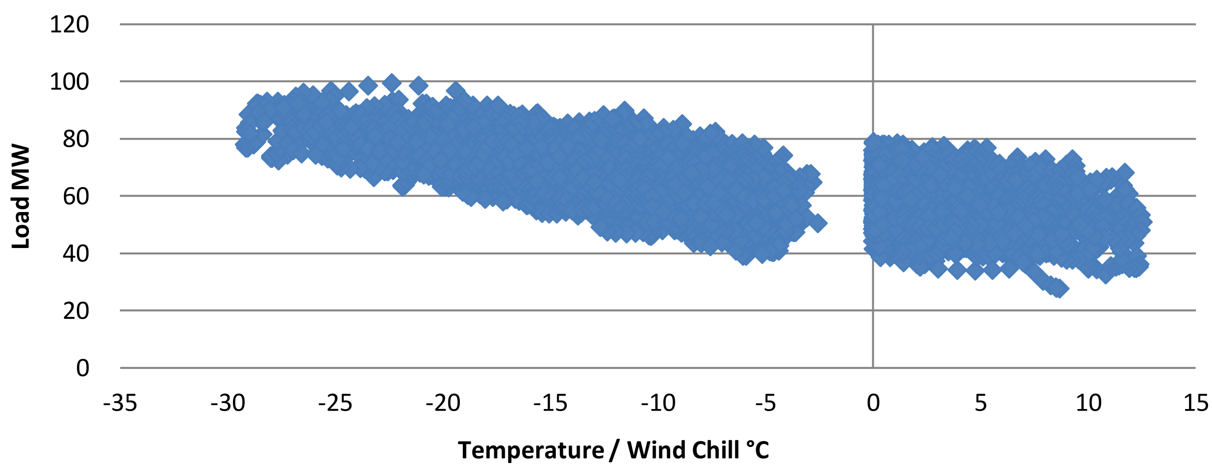

Figure 2: Hydro Rural Interconnected Load vs Island-Weighted Weather

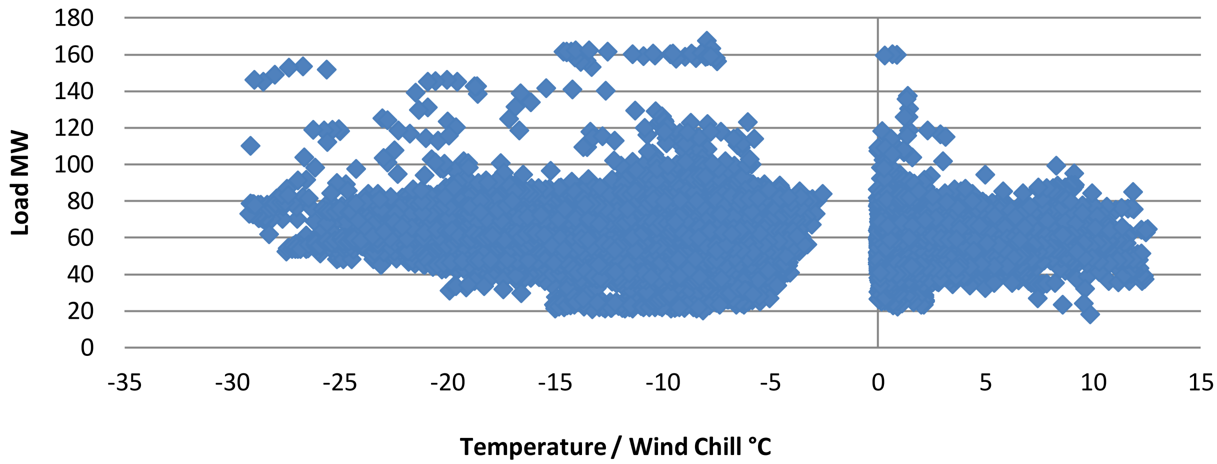

Figure 3: Industrial Load vs Island-Weighted Weather

1 To confirm this assessment, the correlation coefficients[8] for each class load with the weather values
2 were calculated for the same time frame. These results are presented in Table 1.

Table 1: Correlation Coefficients – Winter Loads and Weather

	Correlation Coefficient with Weather °C
Weather °C	1.000
Newfoundland Power Load	-0.624
Hydro Rural Load	-0.579
Industrial Load[9]	0.234

3 It is evident from the data that there is a strong correlation between Newfoundland Power and Hydro
4 Rural loads with weather, and minimal correlation between Industrial load and weather. This supports
5 the production of a P90 sensitivity forecast for Newfoundland Power and Hydro Rural demand only.

[8] A correlation coefficient is a statistical measure that describes the strength and direction of a linear relationship between two variables. It ranges from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no linear correlation. The closer the coefficient is to +1 or -1, the stronger the linear relationship. The closer it is to 0, the weaker the relationship. A positive value indicates a positive correlation (as one variable increases, the other tends to increase), while a negative value indicates a negative correlation (as one variable increases, the other tends to decrease).
[9] Represents actual Industrial load and not necessarily equal to power on order.

2.2 Load Study

2.2.1 Data Collection

Hydro maintains a database of historical records of all customer class coincident and non-coincident peaks, as well as Hydro's system peak. For this study, the three Island Interconnected Customer classes were reviewed: Newfoundland Power, Hydro Rural, and Industrial. To calculate the CFs used to determine class contributions to the system peak, annual CFs were first calculated. These results are presented in Table 2.

Table 2: Annual Customer CFs for Hydro Island Interconnected System[10]

Winter Period	Newfoundland Power (%)	Hydro Rural (%)	Industrial (%)
92/93	98.3	92.1	94.9
93/94	96.9	96.1	87.9
94/95	95.8	100.0	91.6
95/96	98.6	99.6	90.6
96/97	N/A	N/A	N/A
97/98	99.5	94.5	88.9
98/99	100.0	100.0	91.9
99/00	97.7	95.6	94.6
00/01	100.0	99.5	91.3
01/02	100.0	99.7	93.7
02/03	100.0	97.0	99.6
03/04	99.4	89.6	98.8
04/05	99.6	99.9	87.5
05/06	99.4	80.3	76.7
06/07	98.2	91.1	87.9
07/08	99.7	97.2	87.1
08/09	99.9	91.4	84.2
09/10	99.1	98.3	86.6
10/11	N/A	N/A	N/A
11/12	99.1	94.6	83.1
12/13	96.8	80.8	86.4
13/14	99.8	86.2	88.3
14/15	98.5	93.2	82.2
15/16	100.0	99.4	86.0
16/17	96.4	98.8	60.0

[10] Winter periods 1996/97 and 2010/11 are excluded from the historical data set as the records were assessed as being outliers and excluded from load study calculations.

Winter Period	Newfoundland Power (%)	Hydro Rural (%)	Industrial (%)
17/18	95.1	91.1	79.0
18/19	99.9	98.4	83.7
19/20	100.0	98.2	87.5
20/21	100.0	94.0	80.5[11]
21/22	98.8	98.6	89.3[11]
22/23	99.4	91.7	86.0[11]
23/24	97.5	92.1	82.9[11]

Throughout the last 30 years, the Island customer classes have undergone various changes in the composition of their loads. Newfoundland Power continues to be the largest class on the Hydro system and has experienced an increase in the penetration of electrically heated homes, both in new construction as well as in the existing housing stock. This shift to electrically heated homes has added significant load to the system and, in general, results in greater demand during colder weather conditions like those experienced at peak times. Hydro Rural has also experienced a modest shift to electrically heated homes.

The Industrial class has seen several changes to the customers it represents and the size of the load requested by them. Prior to 2020, NARL[12] was at full operation. Starting in 2020, their operations shut down or were at minimal production until increases in power on order started in the second half of 2024.

To determine the appropriate average historical CFs for each class, qualitative and quantitative data were used.[13] These values are presented in Table 3.

Table 3: Hydro Island Interconnected System Peak Demand CFs

Customer Class	CF (%)
Newfoundland Power	99.1
Hydro Rural	96.1
Industrial	84.5

[11] For the Industrial class, the last four years excluded North Atlantic Refining Limited ("NARL") as they were shut down for the pandemic and were slowly increasing their power on order.

[12] NARL was acquired by new ownership in 2021 and renamed Braya Renewable Fuels ("Braya").

[13] For Newfoundland Power and Hydro Rural, the ten-year median was calculated. For the Industrial class, the two-year average was calculated to ensure a representative sample due to the changes in Industrial customers and load described above.

2.3 Coincident Factor Review

2.3.1 Impact of Wind and Temperature

As previously demonstrated, weather does have an impact on Newfoundland Power and Hydro Rural loads. To assess whether the actual CFs of each class is also impacted by the severity of weather when the peak occurs, Hydro calculated the correlation coefficients between the wind chill values and CFs at the system peak.[14] The correlation coefficient values are presented in Table 4, and scatter plots of annual CFs and wind chill values at peak are presented in Figure B-1, Figure B-2, and Figure B-3 of Appendix B.

Table 4: Correlation Coefficients – Historical CFs and Wind Chill at System Peak

	Correlation Coefficient with Wind Chill °C
Wind Chill °C	1
Newfoundland Power CF	-0.073
Hydro Rural CF	-0.038
Industrial CF	-0.001

As the correlation coefficients are all close to zero therefore, historical data does not present a strong correlation for either class between CFs and wind chill at peak.

2.3.2 Impact of Time of Day

Hydro also reviewed the impact of the time of day at which the system peak occurs on the actual CFs of each class. Hydro calculated the correlation coefficients between these variables at the system peak.[15] These values are presented in Table 5.

Table 5: Correlation Coefficients – Historical CFs and Time of System Peak

	Correlation Coefficient with Time of Day
Time of Day	1.000
Newfoundland Power CF	0.244
Hydro Rural CF	0.031
Industrial CF	0.388

[14] To capture the broad range of wind chills at Hydro system peak, Hydro used 30 years of winter peaks to determine the coefficients. Two winter peaks were assessed as being outliers and excluded from the calculation.
[15] To capture the range of times at which the system peak occurred, Hydro used 30 years of winter peaks to determine the coefficients. Two winter peaks were assessed as being outliers and excluded from the calculation.

Analysis of the impact of the time of day that the system peak occurs on CFs suggests there is a minimal correlation found with Newfoundland Power and Hydro Rural classes. Medium correlation was detected with the Industrial class; however, the customers that make up that class have changed throughout the study period, with only the last two to four most recent years reflective of the current customer base.[16] Scatter plots presenting annual CFs and time of peak for each class are presented in Figure B-4, Figure B-5, and Figure B-6 of Appendix B.

2.3.3 Customer Class Size

The proportion of the system peak that is Newfoundland Power load has grown over the study period. To assess whether the change in proportion of load has an influence on the CF, Hydro used exploratory data analysis and the measures of correlation coefficients between historical annual CFs and the proportion of peak load that was Newfoundland Power's contribution. The results are presented in Figure 4 and Table 6.

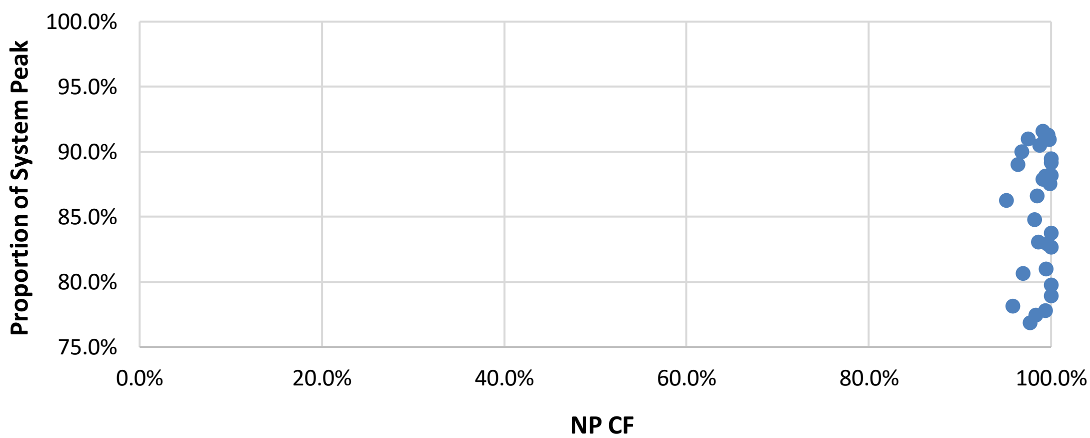

Figure 4: Historical Proportion of System Peak that is Newfoundland Power Load

Table 6: Correlation Coefficient – Newfoundland Power CF and Proportion of System Peak Load

	Correlation Coefficient with NP CF
NP Proportion of System Peak	0.119

[16] The future of Braya remains uncertain.

The historical data does not show a strong correlation between the proportion of the system peak that is comprised of Newfoundland Power load and Newfoundland Power's calculated CF for that year. Therefore, Newfoundland Power's CF is not impacted by how much their load is contributing to Hydro's system peak.

3.0 Labrador Interconnected System

3.1 Peak Demand Forecast

Historically, Hydro forecasts a single winter peak in its planning process, more commonly referred to as the P50 forecast. The system peak can occur in any of the four winter months (December to March).

In recent years, Hydro began reporting a P90 forecast as a sensitivity load in its planning studies to assist in the assessment and reporting on forecast exposure. The P90 peak demand forecast reflects an associated increase in demand over an average, or P50, peak demand forecast resulting from instances of more severe wind and/or cold temperatures. During P90 weather conditions, the peak demand will exceed the average (P50) demand level.

To determine what classes on the Labrador Interconnected System were impacted by weather, Hydro used exploratory data analysis and the measures of correlation coefficients between class loads and weather values in °C.[17] Figure 5, Figure 6, and Figure 7 present customer class load versus weather values for the winter periods between 2018 and 2024. As evident in the figures, Labrador East and Labrador West Utility class[18] loads are strongly correlated with weather, while the Industrial class does not show correlation.

[17] The weather value refers to a temperature or wind chill value based on the location of the load (i.e., Happy Valley-Goose Bay for Labrador East loads or Wabush for Labrador West loads). For temperatures above 0°C, the temperature value is presented, and for values below 0°C and wind speed greater than 4.8 kilometres per hour, a wind chill value was calculated. Please refer to Appendix A. Due to the calculation of wind chill, a gap in the figures may be present at the transition between temperature and wind chill values.

[18] For the purpose of this study, utility class in Labrador is defined as Domestic, General Service and Street Lighting.

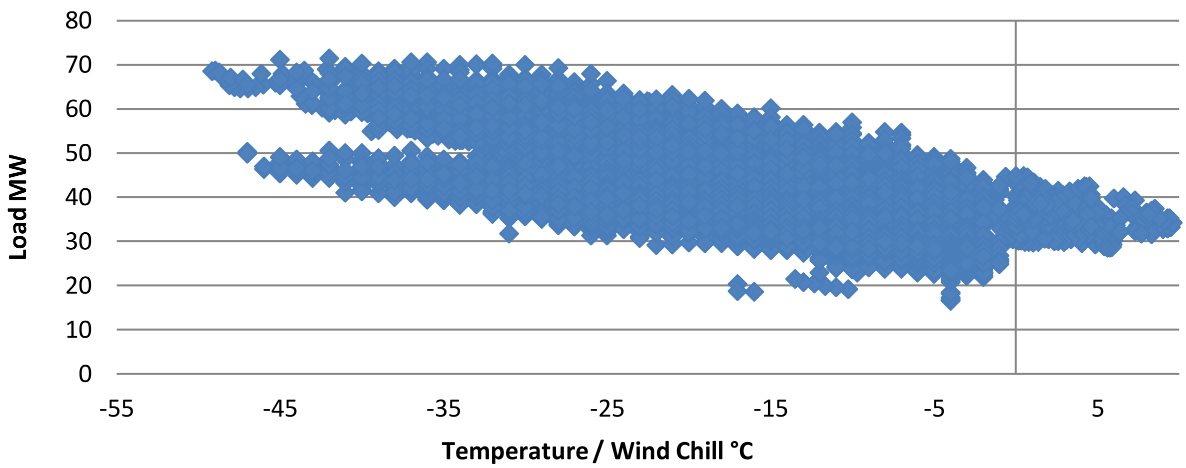

Figure 5: Labrador East Utility Load vs Weather

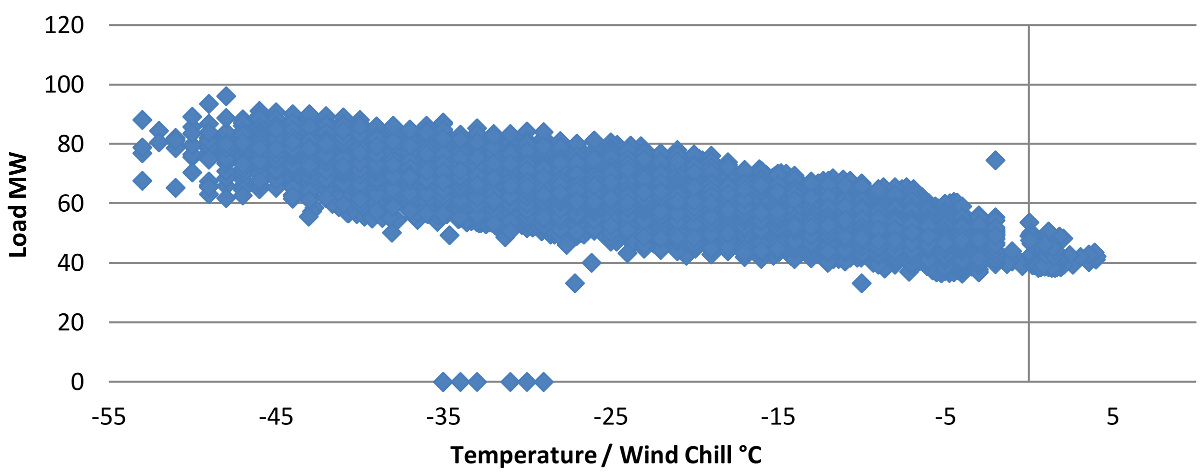

Figure 6: Labrador West Utility Load vs Weather

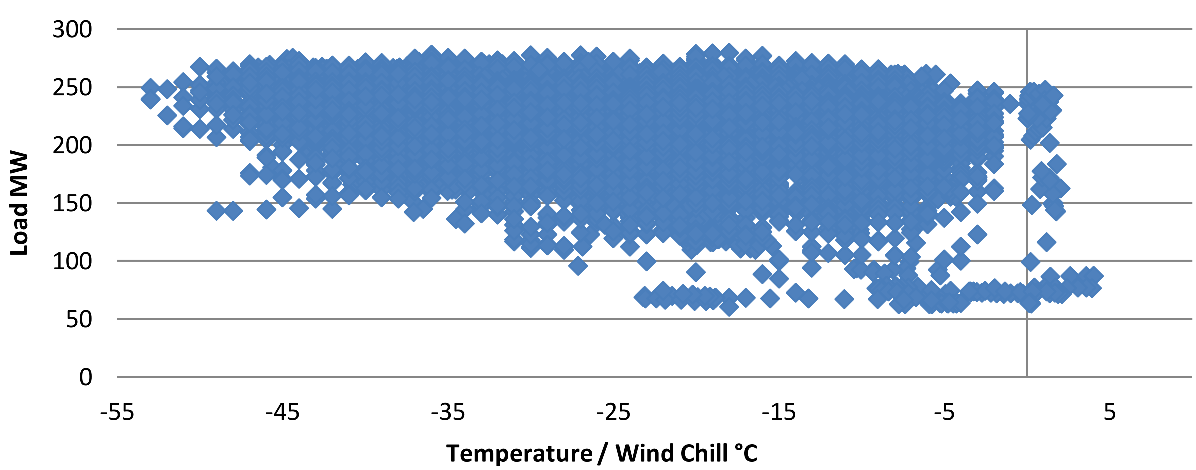

Figure 7: Labrador Industrial Load vs Weather

To confirm this assessment, the correlation coefficients for each class load with the weather values were calculated for the same time frame. These results are presented in Table 7.

Table 7: Correlation Coefficients – Winter Loads and Weather

	Correlation Coefficient with Weather °C
Weather °C	1.000
Labrador East Utility	-0.695
Lab West Utility	-0.776
Industrial Load[19]	-0.271

It is evident from the data that there is a strong correlation between the utility loads in Labrador East and Labrador West with weather, and less correlation between the Industrial load and weather. This supports the P90 sensitivity forecast produced, having an impact on utility demand only.

3.2 Load Study

3.2.1 Data Collection

Hydro maintains a database of historical records of all customer class coincident and non-coincident peaks, as well as Hydro's system peak. For this study, two classes were reviewed: Labrador East and Labrador West were treated as one class (Labrador Utility) and IOC[20] and Tacora Resources Inc. made up the Industrial class. To calculate the CFs used to determine class contributions to the system peak, annual CFs were first calculated. Then, to determine the appropriate average historical CFs for each class, qualitative and quantitative data were used. The years chosen to calculate average customer CFs are presented in Table 8.

[19] Represents actual Industrial load and not necessarily equal to power on order.
[20] Iron Ore Company of Canada ("IOC").

Table 8: Annual Customer CFs for Hydro Labrador Interconnected System

Winter Period	Labrador Utility (%)	Industrial (%)
19/20	95.4	100.0
20/21	87.7	96.7
21/22	87.2	97.3
22/23	93.2	90.6
23/24	94.9	89.7

Throughout the years, the Labrador Interconnected System has undergone various changes in the composition of its load. Due to the extent of these changes on the makeup of total load and the impact on peak, Hydro has chosen the last five years, which are most representative of the current and forecasted makeup of Labrador load, in the calculation of overall CFs. These CF values are presented in Table 9.

Table 9: Hydro Labrador Interconnected System Peak Demand CFs

Customer Class	CF (%)
Labrador Utility	91.7
Industrial	94.9

Given system peak in Labrador is more so driven by Industrial loads and the timing of such, no further analysis was deemed necessary on CFs such as time of day or wind chill.

4.0 Summary and Conclusions

This report analyzed historical load data to determine the impact of uncertainty parameters on the CFs utilized in the cost of service application. The results of this study show that electricity loads from Newfoundland Power, Hydro Rural, and Labrador Utility customer classes are strongly correlated with temperature and wind chill values during the winter peak months. Further analysis of Newfoundland Power and Hydro Rural concluded that the historical wind chill at system peak and the time of system peak have little to no correlation with and therefore no impact on the CFs of these classes.

Analysis of the Industrial classes showed almost no correlation with overall load and temperature, or wind chill. These results are aligned with Hydro's experience with the general behaviour of Industrial customer loads as well as load forecast input received from these customers.[21]

The P90 weather condition forecast is based on 30 years of historical wind chill values during the winter period. In a P90 forecast, the peak load would be incrementally higher compared to a P50 forecast,[22] however, it would largely be driven by increases in Utility load and not Industrial load, as their peak is not highly correlated with weather. Therefore, Hydro concluded that there would be no material difference in CF for each customer class on the Island Interconnected System under different uncertainty parameters, such as a P50 versus a P90, and there would also be no material change in the proportions each customer is contributing to Hydro's peak load.

On the Labrador Interconnected System, only Labrador West and Labrador East Utility loads are highly correlated with weather; using a P50 versus P90 forecast would have an impact on utility loads only. Consistent with the Island Interconnected System, load increases in a P90 forecast would be driven by increases in the Utility load, as Industrial load is not highly correlated with weather. Therefore, there would be no material difference in CF for each customer class under different uncertainty parameters.

Hydro concludes that at the present time, it is appropriate to use the same CFs when calculating P50 and P90 system peaks and that no additional CFs are needed for the time of peak at this time.

[21] Correlation was detected between the historical time of peak and the CF for the Island Industrial class; however, further review showed that the level of correlation decreased when more recent years were analyzed. Due to the change in make-up of the customers in this class throughout the study period, Hydro does not believe there is sufficient evidence to support calculating an additional CF based on the time of system peak for the Industrial class.
[22] The P50 forecast is also based on 30 years of historical wind chill values during the winter period, but is calculated based on the fiftieth percentile of values, while a P90 uses the tenth percentile.

Appendix A

Wind Chill Value Calculation

newfoundland labrador hydro

The standard wind chill formula utilized in this analysis is:

$$T_{wc} = 13.12 + 0.6215T_a - 11.37v^{0.16} + 0.3965T_a v^{0.16}$$

where,

$$T_{wc}\ is\ the\ wind\ chill\ index$$

$$T_a\ is\ the\ air\ temperature\ in\ degress\ Celsius$$

$$v\ is\ the\ wind\ speed\ in\ kilometres\ per\ hour$$

For the purpose of this analysis, wind chill was defined only for temperatures at or below 0°C and wind speeds above 4.8 kilometres per hour.

Appendix B

Annual Coincident Factors vs Wind Chill and Time of Peak Per Class

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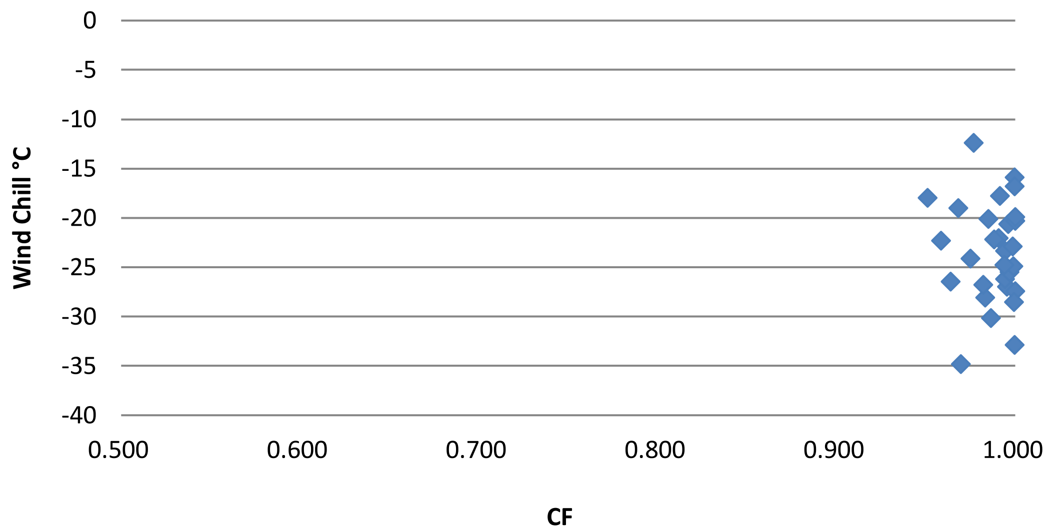

Figure B-1: Newfoundland Power CF vs Wind Chill

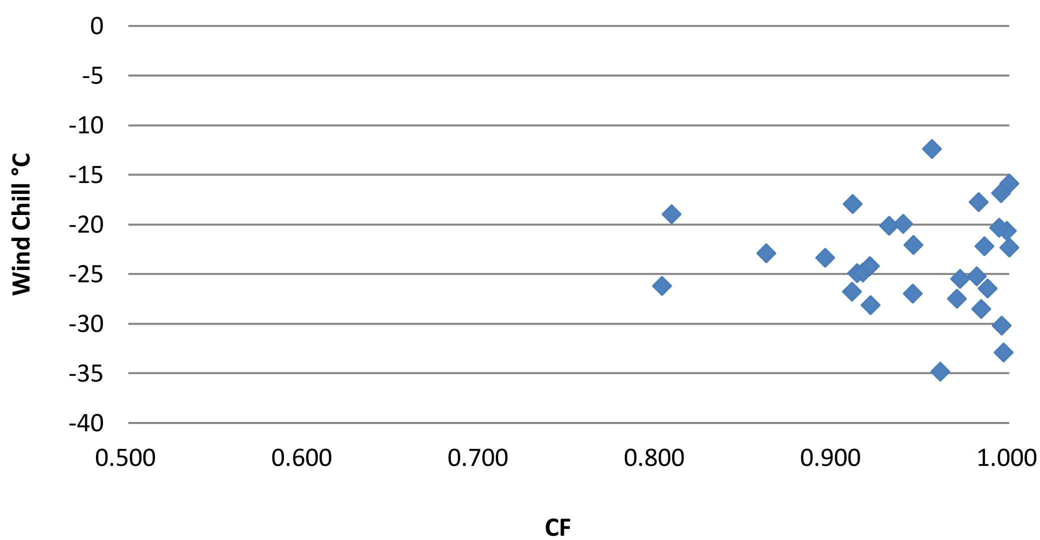

Figure B-2: Hydro Rural CF vs Wind Chill

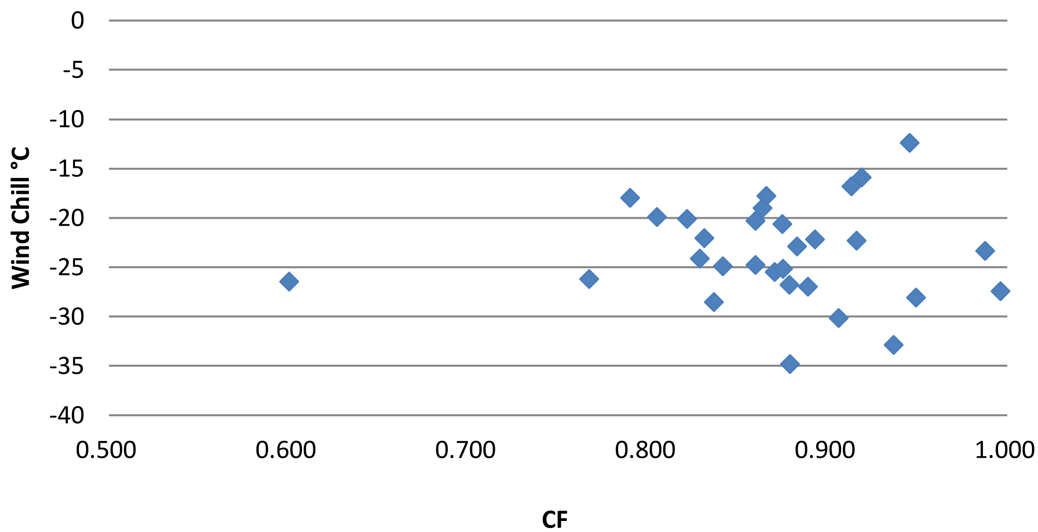

Figure B-3: Industrial CF vs Wind Chill

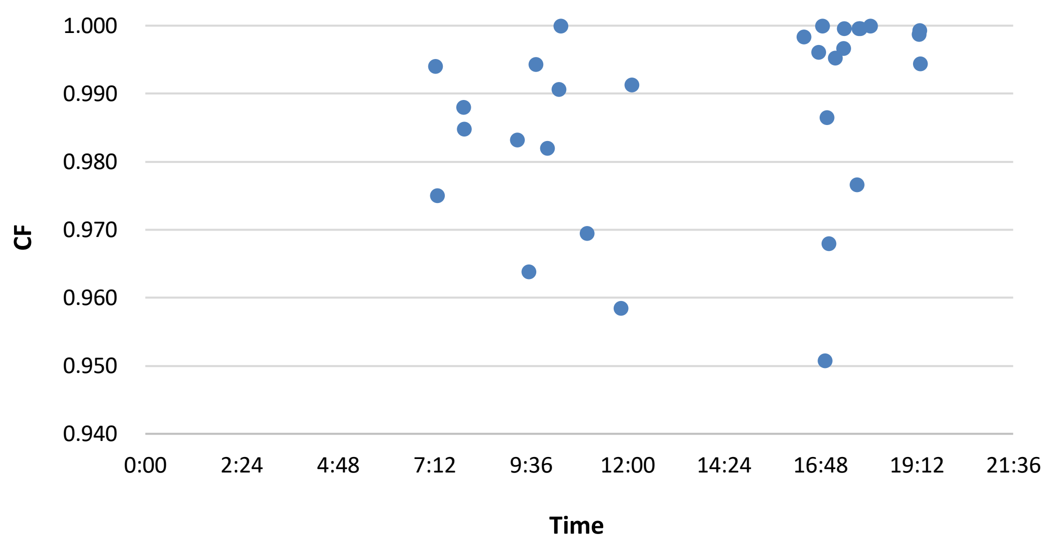

Figure B-4: Newfoundland Power CF vs Time of Peak

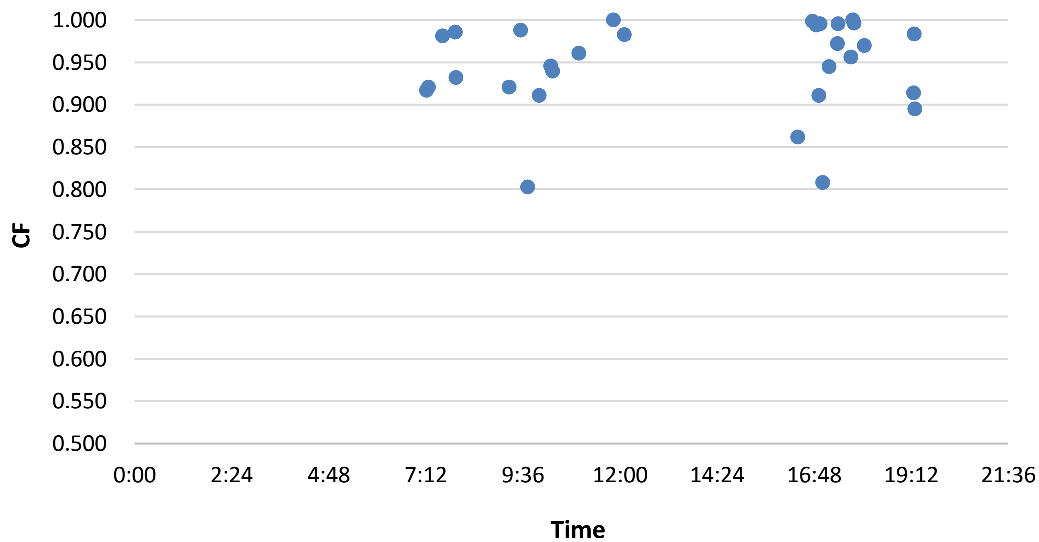

Figure B-5: Hydro Rural CF vs Time of Peak

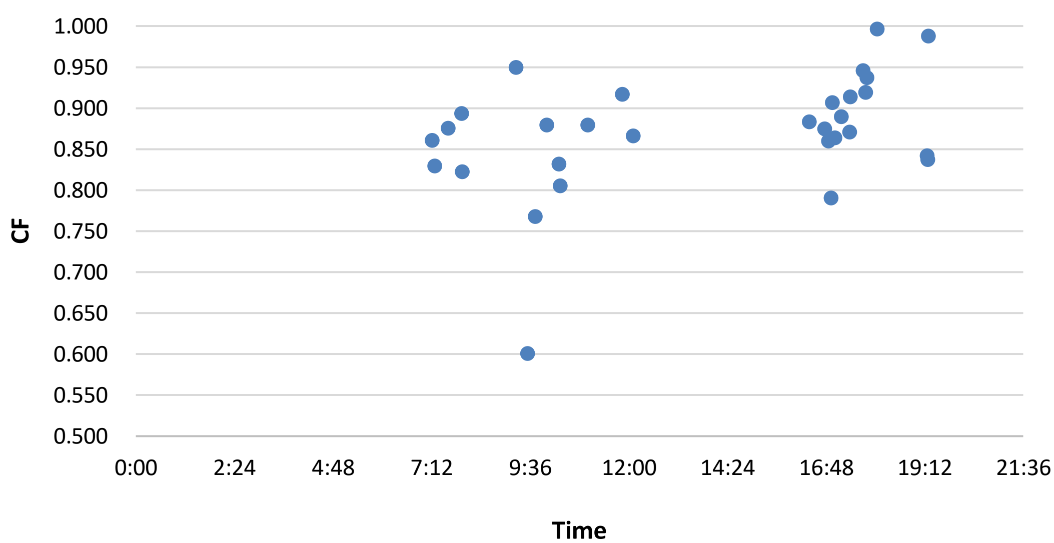

Figure B-6: Industrial CF vs Time of Peak

Attachment 3

Specifically Assigned Assets Report

Specifically Assigned Assets Report

Cost of Service Methodology

Contents

1.0 Background

In its 2017 General Rate Application ("GRA"), Newfoundland and Labrador Hydro ("Hydro") undertook a review and proposed changes to the treatment of costs associated with specifically assigned assets. Specifically assigned assets are those utility assets that are dedicated to serving a single customer and are generally transmission-related. The costs associated with these assets—which include both capital costs and operating and maintenance ("O&M") expenses—are allocated directly to those customers rather than being shared among all system users.

Historically, there had been concerns regarding the accuracy and fairness of Hydro's methodology for determining which assets were to be specifically assigned, as well as how the associated O&M expenses were calculated and charged. These concerns were particularly relevant for the Island Industrial Customers, for whom such charges could represent a non-trivial portion of their electricity costs, ranging from approximately 0.6% to 36% of total electricity costs in 2024.

As part of the 2017 GRA proceeding, Hydro committed to a comprehensive review of its asset base and filed the "Review of Industrial Customer Specifically Assigned Assets" in March 2018.[1] This review assessed whether assets currently designated as specifically assigned still met the applicable criteria and whether any additional assets should be reclassified. The analysis led to changes in the assignment of assets for several industrial customers, including Corner Brook Pulp and Paper Limited ("CBPP"), North Atlantic Refining Limited ("NARL" or "Braya"),[2] Vale Newfoundland and Labrador Limited ("Vale"), and Teck Resources Limited ("Teck"), to ensure alignment with cost of service principles.

Hydro proposed in the 2017 GRA that O&M expenses related to these specifically assigned assets should be calculated using test year asset values indexed using Handy-Whitman indices, providing a standardized and reasonable basis for cost estimation. This proposal was among a suite of cost of service items that Hydro submitted for Board of Commissioners of Public Utilities ("Board") approval, reflecting updates that were considered appropriate in advance of a broader cost of service methodology review tied to the commissioning of the Muskrat Falls Project.

[1] "Review of Industrial Customer Specifically Assigned Assets," Newfoundland and Labrador Hydro, rev. March 5, 2018 (originally filed December 21, 2017).
[2] NARL was acquired by new ownership in 2021 and renamed Braya Renewable Fuels ("Braya").

This proposed methodology and the resulting cost allocations were reviewed as part of a negotiated settlement among Hydro, the Consumer Advocate, Newfoundland Power Inc., and the Island Industrial Customer Group. The resulting agreement recommended approval of Hydro's assignment of assets as common or specifically assigned, as amended in the December 2017 report—except for the assignment of the frequency converter, which remained under dispute.

The Board ultimately approved these revisions and directed that Hydro's new cost of service and rate design methodology—incorporating the Muskrat Falls Project assets—be filed separately in 2018, thus limiting the scope of the current proceeding to the matters set out in Hydro's GRA filing.

In the 2018 Cost of Service Methodology Review application,[3] Hydro reaffirmed its use of indexed asset values for allocating O&M costs to specifically assigned customers, while acknowledging that the reasonableness of this approach should be subject to further review in a future GRA. The 2019 Settlement Agreement accepted this proposal, and the Board approved it in Order No. P.U. 37(2019), affirming the current methodology for the time being and identifying it as an issue for continued evaluation. The Settlement Agreement also required Hydro to file a report, as part of its next GRA, providing details of the results of cost tracking for specifically assigned assets and its assessment of the feasibility of using actual expenses in the calculation of specifically assigned charges. This report provides the results of tracking actual costs and our recommendations to be implemented in the next GRA.

2.0 Allocation of O&M Expenses

Under the methodology adopted for the 2017 GRA, Hydro calculated O&M charges for specifically assigned assets using asset values indexed by the Handy-Whitman Index. This approach provided a standardized and administratively efficient method to estimate O&M costs in the absence of detailed cost tracking at the asset level. The indexed values served as a proxy for asset replacement cost, and the O&M charge was derived by applying a uniform ratio of each customer's indexed specifically assigned transmission asset values to the total indexed transmission asset value across all transmission assets. This ratio was then applied to total transmission O&M to derive the portion of transmission O&M to be specifically assigned to each customer.

[3] "Cost of Service Methodology Review," Newfoundland and Labrador Hydro, November 15, 2018.

While administratively convenient, this approach was met with criticism from some stakeholders, particularly Hydro's Island Industrial Customer Group. The principal concern was that the method failed to reflect the actual maintenance requirements of the assets in question. The indexed value approach risked overcharging customers with assets requiring lower maintenance, and undercharging others, thereby compromising cost causality and fairness. Furthermore, the uniform application of O&M ratios did not account for variability in asset condition, usage, or complexity.

In response to these concerns, Hydro is proposing to replace the indexed asset value methodology with a more precise approach that relies on work order data to track actual O&M expenditures at the asset level. Under the proposed methodology, the O&M charged to a specifically assigned customer will be composed of two components:

1) **Direct O&M Charge:** This will be calculated as the six-year average of actual O&M expenses recorded against each specifically assigned asset. The six-year averaging period aligns with the typical maintenance cycle for transmission assets, thereby smoothing year-to-year variability while preserving cost causality.

2) **Indirect O&M Charge:** This component will be derived by applying a loader to the direct charge. The loader is calculated as the ratio of total indirect transmission O&M to total direct transmission O&M, derived from the Cost of Service Study. This ratio will then be applied to the customer's Direct O&M Charge to allocate a fair share of system-level overhead and shared costs.

For assets for which six-year average historical work order data is not available, such as newly installed assets, Hydro proposes using estimated preventative maintenance costs on an asset-by-asset basis. Hydro will utilize work order data on similar assets to derive maintenance costs for each maintenance activity, escalating costs for labour and materials.

This revised methodology aims to improve cost allocation and fairness, while maintaining administrative feasibility. It also addresses concerns raised during previous proceedings by ensuring that the allocation of O&M expenses is based on actual maintenance activity, better reflecting variability in asset condition, usage, or complexity rather than estimated or indexed values.

2.1 2019 Test Year Example

To demonstrate the impacts of Hydro's proposed O&M allocation methodology, Hydro has compared the total O&M expense allocation for Island Specifically Assigned customers using the current method of indexed asset values to that using Hydro's proposed method of a six-year rolling average of actual O&M expenses associated with each specifically assigned asset.[4]

2.1.1 Calculation of Indirect Loader

Hydro proposes the calculation of an indirect O&M loader to be applied to the direct, specifically assigned O&M to allocate a prorated portion of system-level overhead and shared costs. This loader is calculated as the ratio of Transmission Administration and General expenses and Transmission "Other" expenses, to direct Transmission O&M and Terminals O&M expenses. The indirect loader will be calculated separately for the Island and Labrador.

$$Indirect\ Loader = \frac{Transmission\ A\&G + Transmission\ Other}{Transmission\ Direct\ O\&M + Terminals\ Direct\ O\&M}$$

Using 2019 Test Year values, the indirect O&M loader for the Island Interconnected System is calculated as 76% of direct O&M expenses:

$$Indirect\ Loader = \frac{\$3{,}610{,}424 + \$2{,}335{,}788}{\$3{,}298{,}719 + \$4{,}519{,}337} = 76\%$$

For the Labrador Interconnected System, the indirect loader is calculated as 14.4% of direct O&M expenses:

$$Indirect\ Loader = \frac{\$164{,}210 + \$189{,}106}{\$2{,}280{,}520 + \$173{,}173} = 14.4\%$$

[4] Comparisons do not account for asset removals or additions compared to those included in the 2019 Test Year Cost of Service Study.

2.1.2 Methodology Comparison

A comparison of the total O&M expense allocation for Island Specifically Assigned customers using the current method of indexed asset values to that using Hydro's proposed method of a six-year rolling average (2018–2023) of actual O&M expenses associated with each specifically assigned asset is provided in Table 1.

Table 1: Comparison of Existing and Proposed Allocation Methods

Customer	Indexed Value O&M Charge	Six-Year Average O&M Charge			Change (%)
		Direct	Indirect	Total	
Vale	99,291	43,664	33,185	**76,849**	-23%
Braya	31,030	20,331	15,452	**35,783**	15%
CBPP/DLP[5]	4,537	2,711	2,060	**4,771**	5%
Teck	49,225	4,634	3,522	**8,156**	-83%
Newfoundland Power	813,134	288,063	218,928	**506,990**	-38%
Total	**997,217**	**359,403**	**273,146**	**632,549**	-37%

Using 2019 Test Year values, Hydro's proposed methodology for allocation of O&M against specifically assigned assets results in a reallocation of O&M expenses from specifically assigned to common, in the amount of $364,700, or approximately 37% of the 2019 Test Year specifically assigned transmission O&M expense. On a customer-by-customer basis, the impact of the proposed methodology varies significantly, ranging from a decrease of 83% to an increase of 15%. While this methodology is less administratively efficient, Hydro believes this methodology presents a more accurate and fair allocation of O&M expenses on the basis of actual O&M, which accounts for asset condition, age, and variability between customers, and effectively eliminates the risk of subsidization between customers.

3.0 Capital Costs

Historically, Hydro had generally recovered capital costs associated with specifically assigned assets through customer rates charged to that specific customer, derived from its Cost of Service Study. However, this methodology posed a risk of under-recovery in the event a customer ceases to operate before the costs of their specifically assigned assets are fully recovered. In Hydro's 2019 Capital Budget Application, Hydro began identifying costs associated with assets specifically assigned to Industrial

[5] Deer Lake Power ("DLP").

customers within the application, and providing a five-year plan of specifically assigned capital expenditures. Hydro subsequently began collecting these costs through direct charges to Industrial customers following Board approval of its capital budget application. Hydro intends to continue the practice of recovering capital costs from industrial customers through direct charges upon project approval. Hydro intends to continue to recover capital costs specifically assigned to Newfoundland Power through Hydro's wholesale rate.

4.0 Specifically Assigned Asset Review

Prior to filing its next GRA, Hydro intends to conduct a review of specifically assigned assets to assess whether assets currently designated as specifically assigned still meet the applicable criteria and whether any additional assets should be reclassified. The results of Hydro's review will be reflected in its next GRA filing.

5.0 Conclusion

This report outlines Hydro's proposed enhancements to the methodology for allocating O&M costs associated with specifically assigned assets, with a focus on improving fairness, transparency, and alignment with cost causality principles. Building on feedback from stakeholders and lessons learned since the 2017 GRA, Hydro recommends replacing the indexed asset value approach with a methodology based on actual work order O&M data, complemented by an indirect cost loader. This shift aims to provide more accurate, asset-specific cost attribution while maintaining administrative viability. The proposed method has shown variable impacts across customers, with overall benefits including reduced subsidization and improved equity in cost recovery.

Additionally, Hydro reaffirms its practice of recovering capital costs through direct charges to Industrial customers and intends to conduct a thorough reassessment of asset assignments ahead of the next GRA.

Collectively, these measures are designed to strengthen the cost of service framework and ensure that the allocation of costs of specifically assigned assets continues to reflect the actual use and condition of the assets involved.

Attachment 4

Newfoundland Power Generation During Island Interconnected System Peaks

Newfoundland Power Generation During Island Interconnected System Peaks

January 2020–December 2024

Contents

List of Appendices

1.0 Purpose

In the Settlement Agreement to the 2018 Cost of Service Methodology Review ("Settlement Agreement"),[1] the parties agreed that Newfoundland and Labrador Hydro ("Hydro") would file, as part of its next general rate application ("GRA"), a report of a review by Hydro of the methodology for the calculation of the megawatt credit provided to Newfoundland Power Inc. ("Newfoundland Power") to ensure reasonableness. This report addresses this request.

The current hydraulic generation credit is 83.5 MW, and the thermal generation credit is 34.6 MW, which was approved in Hydro's 2019 Test Year, included in the 2017 GRA.

2.0 Hydraulic Generation Credit

This determination is based on analysis of historical values for Newfoundland Power hydraulic generation during Island Interconnected System peak loading periods.

2.1 Introduction

Newfoundland Power has hydraulic generation, which Hydro can request be maximized during periods of high demand on the Island Interconnected System. This generation is also used to manage regional constraints. It was used fairly frequently to help reduce the loading on the transmission line corridor from Bay d'Espoir into the Avalon Peninsula, prior to the in-service of Transmission Line TL267. Currently, it is being utilized (less frequently) to offload the transmission corridor from Western Avalon into Soldiers Pond. Analysis of data from January 2020 to December 2024 was completed to determine the amount of hydraulic generation that Newfoundland Power has been consistently providing during times of high or peak load on the Island Interconnected System, following a request from Hydro to maximize hydraulic generation. Note that while Newfoundland Power also has thermal generation, the analysis in this section is limited to its hydraulic generation. Three different scenarios were evaluated: annual Island Interconnected System Peak, top 5% of peak Island load hours and top 10% of peak Island load hours.

2.2 Scenario Analysis

Data analysis is based on the calendar year from January 1 to December 31.

[1] Approved in Board Order No. P.U. 37(2019).

2.2.1 Annual Island Interconnected System Peak

This case involved identifying the hour of peak demand (i.e., the single highest load hour in a calendar year) for each year from 2020 to 2024. Given that weather patterns, which typically drive periods of high demand, can persist for more than one day, the day prior to and the day after this highest peak day were also included in the analysis. This ensures that Newfoundland Power receives appropriate credit for instances in which its generation provided assistance in managing peak in a period of high demand on the day prior to or following the day containing the annual peak, but was more limited in its ability to supply during peak hours for external reasons (e.g., low water). For each of these three days, the peak hour was identified, as well as the hour before and after the peak hour, during which the load is also generally expected to be high. The average Newfoundland Power hydraulic generation for these three hours on each day was calculated. The overall average for the three days was then determined. This was completed for each year.

Please note that for all Newfoundland Power hydraulic generation values included in the final results, it was confirmed that a formal request to maximize hydraulic generation was made from Hydro to Newfoundland Power.

2.2.2 Top 5% of Peak Island Load Hours

This case involved identifying the top 5% of Island Interconnected System load hours for each year. The average Newfoundland Power hydraulic generation for the noted hours was then calculated. This was completed for each year.

2.2.3 Top 10% of Peak Island Load Hours

This case involved identifying the top 10% of Island Interconnected System load hours for each year. The average Newfoundland Power hydraulic generation for the noted hours was then calculated. This was completed for each year.

2.3 Scenario Analysis Results

All data analyzed was obtained from Hydro’s Energy Management System. The results of the analysis are presented in the following sections.

2.3.1 Annual Island Interconnected System Peak Results

Table 1 summarizes the Island Interconnected System peak demand for each year on a calendar year basis, as well as the average Newfoundland Power hydraulic generation at the time of peak. The overall average for Newfoundland Power hydraulic generation during Island Interconnected System Peak was determined to be 64 MW. Tables A-1 to A-5, located in Appendix A, provide the analysis for each individual year. Each table in Appendix A identifies the days and hours included in the analysis, the peak demand, and the associated Newfoundland Power hydraulic generation.

Table 1: Summary of Newfoundland Power Hydraulic Generation During System Peak

Year	Island Interconnected System Peak Demand (MW)	Newfoundland Power Hydraulic Generation (MW)
2020	1641	66
2021	1518	60
2022	1614	71
2023	1770	76
2024	1728	48
	Average	**64**

2.3.2 Top 5% of Peak Island Load Hours Results

Table 2 summarizes the average Island Interconnected System demand during the top 5% of hours with the highest Island Interconnected System demand, as well as the average Newfoundland Power hydraulic generation during those hours. The overall average for Newfoundland Power hydraulic generation during the top 5% of hours with the highest Island Interconnected System demand was determined to be 59 MW. The complete data set for each year can be found in Appendix B.

Table 2: Newfoundland Power Hydraulic Generation During Top 5% of Island Interconnected System Load Hours

Year	Average Island Interconnected System Demand in Top 5% of Hours with Highest Demand (MW)	Newfoundland Power Hydraulic Generation (MW)
2020	1433	50
2021	1351	59
2022	1407	73
2023	1478	64
2024	1424	49
	Average	**59**

2.3.3 Top 10% of Peak Island Load Hours Results

Table 3 summarizes the average Island Interconnected System during the top 10% of hours with the highest Island Interconnected System demand, as well as the average Newfoundland Power hydraulic generation during those hours. The overall average for Newfoundland Power hydraulic generation during the top 10% of hours with the highest Island Interconnected System demand was found to be 58 MW. The complete data set for each year can be found in Appendix C.

Table 3: Newfoundland Power Hydraulic Generation During Top 10% of Island Interconnected System Load Hours

Year	Average Island Interconnected System Load in Top 10% of Hours with Highest Demand (MW)	Newfoundland Power Hydraulic Generation (MW)
2020	1377	49
2021	1307	58
2022	1352	70
2023	1402	61
2024	1367	51
	Average	**58**

2.4 Recommended Newfoundland Power Hydraulic Generation Credit

Based on the analysis contained herein, it is recommended that the hydraulic generation credit provided to Newfoundland Power reflect a credit of 64 MW. It is recommended that this value be reviewed on a recurrent basis.

3.0 Thermal Generation Credit

3.1 Introduction

Newfoundland Power has thermal generation, which Hydro can request be maximized during periods of high demand on the Island Interconnected System. This generation is also used to manage regional transmission constraints.

3.2 Analysis Approach

The process for requesting Newfoundland Power to maximize thermal generation to support the Island Interconnected System is to request, in advance, the thermal unit(s) to be staffed. While Hydro has requested staffing of Newfoundland Power’s thermal units over the last five-year period (January 2020 through December 2024) as a precaution in advance of a forecasted peak, the units have not subsequently been asked to generate. As a result, there is a lack of generation data to perform a similar analysis as utilized to calculate the hydraulic generation credit.

3.3 Recommended Newfoundland Power Thermal Generation Credit

Despite the limited generation data available to conduct a similar analysis for Newfoundland Power's hydraulic generation credit, the thermal generation remains available to be called upon. It is recommended that the process for determining the thermal generation credit remain unchanged, determined by Newfoundland Power's thermal generation capability forecast for the test year, reduced by the reserve at the criteria.

4.0 Conclusions/Recommendations

The following summarizes the data presented above:

- Newfoundland Power hydraulic generation, from January 2020 to December 2024, for the scenarios analyzed, is summarized in Table 4.

Table 4: Average Newfoundland Power Hydraulic Generation for Scenarios Analyzed

	Average Newfoundland Power Hydraulic Generation (MW)
During Island Interconnected System Peak	64
During Top 5% of hours with Highest Load	59
During Top 10% of hours with Highest Load	58

- It is recommended that the hydraulic generation credit provided to Newfoundland Power reflect a credit of 64 MW. It is recommended that this value be reviewed on a recurrent basis.
- It is recommended that the process for determining the thermal generation credit provided to Newfoundland Power remain unchanged at this time.

Appendix A

Annual Island Interconnected System Peak

(January 2020–December 2024)

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hydro

Table A-1: Calculation of Newfoundland Power Hydraulic Generation During System Peak (2020)

Island Interconnected System Peak for 2020 - 1641 MW

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)	NP Avg Gen (MW)
20-Feb-20 18:00:00	1577	66	
20-Feb-20 19:00:00	**1585**	**67**	**65**
20-Feb-20 20:00:00	1583	62	
21-Feb-20 06:00:00	1538	74	
21-Feb-20 07:00:00	**1641**	**75**	**74**
21-Feb-20 08:00:00	1613	74	
22-Feb-20 06:00:00	1481	57	
22-Feb-20 07:00:00	**1501**	**59**	**58**
22-Feb-20 08:00:00	1496	58	
		Overall Average NP GEN (MW)	**66**

Table A-2: Calculation of Newfoundland Power Hydraulic Generation During System Peak (2021)

Island Interconnected System Peak for 2021 - 1518 MW

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)	NP Avg Gen (MW)
10-Feb-21 16:00:00	1285	59	
10-Feb-21 17:00:00	**1345**	**59**	**61**
10-Feb-21 18:00:00	1337	65	
11-Feb-21 09:00:00	1509	52	
11-Feb-21 10:00:00	**1518**	**52**	**52**
11-Feb-21 11:00:00	1514	53	
12-Feb-21 16:00:00	1314	68	
12-Feb-21 17:00:00	**1343**	**65**	**66**
12-Feb-21 18:00:00	1325	66	
		Overall Average NP GEN (MW)	**60**

Table A-3: Calculation of Newfoundland Power Hydraulic Generation During System Peak (2022)

Island Interconnected System Peak for 2022 - 1614 MW

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)	NP Avg Gen (MW)
15-Feb-22 17:00:00	1508	76	
15-Feb-22 18:00:00	**1509**	**76**	**76**
15-Feb-22 19:00:00	1504	76	
16-Feb-22 06:00:00	1511	66	
16-Feb-22 07:00:00	**1614**	**66**	**66**
16-Feb-22 08:00:00	1613	66	
17-Feb-22 07:00:00	1459	67	
17-Feb-22 08:00:00	**1475**	**73**	**70**
17-Feb-22 09:00:00	1455	70	
		Overall Average NP GEN (MW)	**71**

Table A-4: Calculation of Newfoundland Power Hydraulic Generation During System Peak (2023)[1]

Island Interconnected System Peak for 2023 - 1770 MW

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)	NP Avg Gen (MW)
26-Feb-23 07:00:00	1658	77	
26-Feb-23 08:00:00	**1690**	**76**	**76**
26-Feb-23 09:00:00	1686	74	
27-Feb-23 06:00:00	1663	75	
27-Feb-23 07:00:00	**1770**	**77**	**76**
27-Feb-23 08:00:00	1732	78	
28-Feb-23 06:00:00	1647	77	
28-Feb-23 07:00:00	**1733**	**77**	**76**
28-Feb-23 08:00:00	1691	73	
		Overall Average NP GEN (MW)	**76**

[1] Numbers may not add due to rounding.

Table A-5: Calculation of Newfoundland Power Hydraulic Generation During System Peak (2024)

Island Interconnected System Peak for 2024 - 1728 MW

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)	NP Avg Gen (MW)
23-Jan-24 20:00:00	1465	49	
23-Jan-24 21:00:00	**1474**	**49**	**50**
23-Jan-24 22:00:00	1426	50	
24-Jan-24 06:00:00	1659	45	
24-Jan-24 07:00:00	**1728**	**53**	**51**
24-Jan-24 08:00:00	1707	54	
25-Jan-24 07:00:00	1471	48	
25-Jan-24 08:00:00	**1488**	**48**	**45**
25-Jan-24 09:00:00	1471	39	
		Overall Average NP GEN (MW)	**48**

Appendix B

Top 5% of Island Interconnected System Load Hours

(2020–2024)

Table B-1: Top 5% of Island Interconnected System Load Hours (2020)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Feb-20 07:00:00	1641	75
10-Mar-20 07:00:00	1625	53
21-Feb-20 08:00:00	1613	74
10-Mar-20 08:00:00	1610	57
15-Jan-20 08:00:00	1609	53
14-Feb-20 18:00:00	1601	76
10-Jan-20 08:00:00	1601	51
14-Feb-20 19:00:00	1600	75
15-Jan-20 07:00:00	1595	60
20-Feb-20 19:00:00	1585	67
10-Jan-20 07:00:00	1585	53
20-Feb-20 20:00:00	1583	62
14-Feb-20 20:00:00	1581	74
20-Feb-20 18:00:00	1577	66
15-Jan-20 09:00:00	1565	51
22-Jan-20 08:00:00	1563	61
21-Feb-20 09:00:00	1563	70
20-Feb-20 21:00:00	1559	56
14-Feb-20 17:00:00	1555	76
14-Feb-20 21:00:00	1552	64
21-Feb-20 18:00:00	1552	72
20-Feb-20 17:00:00	1551	67
19-Jan-20 10:00:00	1551	30
21-Feb-20 19:00:00	1545	64
17-Mar-20 07:00:00	1543	50
22-Jan-20 07:00:00	1539	63
21-Feb-20 06:00:00	1538	74
18-Jan-20 17:00:00	1538	39
19-Jan-20 09:00:00	1533	28
17-Jan-20 11:00:00	1532	52
17-Jan-20 12:00:00	1532	50
19-Jan-20 11:00:00	1528	30
22-Jan-20 09:00:00	1527	59
10-Mar-20 09:00:00	1527	46
18-Jan-20 18:00:00	1525	37
21-Feb-20 20:00:00	1525	61
15-Feb-20 08:00:00	1524	65
10-Jan-20 09:00:00	1522	46
15-Jan-20 17:00:00	1522	44

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
17-Mar-20 08:00:00	1522	48
21-Feb-20 17:00:00	1520	73
14-Jan-20 08:00:00	1517	64
10-Feb-20 07:00:00	1516	38
14-Jan-20 17:00:00	1516	55
21-Feb-20 10:00:00	1513	67
17-Jan-20 10:00:00	1513	50
19-Jan-20 17:00:00	1510	28
15-Feb-20 07:00:00	1509	68
10-Mar-20 06:00:00	1508	36
10-Jan-20 17:00:00	1506	47
14-Feb-20 22:00:00	1505	64
20-Feb-20 22:00:00	1504	50
06-Feb-20 07:00:00	1502	54
18-Jan-20 19:00:00	1501	34
06-Feb-20 08:00:00	1501	52
22-Feb-20 07:00:00	1501	59
15-Feb-20 09:00:00	1500	65
10-Feb-20 08:00:00	1500	46
19-Jan-20 08:00:00	1500	25
15-Feb-20 18:00:00	1499	73
14-Jan-20 07:00:00	1496	65
22-Feb-20 08:00:00	1496	58
17-Jan-20 13:00:00	1496	49
19-Jan-20 12:00:00	1496	31
14-Jan-20 18:00:00	1494	60
15-Feb-20 19:00:00	1493	67
21-Feb-20 21:00:00	1493	56
15-Jan-20 16:00:00	1492	45
14-Jan-20 19:00:00	1492	60
13-Jan-20 17:00:00	1492	66
16-Jan-20 08:00:00	1491	52
02-Feb-20 11:00:00	1488	52
17-Jan-20 16:00:00	1487	50
02-Feb-20 12:00:00	1487	52
15-Jan-20 18:00:00	1486	47
21-Feb-20 11:00:00	1486	65
10-Jan-20 18:00:00	1485	47
14-Jan-20 20:00:00	1484	57
22-Jan-20 17:00:00	1483	65
17-Jan-20 14:00:00	1483	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Jan-20 07:00:00	1482	51
22-Feb-20 06:00:00	1481	57
17-Jan-20 15:00:00	1481	51
15-Jan-20 10:00:00	1479	49
20-Feb-20 16:00:00	1479	55
13-Jan-20 18:00:00	1477	66
15-Feb-20 17:00:00	1475	73
03-Mar-20 07:00:00	1475	40
18-Jan-20 16:00:00	1475	39
15-Feb-20 10:00:00	1474	61
15-Jan-20 19:00:00	1473	47
15-Feb-20 06:00:00	1473	71
25-Jan-20 08:00:00	1472	52
15-Jan-20 06:00:00	1472	59
21-Feb-20 12:00:00	1470	65
17-Jan-20 09:00:00	1469	50
19-Feb-20 08:00:00	1468	57
16-Feb-20 10:00:00	1468	57
10-Jan-20 16:00:00	1468	47
14-Feb-20 23:00:00	1468	64
22-Feb-20 09:00:00	1468	57
22-Jan-20 10:00:00	1467	55
19-Jan-20 18:00:00	1467	26
17-Jan-20 17:00:00	1467	47
13-Jan-20 19:00:00	1464	64
02-Feb-20 10:00:00	1464	53
14-Feb-20 16:00:00	1464	71
16-Feb-20 09:00:00	1464	54
02-Feb-20 13:00:00	1460	51
19-Feb-20 11:00:00	1460	53
15-Feb-20 11:00:00	1460	49
21-Feb-20 16:00:00	1460	64
14-Jan-20 09:00:00	1460	53
16-Feb-20 11:00:00	1459	56
10-Jan-20 19:00:00	1459	47
10-Mar-20 10:00:00	1458	42
19-Feb-20 10:00:00	1458	50
23-Jan-20 08:00:00	1457	47
15-Feb-20 20:00:00	1457	57
09-Mar-20 20:00:00	1457	45
06-Feb-20 17:00:00	1455	51

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-20 17:00:00	1454	57
14-Jan-20 21:00:00	1454	54
19-Feb-20 09:00:00	1454	58
09-Mar-20 21:00:00	1453	45
14-Feb-20 08:00:00	1453	65
13-Jan-20 20:00:00	1452	62
19-Jan-20 16:00:00	1452	29
15-Jan-20 20:00:00	1452	46
22-Jan-20 16:00:00	1452	54
15-Jan-20 11:00:00	1451	49
09-Feb-20 19:00:00	1451	49
16-Dec-20 17:00:00	1451	66
17-Mar-20 06:00:00	1451	47
14-Jan-20 16:00:00	1450	45
09-Feb-20 18:00:00	1450	48
18-Jan-20 20:00:00	1450	34
31-Jan-20 17:00:00	1449	41
09-Feb-20 20:00:00	1448	55
23-Jan-20 09:00:00	1448	44
16-Feb-20 12:00:00	1448	62
10-Feb-20 17:00:00	1447	46
13-Jan-20 08:00:00	1447	61
22-Jan-20 18:00:00	1447	65
22-Jan-20 06:00:00	1446	60
16-Mar-20 08:00:00	1445	50
21-Feb-20 22:00:00	1445	50
19-Jan-20 19:00:00	1444	26
17-Jan-20 18:00:00	1444	45
11-Mar-20 08:00:00	1444	29
10-Jan-20 06:00:00	1443	54
06-Feb-20 09:00:00	1442	52
19-Feb-20 07:00:00	1441	56
03-Feb-20 17:00:00	1441	61
25-Jan-20 09:00:00	1440	50
17-Mar-20 09:00:00	1440	40
14-Feb-20 07:00:00	1440	75
15-Feb-20 12:00:00	1439	48
16-Jan-20 17:00:00	1439	61
20-Feb-20 23:00:00	1439	47
01-Feb-20 09:00:00	1438	35
06-Feb-20 18:00:00	1438	49

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Jan-20 09:00:00	1437	54
19-Jan-20 07:00:00	1437	25
13-Mar-20 07:00:00	1436	46
18-Feb-20 19:00:00	1435	52
16-Mar-20 07:00:00	1434	37
16-Dec-20 16:00:00	1434	64
18-Feb-20 20:00:00	1434	53
15-Feb-20 16:00:00	1434	51
19-Feb-20 12:00:00	1434	53
13-Feb-20 08:00:00	1434	47
22-Jan-20 19:00:00	1433	64
22-Feb-20 18:00:00	1433	61
12-Jan-20 17:00:00	1433	56
10-Feb-20 09:00:00	1433	50
21-Jan-20 18:00:00	1432	58
13-Feb-20 07:00:00	1432	51
16-Jan-20 19:00:00	1432	59
19-Jan-20 13:00:00	1430	30
13-Mar-20 08:00:00	1430	45
06-Feb-20 16:00:00	1430	58
13-Jan-20 09:00:00	1430	64
13-Jan-20 21:00:00	1430	62
16-Jan-20 18:00:00	1429	61
21-Feb-20 13:00:00	1429	58
31-Jan-20 18:00:00	1429	45
01-Feb-20 08:00:00	1428	34
18-Feb-20 18:00:00	1427	52
22-Feb-20 10:00:00	1427	59
10-Jan-20 10:00:00	1427	41
09-Mar-20 08:00:00	1427	41
15-Feb-20 05:00:00	1427	70
22-Jan-20 11:00:00	1426	49
25-Jan-20 07:00:00	1426	55
23-Mar-20 07:00:00	1426	45
03-Mar-20 08:00:00	1425	40
09-Feb-20 17:00:00	1425	48
21-Jan-20 19:00:00	1425	58
16-Jan-20 20:00:00	1425	57
15-Feb-20 00:00:00	1424	60
18-Feb-20 21:00:00	1424	50
11-Mar-20 07:00:00	1424	29

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-20 08:00:00	1424	46
01-Feb-20 18:00:00	1424	47
20-Feb-20 07:00:00	1424	58
09-Mar-20 19:00:00	1423	45
10-Feb-20 18:00:00	1423	46
02-Feb-20 14:00:00	1423	49
16-Feb-20 17:00:00	1423	56
16-Feb-20 13:00:00	1423	62
15-Feb-20 21:00:00	1423	55
10-Feb-20 16:00:00	1423	45
15-Jan-20 15:00:00	1423	45
09-Jan-20 17:00:00	1422	57
16-Feb-20 08:00:00	1421	57
22-Jan-20 20:00:00	1420	64
01-Feb-20 19:00:00	1420	47
23-Jan-20 17:00:00	1420	53
13-Jan-20 07:00:00	1419	59
21-Feb-20 15:00:00	1419	61
16-Dec-20 18:00:00	1419	67
02-Feb-20 16:00:00	1419	45
10-Feb-20 06:00:00	1419	37
02-Feb-20 17:00:00	1419	43
22-Feb-20 05:00:00	1418	43
21-Feb-20 05:00:00	1418	50
31-Jan-20 16:00:00	1418	41
08-Feb-20 17:00:00	1417	44
11-Mar-20 09:00:00	1417	29
06-Feb-20 19:00:00	1417	48
10-Jan-20 20:00:00	1417	47
09-Feb-20 21:00:00	1416	51
23-Mar-20 08:00:00	1416	50
14-Feb-20 09:00:00	1415	40
31-Jan-20 08:00:00	1415	33
23-Jan-20 07:00:00	1415	48
12-Jan-20 16:00:00	1414	60
02-Feb-20 09:00:00	1414	54
20-Feb-20 08:00:00	1414	64
02-Feb-20 15:00:00	1414	46
08-Feb-20 18:00:00	1413	44
13-Jan-20 16:00:00	1413	66
22-Feb-20 19:00:00	1412	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Mar-20 22:00:00	1412	42
03-Feb-20 16:00:00	1412	62
15-Feb-20 13:00:00	1412	47
03-Feb-20 18:00:00	1411	57
31-Jan-20 07:00:00	1411	32
14-Jan-20 10:00:00	1411	43
10-Mar-20 19:00:00	1410	32
09-Jan-20 19:00:00	1410	56
31-Jan-20 19:00:00	1410	46
07-Feb-20 17:00:00	1410	37
10-Mar-20 05:00:00	1410	35
13-Feb-20 09:00:00	1410	42
10-Mar-20 20:00:00	1409	30
18-Jan-20 21:00:00	1409	31
15-Feb-20 01:00:00	1408	59
01-Feb-20 10:00:00	1408	35
19-Jan-20 20:00:00	1408	26
21-Feb-20 14:00:00	1407	59
21-Jan-20 09:00:00	1407	47
25-Jan-20 18:00:00	1407	55
21-Jan-20 20:00:00	1406	59
01-Feb-20 20:00:00	1406	45
16-Feb-20 18:00:00	1406	56
16-Jan-20 21:00:00	1406	55
10-Feb-20 10:00:00	1405	50
13-Jan-20 10:00:00	1405	67
10-Jan-20 11:00:00	1405	42
17-Jan-20 08:00:00	1405	46
07-Mar-20 17:00:00	1405	54
16-Dec-20 19:00:00	1404	67
25-Jan-20 19:00:00	1404	53
07-Mar-20 18:00:00	1404	54
16-Feb-20 16:00:00	1404	63
15-Feb-20 04:00:00	1403	48
16-Mar-20 09:00:00	1402	49
01-Feb-20 17:00:00	1402	47
19-Jan-20 06:00:00	1402	26
10-Mar-20 11:00:00	1402	40
15-Jan-20 21:00:00	1402	45
16-Feb-20 14:00:00	1401	64
17-Jan-20 19:00:00	1401	42

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Jan-20 18:00:00	1400	57
13-Feb-20 17:00:00	1400	50
25-Jan-20 17:00:00	1400	57
19-Feb-20 13:00:00	1400	51
22-Feb-20 17:00:00	1399	51
09-Mar-20 07:00:00	1399	41
18-Jan-20 15:00:00	1399	44
21-Jan-20 16:00:00	1398	56
21-Feb-20 23:00:00	1398	49
20-Feb-20 15:00:00	1398	56
05-Feb-20 19:00:00	1398	41
15-Feb-20 14:00:00	1397	48
28-Feb-20 09:00:00	1397	39
07-Feb-20 16:00:00	1397	37
05-Feb-20 18:00:00	1396	43
12-Jan-20 18:00:00	1396	55
03-Mar-20 06:00:00	1396	34
27-Feb-20 19:00:00	1396	43
16-Dec-20 20:00:00	1395	66
21-Feb-20 00:00:00	1395	48
10-Feb-20 19:00:00	1395	46
28-Feb-20 08:00:00	1394	39
09-Jan-20 20:00:00	1394	56
06-Feb-20 20:00:00	1394	48
22-Jan-20 12:00:00	1394	45
25-Jan-20 10:00:00	1394	50
05-Feb-20 20:00:00	1394	39
31-Jan-20 20:00:00	1393	44
13-Feb-20 10:00:00	1393	45
22-Jan-20 15:00:00	1393	51
23-Jan-20 10:00:00	1392	50
14-Jan-20 22:00:00	1392	53
09-Jan-20 16:00:00	1392	58
08-Feb-20 19:00:00	1391	43
06-Feb-20 06:00:00	1391	48
15-Feb-20 03:00:00	1391	43
23-Jan-20 18:00:00	1390	54
03-Feb-20 08:00:00	1390	42
22-Feb-20 11:00:00	1390	48
15-Feb-20 02:00:00	1390	45
22-Feb-20 04:00:00	1390	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Feb-20 17:00:00	1390	43
15-Feb-20 15:00:00	1390	48
27-Feb-20 18:00:00	1389	48
24-Feb-20 07:00:00	1389	39
04-Feb-20 07:00:00	1389	62
13-Feb-20 16:00:00	1389	50
21-Jan-20 07:00:00	1388	46
20-Feb-20 09:00:00	1388	52
14-Feb-20 10:00:00	1388	43
16-Dec-20 08:00:00	1388	60
07-Mar-20 19:00:00	1387	54
14-Mar-20 10:00:00	1387	37
16-Feb-20 15:00:00	1387	62
22-Feb-20 20:00:00	1386	66
13-Feb-20 11:00:00	1386	44
10-Feb-20 11:00:00	1385	56
21-Feb-20 01:00:00	1385	46
19-Jan-20 14:00:00	1384	30
11-Mar-20 10:00:00	1384	32
03-Feb-20 19:00:00	1384	55
06-Feb-20 10:00:00	1384	53
09-Feb-20 09:00:00	1384	37
20-Mar-20 08:00:00	1384	21
10-Jan-20 15:00:00	1383	47
14-Feb-20 11:00:00	1383	46
14-Jan-20 06:00:00	1382	68
21-Jan-20 21:00:00	1382	60
21-Feb-20 04:00:00	1382	43
13-Feb-20 18:00:00	1381	51
08-Feb-20 16:00:00	1381	44
25-Jan-20 20:00:00	1380	52
10-Feb-20 12:00:00	1380	57
17-Dec-20 08:00:00	1380	50
14-Feb-20 15:00:00	1380	50
04-Feb-20 08:00:00	1380	57
27-Feb-20 20:00:00	1379	40
21-Feb-20 02:00:00	1379	45
03-Mar-20 09:00:00	1379	40
15-Feb-20 22:00:00	1379	52
09-Mar-20 09:00:00	1378	40
19-Feb-20 14:00:00	1378	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Mar-20 21:00:00	1378	30
22-Feb-20 03:00:00	1378	43
09-Feb-20 08:00:00	1378	37
10-Jan-20 12:00:00	1378	44
18-Feb-20 17:00:00	1378	51
13-Feb-20 12:00:00	1377	43
31-Dec-20 17:00:00	1377	56
10-Mar-20 18:00:00	1377	33
01-Feb-20 21:00:00	1377	47
28-Feb-20 10:00:00	1376	34
22-Jan-20 21:00:00	1375	58
07-Mar-20 16:00:00	1375	50
20-Jan-20 17:00:00	1375	48
07-Feb-20 18:00:00	1375	36
08-Jan-20 17:00:00	1375	63
14-Jan-20 11:00:00	1375	41
13-Jan-20 11:00:00	1375	68
19-Jan-20 15:00:00	1375	29
22-Jan-20 13:00:00	1373	45
21-Feb-20 03:00:00	1373	45
18-Feb-20 08:00:00	1373	46
06-Feb-20 15:00:00	1373	62
15-Jan-20 12:00:00	1372	49
19-Jan-20 21:00:00	1372	25
01-Feb-20 07:00:00	1371	32
23-Mar-20 09:00:00	1371	56
16-Jan-20 06:00:00	1371	46
12-Jan-20 19:00:00	1371	51
23-Jan-20 16:00:00	1370	49
20-Feb-20 10:00:00	1370	53
31-Dec-20 16:00:00	1370	54
14-Mar-20 09:00:00	1370	34
18-Jan-20 22:00:00	1370	30
13-Dec-20 17:00:00	1369	49
22-Mar-20 20:00:00	1369	41
03-Feb-20 09:00:00	1369	47
15-Jan-20 14:00:00	1369	46
16-Jan-20 16:00:00	1368	54
10-Feb-20 15:00:00	1368	51
28-Feb-20 07:00:00	1368	40
05-Feb-20 21:00:00	1368	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
17-Dec-20 09:00:00	1367	47
26-Jan-20 08:00:00	1367	49
18-Feb-20 22:00:00	1367	47
23-Jan-20 19:00:00	1367	49
01-Feb-20 11:00:00	1366	35
16-Feb-20 07:00:00	1366	49
05-Feb-20 08:00:00	1366	52
08-Feb-20 20:00:00	1366	43
22-Feb-20 00:00:00	1365	49
10-Mar-20 17:00:00	1365	34
12-Jan-20 15:00:00	1364	58
16-Feb-20 19:00:00	1364	55
17-Jan-20 20:00:00	1364	41
16-Jan-20 10:00:00	1364	55
22-Jan-20 14:00:00	1364	51
13-Feb-20 15:00:00	1364	50
10-Jan-20 21:00:00	1364	51
17-Dec-20 17:00:00	1364	52
31-Jan-20 15:00:00	1364	41
17-Mar-20 10:00:00	1363	39
02-Feb-20 18:00:00	1363	43
20-Feb-20 12:00:00	1363	58
15-Jan-20 13:00:00	1362	49
31-Jan-20 09:00:00	1362	35
09-Jan-20 21:00:00	1362	56
13-Feb-20 13:00:00	1362	45
22-Feb-20 02:00:00	1361	43
16-Dec-20 07:00:00	1361	59
17-Dec-20 11:00:00	1361	45
12-Feb-20 18:00:00	1361	45
Average (MW)	**1433**	**50**

Table B-2: Top 5% of Island Interconnected System Load Hours (2021)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Feb-21 10:00:00	1518	52
11-Feb-21 17:00:00	1516	47
11-Feb-21 11:00:00	1514	53
11-Feb-21 09:00:00	1509	52
16-Dec-21 17:00:00	1506	78

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Feb-21 08:00:00	1506	65
11-Feb-21 12:00:00	1501	52
16-Dec-21 19:00:00	1500	73
16-Dec-21 18:00:00	1498	75
21-Feb-21 17:00:00	1494	48
11-Feb-21 08:00:00	1493	55
22-Feb-21 07:00:00	1491	63
16-Dec-21 20:00:00	1489	73
11-Feb-21 16:00:00	1487	47
15-Dec-21 16:00:00	1482	65
16-Dec-21 08:00:00	1479	78
15-Dec-21 17:00:00	1478	69
22-Feb-21 09:00:00	1478	65
24-Dec-21 17:00:00	1477	73
11-Feb-21 13:00:00	1474	52
11-Feb-21 18:00:00	1471	47
21-Feb-21 16:00:00	1469	58
16-Dec-21 09:00:00	1468	77
24-Dec-21 16:00:00	1466	72
11-Feb-21 14:00:00	1459	51
16-Dec-21 21:00:00	1458	73
11-Feb-21 15:00:00	1456	46
17-Dec-21 08:00:00	1455	64
21-Feb-21 18:00:00	1450	46
20-Dec-21 17:00:00	1447	59
16-Dec-21 16:00:00	1446	79
11-Feb-21 19:00:00	1445	47
15-Dec-21 18:00:00	1445	61
16-Dec-21 10:00:00	1445	77
11-Feb-21 07:00:00	1444	55
17-Dec-21 09:00:00	1440	64
16-Dec-21 07:00:00	1438	78
15-Dec-21 19:00:00	1438	64
24-Dec-21 18:00:00	1434	74
21-Feb-21 19:00:00	1432	43
17-Dec-21 07:00:00	1431	64
17-Dec-21 10:00:00	1429	65
24-Dec-21 11:00:00	1425	72
20-Dec-21 18:00:00	1425	59
22-Feb-21 06:00:00	1424	50
21-Feb-21 10:00:00	1424	57

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Dec-21 20:00:00	1422	66
16-Dec-21 11:00:00	1421	77
17-Dec-21 11:00:00	1420	69
17-Dec-21 16:00:00	1420	72
21-Feb-21 15:00:00	1420	60
20-Jan-21 17:00:00	1419	70
20-Dec-21 19:00:00	1419	63
19-Feb-21 08:00:00	1418	34
15-Dec-21 15:00:00	1418	61
17-Dec-21 17:00:00	1416	71
24-Dec-21 10:00:00	1415	74
21-Feb-21 11:00:00	1415	57
24-Dec-21 12:00:00	1415	72
22-Feb-21 10:00:00	1414	63
21-Jan-21 17:00:00	1411	57
21-Dec-21 08:00:00	1410	69
24-Dec-21 19:00:00	1409	73
11-Feb-21 20:00:00	1408	47
21-Feb-21 20:00:00	1407	41
24-Dec-21 15:00:00	1406	72
15-Dec-21 11:00:00	1406	56
21-Feb-21 09:00:00	1405	59
20-Dec-21 20:00:00	1404	66
15-Dec-21 10:00:00	1404	58
10-Dec-21 17:00:00	1402	68
20-Dec-21 16:00:00	1402	54
15-Dec-21 08:00:00	1401	71
21-Feb-21 14:00:00	1401	57
19-Feb-21 07:00:00	1399	32
24-Dec-21 09:00:00	1399	74
15-Dec-21 09:00:00	1398	64
16-Dec-21 12:00:00	1398	77
17-Dec-21 12:00:00	1396	74
21-Jan-21 16:00:00	1396	57
21-Feb-21 12:00:00	1396	59
21-Dec-21 09:00:00	1393	79
16-Dec-21 22:00:00	1393	73
29-Jan-21 08:00:00	1393	49
19-Dec-21 17:00:00	1392	79
24-Dec-21 13:00:00	1392	72
17-Mar-21 07:00:00	1391	51

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Dec-21 12:00:00	1391	56
22-Feb-21 11:00:00	1390	63
20-Jan-21 18:00:00	1389	65
21-Feb-21 13:00:00	1388	58
24-Dec-21 14:00:00	1387	72
17-Mar-21 08:00:00	1386	60
15-Dec-21 21:00:00	1384	76
29-Mar-21 11:00:00	1384	65
15-Dec-21 14:00:00	1384	59
25-Jan-21 08:00:00	1384	43
24-Dec-21 20:00:00	1382	67
21-Dec-21 17:00:00	1382	75
18-Mar-21 08:00:00	1381	67
29-Jan-21 17:00:00	1381	50
17-Dec-21 13:00:00	1380	74
15-Dec-21 07:00:00	1380	72
17-Dec-21 15:00:00	1379	72
19-Dec-21 18:00:00	1378	78
19-Feb-21 09:00:00	1378	38
23-Jan-21 17:00:00	1378	52
16-Mar-21 08:00:00	1376	72
19-Feb-21 17:00:00	1375	56
29-Jan-21 09:00:00	1375	49
19-Dec-21 19:00:00	1373	77
17-Dec-21 14:00:00	1373	73
19-Feb-21 18:00:00	1372	53
25-Jan-21 09:00:00	1372	42
20-Jan-21 16:00:00	1372	70
10-Dec-21 18:00:00	1371	68
15-Dec-21 13:00:00	1371	55
21-Feb-21 21:00:00	1370	41
29-Mar-21 12:00:00	1370	66
20-Dec-21 21:00:00	1370	69
17-Dec-21 18:00:00	1369	72
28-Feb-21 11:00:00	1367	42
29-Mar-21 10:00:00	1366	62
20-Dec-21 09:00:00	1365	65
21-Dec-21 16:00:00	1365	76
10-Dec-21 16:00:00	1365	69
16-Dec-21 13:00:00	1364	77
28-Feb-21 12:00:00	1364	48

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Dec-21 07:00:00	1364	61
01-Feb-21 17:00:00	1363	56
03-Jan-21 17:00:00	1363	48
21-Jan-21 18:00:00	1362	58
18-Mar-21 07:00:00	1361	67
22-Feb-21 12:00:00	1361	62
20-Feb-21 17:00:00	1360	61
21-Jan-21 08:00:00	1360	59
20-Jan-21 19:00:00	1360	66
24-Dec-21 08:00:00	1360	73
02-Feb-21 08:00:00	1359	59
11-Jan-21 17:00:00	1359	75
16-Mar-21 09:00:00	1358	72
19-Dec-21 20:00:00	1358	77
10-Dec-21 19:00:00	1357	68
21-Jan-21 09:00:00	1357	62
31-Dec-21 17:00:00	1356	57
04-Jan-21 17:00:00	1356	66
22-Feb-21 18:00:00	1356	35
16-Dec-21 15:00:00	1355	79
29-Jan-21 10:00:00	1355	60
22-Feb-21 19:00:00	1355	33
16-Jan-21 17:00:00	1355	61
19-Feb-21 19:00:00	1355	52
20-Dec-21 10:00:00	1354	59
21-Jan-21 12:00:00	1354	57
29-Mar-21 09:00:00	1354	62
25-Jan-21 07:00:00	1354	42
11-Feb-21 06:00:00	1354	52
20-Feb-21 18:00:00	1353	56
21-Dec-21 18:00:00	1353	75
11-Feb-21 21:00:00	1353	47
29-Jan-21 07:00:00	1353	48
14-Dec-21 17:00:00	1353	75
20-Jan-21 08:00:00	1352	44
21-Feb-21 08:00:00	1352	54
16-Feb-21 08:00:00	1352	43
21-Jan-21 15:00:00	1350	57
20-Dec-21 08:00:00	1349	77
21-Jan-21 11:00:00	1349	60
24-Dec-21 21:00:00	1349	63

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
19-Feb-21 16:00:00	1348	56
21-Jan-21 10:00:00	1348	62
09-Mar-21 08:00:00	1348	36
13-Feb-21 17:00:00	1348	55
21-Dec-21 10:00:00	1347	85
20-Dec-21 11:00:00	1347	56
29-Jan-21 16:00:00	1347	50
22-Jan-21 09:00:00	1347	61
22-Feb-21 05:00:00	1346	28
25-Jan-21 10:00:00	1346	44
20-Jan-21 09:00:00	1345	44
31-Mar-21 08:00:00	1345	64
20-Feb-21 09:00:00	1345	66
01-Jan-21 17:00:00	1345	55
10-Feb-21 17:00:00	1345	59
21-Jan-21 13:00:00	1344	57
23-Jan-21 18:00:00	1344	51
02-Feb-21 09:00:00	1344	63
16-Dec-21 06:00:00	1344	73
23-Feb-21 08:00:00	1344	64
16-Dec-21 14:00:00	1344	78
20-Jan-21 10:00:00	1343	45
13-Feb-21 18:00:00	1343	55
20-Jan-21 11:00:00	1343	46
12-Feb-21 17:00:00	1343	65
11-Dec-21 09:00:00	1343	64
17-Dec-21 06:00:00	1342	64
28-Feb-21 10:00:00	1342	40
15-Feb-21 08:00:00	1342	34
17-Dec-21 19:00:00	1341	71
25-Dec-21 09:00:00	1340	72
16-Feb-21 17:00:00	1340	54
15-Feb-21 09:00:00	1340	38
21-Dec-21 12:00:00	1340	78
22-Jan-21 17:00:00	1339	60
28-Jan-21 17:00:00	1339	56
21-Jan-21 14:00:00	1339	57
22-Dec-21 17:00:00	1338	71
10-Feb-21 18:00:00	1337	65
22-Feb-21 20:00:00	1337	32
28-Feb-21 13:00:00	1337	48

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-21 18:00:00	1337	51
10-Feb-21 08:00:00	1337	55
11-Jan-21 16:00:00	1336	76
10-Feb-21 19:00:00	1336	62
25-Dec-21 11:00:00	1336	65
20-Feb-21 19:00:00	1336	57
22-Feb-21 17:00:00	1335	47
02-Feb-21 07:00:00	1335	54
10-Dec-21 20:00:00	1335	66
05-Jan-21 17:00:00	1335	70
20-Dec-21 12:00:00	1335	56
29-Mar-21 13:00:00	1334	65
18-Mar-21 09:00:00	1334	68
29-Jan-21 18:00:00	1334	50
25-Dec-21 10:00:00	1334	66
19-Dec-21 16:00:00	1334	78
25-Jan-21 17:00:00	1333	56
16-Feb-21 09:00:00	1333	45
19-Feb-21 10:00:00	1333	39
29-Mar-21 08:00:00	1333	62
29-Mar-21 16:00:00	1333	65
31-Mar-21 07:00:00	1333	64
21-Jan-21 19:00:00	1332	60
12-Feb-21 08:00:00	1332	55
01-Feb-21 16:00:00	1332	57
23-Jan-21 16:00:00	1332	52
17-Mar-21 09:00:00	1332	63
12-Feb-21 09:00:00	1332	57
21-Dec-21 19:00:00	1331	73
01-Jan-21 18:00:00	1331	54
16-Mar-21 10:00:00	1331	70
09-Mar-21 09:00:00	1331	36
20-Feb-21 08:00:00	1331	65
27-Jan-21 17:00:00	1330	50
01-Feb-21 18:00:00	1330	42
23-Feb-21 07:00:00	1330	51
19-Feb-21 20:00:00	1329	52
20-Feb-21 16:00:00	1328	58
20-Jan-21 15:00:00	1328	66
15-Dec-21 22:00:00	1328	76
14-Dec-21 18:00:00	1327	77

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-21 19:00:00	1327	51
12-Jan-21 08:00:00	1327	64
22-Dec-21 19:00:00	1327	71
03-Mar-21 07:00:00	1327	49
15-Feb-21 17:00:00	1326	51
20-Feb-21 10:00:00	1326	64
12-Jan-21 09:00:00	1325	66
10-Dec-21 08:00:00	1325	55
03-Jan-21 18:00:00	1325	49
04-Jan-21 16:00:00	1325	67
12-Feb-21 18:00:00	1325	66
16-Jan-21 16:00:00	1325	57
03-Jan-21 16:00:00	1325	48
21-Jan-21 07:00:00	1325	59
23-Feb-21 17:00:00	1325	57
21-Dec-21 13:00:00	1325	73
31-Dec-21 16:00:00	1324	57
19-Feb-21 06:00:00	1324	33
04-Mar-21 08:00:00	1324	41
20-Jan-21 20:00:00	1323	66
10-Feb-21 07:00:00	1323	47
01-Jan-21 19:00:00	1323	53
28-Jan-21 08:00:00	1323	48
22-Dec-21 18:00:00	1323	71
10-Feb-21 20:00:00	1323	64
23-Jan-21 09:00:00	1322	59
01-Jan-21 16:00:00	1322	55
02-Feb-21 17:00:00	1322	55
29-Mar-21 17:00:00	1322	69
16-Feb-21 18:00:00	1322	53
15-Feb-21 18:00:00	1322	50
08-Feb-21 11:00:00	1322	65
01-Feb-21 08:00:00	1321	65
26-Feb-21 17:00:00	1321	50
30-Jan-21 10:00:00	1321	69
30-Jan-21 17:00:00	1321	60
16-Dec-21 23:00:00	1321	67
22-Jan-21 10:00:00	1321	51
13-Feb-21 19:00:00	1320	47
11-Dec-21 17:00:00	1320	65
21-Dec-21 11:00:00	1320	84

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
30-Dec-21 17:00:00	1320	52
20-Dec-21 13:00:00	1320	54
09-Dec-21 17:00:00	1319	67
16-Mar-21 07:00:00	1319	57
15-Feb-21 10:00:00	1319	39
19-Dec-21 21:00:00	1319	77
30-Jan-21 11:00:00	1319	67
12-Feb-21 10:00:00	1318	58
03-Mar-21 08:00:00	1318	41
22-Dec-21 20:00:00	1318	72
22-Jan-21 08:00:00	1318	53
09-Feb-21 17:00:00	1318	66
25-Jan-21 11:00:00	1317	48
20-Dec-21 15:00:00	1317	44
21-Feb-21 22:00:00	1317	41
08-Feb-21 12:00:00	1316	65
16-Jan-21 11:00:00	1316	60
14-Dec-21 16:00:00	1316	69
09-Dec-21 16:00:00	1316	68
23-Jan-21 19:00:00	1316	51
21-Dec-21 14:00:00	1316	75
28-Jan-21 18:00:00	1316	57
19-Feb-21 11:00:00	1316	47
28-Feb-21 16:00:00	1316	49
04-Mar-21 09:00:00	1315	41
20-Jan-21 12:00:00	1315	46
20-Jan-21 07:00:00	1315	48
12-Jan-21 10:00:00	1315	68
11-Jan-21 18:00:00	1314	75
29-Mar-21 15:00:00	1314	64
28-Feb-21 17:00:00	1314	45
22-Jan-21 18:00:00	1314	63
12-Feb-21 16:00:00	1314	68
04-Jan-21 18:00:00	1314	66
14-Dec-21 19:00:00	1314	77
31-Dec-21 18:00:00	1314	58
16-Jan-21 10:00:00	1313	62
23-Jan-21 10:00:00	1313	62
08-Feb-21 10:00:00	1312	64
01-Feb-21 09:00:00	1312	61
11-Dec-21 08:00:00	1312	65

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Mar-21 20:00:00	1312	52
16-Mar-21 19:00:00	1312	54
14-Feb-21 09:00:00	1311	43
16-Feb-21 16:00:00	1311	58
23-Feb-21 18:00:00	1311	60
16-Jan-21 12:00:00	1311	59
16-Feb-21 07:00:00	1310	45
01-Jan-21 20:00:00	1310	53
22-Dec-21 08:00:00	1310	62
26-Jan-21 08:00:00	1309	53
13-Feb-21 16:00:00	1309	59
30-Jan-21 09:00:00	1309	69
04-Dec-21 17:00:00	1309	71
22-Feb-21 04:00:00	1309	29
02-Feb-21 10:00:00	1308	61
01-Feb-21 19:00:00	1308	35
18-Feb-21 17:00:00	1308	31
02-Mar-21 11:00:00	1308	52
18-Feb-21 18:00:00	1308	30
03-Mar-21 18:00:00	1308	48
19-Feb-21 12:00:00	1308	55
26-Feb-21 20:00:00	1307	46
12-Jan-21 11:00:00	1307	68
11-Dec-21 16:00:00	1307	66
16-Jan-21 18:00:00	1307	63
29-Mar-21 14:00:00	1307	63
20-Dec-21 07:00:00	1307	73
16-Feb-21 10:00:00	1307	43
28-Dec-21 17:00:00	1307	65
01-Feb-21 10:00:00	1306	47
05-Jan-21 16:00:00	1306	74
23-Feb-21 16:00:00	1306	39
18-Feb-21 19:00:00	1306	33
18-Feb-21 08:00:00	1306	69
25-Dec-21 08:00:00	1305	68
03-Mar-21 19:00:00	1305	48
10-Dec-21 21:00:00	1305	69
14-Dec-21 20:00:00	1305	77
20-Feb-21 11:00:00	1304	58
20-Feb-21 20:00:00	1304	56
12-Feb-21 11:00:00	1304	59

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Mar-21 10:00:00	1304	45
28-Jan-21 09:00:00	1304	56
25-Dec-21 16:00:00	1304	75
12-Feb-21 07:00:00	1303	49
26-Jan-21 09:00:00	1303	53
10-Feb-21 09:00:00	1303	43
12-Jan-21 17:00:00	1302	71
03-Jan-21 19:00:00	1302	49
20-Dec-21 14:00:00	1302	51
25-Dec-21 12:00:00	1302	69
15-Mar-21 08:00:00	1302	51
21-Dec-21 15:00:00	1302	75
28-Feb-21 09:00:00	1301	39
28-Feb-21 14:00:00	1301	48
14-Feb-21 08:00:00	1301	43
25-Jan-21 16:00:00	1301	56
10-Dec-21 07:00:00	1300	60
01-Feb-21 11:00:00	1300	46
02-Feb-21 18:00:00	1299	55
16-Feb-21 19:00:00	1299	48
24-Dec-21 22:00:00	1299	61
14-Feb-21 18:00:00	1299	36
15-Jan-21 17:00:00	1299	58
09-Feb-21 18:00:00	1298	72
22-Feb-21 21:00:00	1298	32
03-Mar-21 17:00:00	1298	48
02-Jan-21 17:00:00	1298	47
19-Feb-21 15:00:00	1298	56
26-Jan-21 17:00:00	1297	46
28-Feb-21 15:00:00	1297	49
09-Mar-21 10:00:00	1297	36
08-Mar-21 07:00:00	1297	43
09-Mar-21 07:00:00	1297	44
28-Jan-21 16:00:00	1297	57
28-Jan-21 19:00:00	1296	55
16-Feb-21 11:00:00	1296	45
18-Dec-21 17:00:00	1296	70
28-Jan-21 07:00:00	1296	52
16-Mar-21 17:00:00	1296	59
19-Dec-21 10:00:00	1296	74
23-Jan-21 11:00:00	1296	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Feb-21 03:00:00	1296	29
22-Jan-21 19:00:00	1296	61
29-Jan-21 19:00:00	1295	50
19-Dec-21 11:00:00	1295	75
25-Jan-21 18:00:00	1295	56
20-Dec-21 22:00:00	1295	68
27-Jan-21 18:00:00	1295	57
31-Dec-21 10:00:00	1294	61
04-Mar-21 07:00:00	1294	41
25-Dec-21 17:00:00	1294	76
10-Feb-21 21:00:00	1294	63
06-Dec-21 17:00:00	1294	64
11-Jan-21 19:00:00	1293	75
27-Mar-21 17:00:00	1293	68
29-Dec-21 17:00:00	1293	66
27-Feb-21 08:00:00	1293	43
03-Feb-21 10:00:00	1293	58
16-Jan-21 09:00:00	1293	66
27-Feb-21 07:00:00	1293	39
12-Feb-21 19:00:00	1292	65
09-Dec-21 19:00:00	1292	61
27-Dec-21 17:00:00	1292	61
10-Jan-21 17:00:00	1292	74
Average (MW)	**1351**	**59**

Table B-3: Top 5% of Island Interconnected System Load Hours (2022)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Feb-22 07:00:00	1614	66
16-Feb-22 08:00:00	1613	66
07-Feb-22 08:00:00	1600	86
07-Feb-22 07:00:00	1599	86
16-Feb-22 18:00:00	1583	76
16-Feb-22 17:00:00	1573	77
16-Feb-22 09:00:00	1571	66
12-Jan-22 08:00:00	1568	77
16-Feb-22 19:00:00	1568	76
28-Jan-22 08:00:00	1549	73
04-Jan-22 17:00:00	1545	75
07-Feb-22 09:00:00	1545	86

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Mar-22 08:00:00	1541	76
16-Feb-22 10:00:00	1541	71
29-Dec-22 17:00:00	1540	60
12-Jan-22 09:00:00	1539	77
06-Feb-22 17:00:00	1539	86
01-Mar-22 07:00:00	1538	78
06-Feb-22 18:00:00	1538	86
06-Feb-22 19:00:00	1537	86
28-Jan-22 07:00:00	1531	68
06-Feb-22 20:00:00	1523	86
04-Jan-22 16:00:00	1523	66
16-Feb-22 20:00:00	1519	76
12-Jan-22 17:00:00	1519	76
29-Dec-22 18:00:00	1516	60
16-Feb-22 11:00:00	1513	78
04-Jan-22 18:00:00	1512	83
16-Feb-22 06:00:00	1511	66
12-Jan-22 07:00:00	1510	79
15-Feb-22 18:00:00	1509	76
16-Feb-22 16:00:00	1509	79
15-Feb-22 17:00:00	1508	76
01-Mar-22 09:00:00	1506	71
02-Feb-22 08:00:00	1504	82
05-Jan-22 08:00:00	1504	76
15-Feb-22 19:00:00	1504	76
04-Jan-22 19:00:00	1502	83
29-Dec-22 16:00:00	1500	62
14-Feb-22 17:00:00	1497	78
01-Mar-22 19:00:00	1494	73
12-Jan-22 10:00:00	1494	77
02-Mar-22 07:00:00	1493	64
07-Feb-22 06:00:00	1492	85
16-Feb-22 21:00:00	1492	73
29-Dec-22 19:00:00	1492	58
07-Feb-22 10:00:00	1492	86
01-Mar-22 18:00:00	1489	73
16-Feb-22 12:00:00	1487	78
12-Jan-22 16:00:00	1486	76
15-Feb-22 20:00:00	1486	67
06-Feb-22 16:00:00	1483	86
01-Mar-22 20:00:00	1483	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Feb-22 09:00:00	1480	82
28-Jan-22 09:00:00	1480	73
06-Feb-22 21:00:00	1479	86
25-Feb-22 07:00:00	1478	74
04-Jan-22 20:00:00	1478	83
25-Feb-22 08:00:00	1477	75
17-Feb-22 08:00:00	1475	73
05-Jan-22 07:00:00	1475	63
14-Feb-22 16:00:00	1475	78
02-Feb-22 07:00:00	1472	82
17-Jan-22 08:00:00	1472	81
05-Jan-22 09:00:00	1470	74
29-Dec-22 11:00:00	1469	65
16-Jan-22 17:00:00	1469	82
12-Jan-22 11:00:00	1467	75
07-Feb-22 17:00:00	1466	86
29-Dec-22 10:00:00	1465	65
29-Dec-22 20:00:00	1463	54
14-Feb-22 18:00:00	1463	76
17-Feb-22 07:00:00	1459	67
02-Mar-22 08:00:00	1458	65
11-Jan-22 17:00:00	1457	69
01-Mar-22 10:00:00	1457	76
16-Feb-22 13:00:00	1456	75
17-Feb-22 09:00:00	1455	70
29-Dec-22 12:00:00	1455	65
07-Feb-22 11:00:00	1455	86
26-Feb-22 09:00:00	1453	78
01-Mar-22 21:00:00	1453	73
15-Feb-22 09:00:00	1452	71
05-Jan-22 10:00:00	1452	76
12-Jan-22 18:00:00	1450	74
07-Feb-22 18:00:00	1450	86
15-Feb-22 21:00:00	1450	64
16-Feb-22 15:00:00	1449	73
15-Feb-22 16:00:00	1448	76
16-Jan-22 16:00:00	1446	83
26-Feb-22 10:00:00	1446	78
26-Feb-22 19:00:00	1446	76
26-Feb-22 18:00:00	1445	80
14-Feb-22 08:00:00	1445	77

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Feb-22 08:00:00	1445	71
01-Mar-22 17:00:00	1444	77
29-Dec-22 09:00:00	1444	67
01-Mar-22 06:00:00	1443	77
14-Mar-22 09:00:00	1442	77
12-Jan-22 12:00:00	1442	72
04-Jan-22 21:00:00	1441	77
25-Feb-22 09:00:00	1440	75
16-Feb-22 14:00:00	1440	71
14-Mar-22 08:00:00	1439	77
14-Feb-22 19:00:00	1439	76
09-Jan-22 09:00:00	1439	66
16-Feb-22 22:00:00	1438	70
02-Feb-22 10:00:00	1438	81
04-Jan-22 15:00:00	1438	64
07-Feb-22 19:00:00	1438	85
16-Mar-22 07:00:00	1436	75
22-Jan-22 17:00:00	1435	83
02-Mar-22 06:00:00	1435	64
16-Jan-22 18:00:00	1434	82
17-Jan-22 07:00:00	1434	82
22-Jan-22 18:00:00	1433	83
09-Jan-22 10:00:00	1433	72
15-Feb-22 10:00:00	1432	69
11-Jan-22 16:00:00	1431	69
26-Feb-22 20:00:00	1429	76
29-Dec-22 13:00:00	1429	62
26-Feb-22 08:00:00	1429	79
06-Feb-22 15:00:00	1427	86
26-Feb-22 11:00:00	1427	78
11-Jan-22 08:00:00	1426	77
16-Mar-22 08:00:00	1425	74
05-Jan-22 11:00:00	1425	70
22-Jan-22 08:00:00	1424	83
28-Dec-22 17:00:00	1424	78
11-Jan-22 18:00:00	1424	76
11-Jan-22 19:00:00	1423	77
14-Mar-22 10:00:00	1423	73
04-Jan-22 12:00:00	1423	64
17-Feb-22 10:00:00	1422	70
01-Mar-22 11:00:00	1422	76

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
12-Jan-22 19:00:00	1422	73
29-Dec-22 21:00:00	1421	52
28-Jan-22 17:00:00	1421	73
14-Feb-22 15:00:00	1420	77
16-Jan-22 13:00:00	1420	83
14-Feb-22 13:00:00	1420	78
16-Jan-22 12:00:00	1419	83
25-Feb-22 18:00:00	1418	82
14-Feb-22 12:00:00	1418	78
22-Jan-22 09:00:00	1417	83
30-Dec-22 17:00:00	1417	45
11-Jan-22 10:00:00	1417	80
29-Dec-22 15:00:00	1416	62
24-Feb-22 19:00:00	1416	84
24-Feb-22 18:00:00	1416	84
04-Jan-22 14:00:00	1416	62
19-Jan-22 17:00:00	1416	80
28-Jan-22 06:00:00	1415	68
14-Feb-22 20:00:00	1415	76
22-Jan-22 19:00:00	1415	82
04-Jan-22 11:00:00	1414	60
25-Feb-22 17:00:00	1414	82
16-Jan-22 19:00:00	1413	83
05-Mar-22 18:00:00	1413	68
27-Jan-22 17:00:00	1413	75
21-Jan-22 17:00:00	1413	80
07-Feb-22 12:00:00	1413	85
04-Jan-22 13:00:00	1413	61
17-Jan-22 09:00:00	1413	80
11-Jan-22 09:00:00	1412	78
24-Nov-22 17:00:00	1412	19
06-Feb-22 22:00:00	1411	81
12-Jan-22 06:00:00	1411	78
09-Jan-22 17:00:00	1411	63
29-Dec-22 14:00:00	1411	62
07-Feb-22 20:00:00	1410	83
15-Feb-22 11:00:00	1410	69
16-Jan-22 15:00:00	1409	83
24-Feb-22 17:00:00	1408	84
12-Jan-22 15:00:00	1408	76
14-Mar-22 07:00:00	1407	75

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Feb-22 10:00:00	1407	73
16-Jan-22 14:00:00	1407	83
05-Mar-22 19:00:00	1407	68
11-Jan-22 11:00:00	1406	76
24-Nov-22 16:00:00	1406	14
29-Dec-22 08:00:00	1405	70
14-Mar-22 11:00:00	1405	72
12-Jan-22 13:00:00	1405	72
01-Feb-22 17:00:00	1405	86
11-Jan-22 20:00:00	1404	77
05-Jan-22 17:00:00	1404	65
16-Feb-22 05:00:00	1404	64
09-Jan-22 11:00:00	1404	72
06-Feb-22 14:00:00	1403	86
15-Feb-22 07:00:00	1403	75
14-Feb-22 14:00:00	1403	77
14-Feb-22 07:00:00	1403	75
28-Jan-22 16:00:00	1402	74
06-Feb-22 11:00:00	1401	86
06-Feb-22 10:00:00	1401	84
01-Feb-22 19:00:00	1401	86
25-Feb-22 19:00:00	1400	82
01-Mar-22 22:00:00	1400	73
27-Feb-22 18:00:00	1400	71
27-Jan-22 18:00:00	1400	74
28-Jan-22 10:00:00	1399	73
01-Feb-22 18:00:00	1399	86
07-Feb-22 16:00:00	1399	86
17-Feb-22 11:00:00	1398	69
16-Jan-22 11:00:00	1398	83
27-Feb-22 19:00:00	1398	71
15-Feb-22 12:00:00	1398	68
02-Mar-22 09:00:00	1398	68
12-Jan-22 20:00:00	1397	73
30-Dec-22 08:00:00	1397	42
07-Feb-22 05:00:00	1397	83
30-Dec-22 09:00:00	1397	40
06-Feb-22 13:00:00	1396	86
23-Feb-22 08:00:00	1396	77
04-Jan-22 10:00:00	1396	58
26-Feb-22 21:00:00	1396	76

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
14-Mar-22 20:00:00	1396	81
28-Dec-22 18:00:00	1395	77
06-Feb-22 12:00:00	1394	86
04-Mar-22 19:00:00	1394	66
24-Feb-22 20:00:00	1393	84
22-Jan-22 20:00:00	1392	81
21-Feb-22 08:00:00	1392	82
15-Feb-22 15:00:00	1392	74
19-Jan-22 18:00:00	1392	82
26-Feb-22 17:00:00	1391	80
14-Feb-22 11:00:00	1391	78
05-Jan-22 06:00:00	1391	64
01-Mar-22 12:00:00	1390	73
22-Jan-22 10:00:00	1390	83
04-Jan-22 22:00:00	1390	75
14-Feb-22 09:00:00	1389	77
27-Jan-22 19:00:00	1389	68
28-Dec-22 16:00:00	1388	77
21-Jan-22 16:00:00	1388	81
16-Jan-22 20:00:00	1388	83
05-Mar-22 20:00:00	1388	68
27-Feb-22 08:00:00	1388	77
26-Feb-22 12:00:00	1387	78
04-Mar-22 18:00:00	1386	66
22-Jan-22 07:00:00	1384	84
01-Feb-22 20:00:00	1384	86
09-Mar-22 07:00:00	1384	63
05-Jan-22 16:00:00	1384	57
15-Feb-22 22:00:00	1384	64
30-Dec-22 16:00:00	1384	45
25-Feb-22 06:00:00	1383	75
09-Jan-22 08:00:00	1383	58
21-Feb-22 09:00:00	1383	83
26-Feb-22 07:00:00	1383	79
06-Feb-22 09:00:00	1383	83
08-Jan-22 17:00:00	1383	58
17-Mar-22 08:00:00	1383	75
30-Dec-22 18:00:00	1383	45
19-Jan-22 19:00:00	1383	82
09-Jan-22 16:00:00	1382	62
28-Jan-22 18:00:00	1381	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
23-Jan-22 17:00:00	1381	82
04-Mar-22 20:00:00	1380	66
04-Jan-22 09:00:00	1380	56
27-Feb-22 17:00:00	1380	72
16-Jan-22 10:00:00	1380	83
12-Jan-22 14:00:00	1380	76
24-Nov-22 18:00:00	1379	27
17-Feb-22 12:00:00	1379	68
21-Jan-22 18:00:00	1378	80
01-Mar-22 16:00:00	1378	78
23-Feb-22 09:00:00	1378	76
14-Mar-22 12:00:00	1378	73
15-Mar-22 08:00:00	1377	77
14-Mar-22 19:00:00	1376	81
25-Feb-22 11:00:00	1376	76
23-Jan-22 09:00:00	1376	83
11-Jan-22 12:00:00	1376	73
14-Feb-22 10:00:00	1376	77
30-Dec-22 07:00:00	1376	45
27-Jan-22 20:00:00	1375	68
17-Mar-22 07:00:00	1375	75
17-Feb-22 06:00:00	1375	63
28-Dec-22 19:00:00	1375	77
28-Feb-22 08:00:00	1374	81
19-Jan-22 16:00:00	1374	77
30-Dec-22 10:00:00	1374	40
13-Jan-22 08:00:00	1374	70
25-Feb-22 20:00:00	1373	82
11-Jan-22 21:00:00	1373	76
27-Feb-22 09:00:00	1373	77
23-Feb-22 10:00:00	1373	76
15-Mar-22 07:00:00	1372	77
27-Feb-22 07:00:00	1372	76
02-Feb-22 11:00:00	1372	79
19-Jan-22 20:00:00	1372	82
23-Jan-22 11:00:00	1372	82
24-Feb-22 16:00:00	1372	81
02-Feb-22 06:00:00	1371	82
14-Mar-22 21:00:00	1371	80
13-Jan-22 09:00:00	1371	58
09-Jan-22 18:00:00	1371	59

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Feb-22 14:00:00	1370	68
30-Nov-22 08:00:00	1370	55
07-Feb-22 13:00:00	1370	86
27-Feb-22 20:00:00	1370	71
10-Mar-22 08:00:00	1369	58
16-Feb-22 23:00:00	1369	65
09-Mar-22 08:00:00	1368	62
11-Jan-22 15:00:00	1368	69
14-Feb-22 21:00:00	1368	77
05-Mar-22 17:00:00	1368	68
15-Feb-22 13:00:00	1367	69
21-Feb-22 07:00:00	1367	82
04-Mar-22 08:00:00	1367	69
24-Nov-22 19:00:00	1367	32
27-Feb-22 11:00:00	1366	76
21-Feb-22 10:00:00	1365	84
11-Jan-22 07:00:00	1364	73
21-Jan-22 19:00:00	1364	80
14-Mar-22 17:00:00	1364	81
27-Feb-22 10:00:00	1364	77
12-Jan-22 21:00:00	1364	71
23-Jan-22 12:00:00	1364	82
23-Feb-22 07:00:00	1362	77
25-Feb-22 16:00:00	1362	81
16-Mar-22 09:00:00	1362	73
07-Feb-22 21:00:00	1362	83
02-Mar-22 10:00:00	1361	69
08-Jan-22 18:00:00	1361	57
05-Jan-22 12:00:00	1361	69
17-Jan-22 10:00:00	1360	79
22-Jan-22 11:00:00	1359	83
09-Jan-22 12:00:00	1359	71
20-Jan-22 08:00:00	1359	81
24-Feb-22 21:00:00	1359	84
30-Dec-22 19:00:00	1359	45
05-Mar-22 21:00:00	1358	67
30-Nov-22 17:00:00	1358	34
29-Dec-22 07:00:00	1358	75
03-Jan-22 17:00:00	1358	73
30-Nov-22 18:00:00	1358	34
28-Feb-22 07:00:00	1358	76

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Jan-22 09:00:00	1358	81
28-Dec-22 20:00:00	1357	77
23-Dec-22 17:00:00	1357	83
29-Dec-22 22:00:00	1357	45
27-Jan-22 16:00:00	1357	78
10-Mar-22 07:00:00	1356	58
23-Feb-22 11:00:00	1356	73
02-Mar-22 05:00:00	1356	64
04-Mar-22 21:00:00	1356	66
08-Feb-22 08:00:00	1356	82
28-Jan-22 15:00:00	1356	74
23-Jan-22 10:00:00	1356	82
16-Feb-22 04:00:00	1356	65
30-Nov-22 19:00:00	1355	36
23-Jan-22 18:00:00	1355	82
23-Jan-22 16:00:00	1355	82
22-Jan-22 21:00:00	1354	81
07-Feb-22 14:00:00	1354	86
04-Feb-22 17:00:00	1354	86
26-Feb-22 22:00:00	1354	76
17-Mar-22 09:00:00	1353	75
08-Jan-22 19:00:00	1353	56
01-Feb-22 09:00:00	1352	86
27-Feb-22 16:00:00	1352	73
11-Jan-22 13:00:00	1352	70
13-Mar-22 20:00:00	1352	72
28-Jan-22 11:00:00	1352	74
08-Feb-22 07:00:00	1352	82
05-Jan-22 18:00:00	1351	63
04-Mar-22 17:00:00	1351	66
27-Jan-22 08:00:00	1351	84
22-Jan-22 16:00:00	1351	83
04-Jan-22 08:00:00	1350	54
27-Feb-22 12:00:00	1350	77
13-Jan-22 10:00:00	1350	61
14-Mar-22 18:00:00	1350	81
07-Feb-22 04:00:00	1350	84
24-Jan-22 17:00:00	1349	72
30-Dec-22 11:00:00	1349	42
24-Nov-22 08:00:00	1349	19
01-Mar-22 05:00:00	1349	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Mar-22 13:00:00	1349	64
01-Feb-22 21:00:00	1349	86
30-Nov-22 07:00:00	1348	56
02-Feb-22 18:00:00	1348	84
30-Dec-22 20:00:00	1348	40
06-Feb-22 23:00:00	1348	81
17-Jan-22 06:00:00	1348	82
28-Jan-22 13:00:00	1347	78
02-Feb-22 19:00:00	1347	84
24-Nov-22 15:00:00	1347	15
16-Jan-22 21:00:00	1347	83
24-Nov-22 20:00:00	1347	27
07-Feb-22 15:00:00	1347	86
12-Dec-22 17:00:00	1346	19
24-Nov-22 09:00:00	1346	17
20-Feb-22 19:00:00	1346	82
20-Jan-22 10:00:00	1346	80
28-Jan-22 19:00:00	1346	73
27-Jan-22 21:00:00	1345	68
14-Mar-22 16:00:00	1345	81
20-Feb-22 18:00:00	1345	82
02-Feb-22 17:00:00	1345	84
21-Feb-22 11:00:00	1345	84
23-Dec-22 09:00:00	1345	82
13-Jan-22 17:00:00	1344	68
01-Feb-22 08:00:00	1344	86
21-Jan-22 20:00:00	1344	80
11-Dec-22 17:00:00	1344	32
09-Jan-22 19:00:00	1343	56
25-Feb-22 12:00:00	1343	76
28-Jan-22 14:00:00	1343	75
24-Dec-22 16:00:00	1342	78
30-Nov-22 20:00:00	1342	36
07-Mar-22 17:00:00	1342	53
16-Jan-22 09:00:00	1342	81
08-Feb-22 17:00:00	1341	80
01-Mar-22 23:00:00	1341	71
07-Mar-22 08:00:00	1341	64
06-Mar-22 19:00:00	1341	68
13-Mar-22 21:00:00	1341	72
28-Jan-22 12:00:00	1340	78

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
13-Jan-22 11:00:00	1340	57
24-Jan-22 09:00:00	1339	79
03-Feb-22 08:00:00	1339	82
06-Mar-22 18:00:00	1339	68
30-Nov-22 09:00:00	1339	50
14-Mar-22 13:00:00	1338	74
13-Jan-22 16:00:00	1338	70
19-Jan-22 21:00:00	1338	82
12-Dec-22 16:00:00	1337	24
24-Dec-22 14:00:00	1337	75
04-Feb-22 16:00:00	1337	88
21-Jan-22 15:00:00	1336	81
22-Dec-22 17:00:00	1336	81
22-Feb-22 20:00:00	1336	80
24-Dec-22 11:00:00	1336	75
24-Jan-22 08:00:00	1336	79
Average (MW)	**1407**	**73**

Table B-4: Top 5% of Island Interconnected System Load Hours (2023)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Feb-23 07:00:00	1770	77
24-Feb-23 08:00:00	1761	64
24-Feb-23 09:00:00	1744	63
28-Feb-23 07:00:00	1733	77
27-Feb-23 08:00:00	1732	78
24-Feb-23 07:00:00	1726	64
04-Feb-23 12:00:00	1714	68
04-Feb-23 11:00:00	1710	69
04-Feb-23 17:00:00	1702	77
04-Feb-23 16:00:00	1702	77
24-Feb-23 10:00:00	1697	66
28-Feb-23 08:00:00	1691	73
26-Feb-23 08:00:00	1690	76
04-Feb-23 13:00:00	1690	68
04-Feb-23 15:00:00	1688	77
26-Feb-23 19:00:00	1686	58
26-Feb-23 09:00:00	1686	74
04-Feb-23 10:00:00	1683	73
04-Feb-23 14:00:00	1682	68

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-23 20:00:00	1679	61
25-Feb-23 18:00:00	1677	73
26-Feb-23 18:00:00	1676	57
01-Mar-23 08:00:00	1676	66
01-Mar-23 07:00:00	1675	69
25-Feb-23 09:00:00	1674	66
25-Feb-23 19:00:00	1667	73
27-Feb-23 06:00:00	1663	75
04-Feb-23 18:00:00	1663	75
25-Feb-23 08:00:00	1660	66
26-Feb-23 07:00:00	1658	77
27-Feb-23 09:00:00	1658	78
04-Feb-23 19:00:00	1656	71
25-Feb-23 17:00:00	1650	72
25-Feb-23 20:00:00	1650	72
26-Feb-23 10:00:00	1649	73
25-Feb-23 10:00:00	1649	66
28-Feb-23 06:00:00	1647	77
26-Feb-23 21:00:00	1645	64
04-Feb-23 09:00:00	1643	73
04-Feb-23 20:00:00	1632	65
24-Feb-23 18:00:00	1631	71
26-Feb-23 17:00:00	1631	57
24-Feb-23 11:00:00	1631	73
24-Feb-23 19:00:00	1624	71
25-Feb-23 11:00:00	1624	66
25-Feb-23 21:00:00	1621	71
24-Feb-23 20:00:00	1617	65
24-Feb-23 06:00:00	1614	64
01-Mar-23 09:00:00	1614	69
25-Feb-23 07:00:00	1611	68
13-Jan-23 08:00:00	1611	63
26-Feb-23 06:00:00	1608	78
26-Feb-23 11:00:00	1606	72
28-Feb-23 09:00:00	1604	73
25-Feb-23 16:00:00	1602	70
27-Feb-23 19:00:00	1601	70
02-Mar-23 07:00:00	1601	66
13-Jan-23 07:00:00	1598	64
27-Feb-23 20:00:00	1597	70
25-Feb-23 12:00:00	1597	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Feb-23 10:00:00	1597	77
24-Feb-23 21:00:00	1596	65
27-Feb-23 18:00:00	1589	71
28-Feb-23 18:00:00	1588	67
28-Feb-23 19:00:00	1587	62
04-Feb-23 21:00:00	1586	62
02-Mar-23 08:00:00	1584	64
26-Feb-23 22:00:00	1583	64
10-Feb-23 08:00:00	1582	64
24-Feb-23 12:00:00	1579	71
04-Feb-23 08:00:00	1577	74
28-Feb-23 20:00:00	1577	61
25-Feb-23 22:00:00	1575	71
26-Feb-23 16:00:00	1574	57
13-Jan-23 09:00:00	1573	66
27-Feb-23 21:00:00	1571	61
27-Feb-23 17:00:00	1571	72
01-Mar-23 06:00:00	1568	67
24-Feb-23 17:00:00	1564	73
26-Feb-23 05:00:00	1564	77
26-Feb-23 12:00:00	1560	64
02-Feb-23 07:00:00	1558	80
28-Feb-23 17:00:00	1558	62
27-Feb-23 05:00:00	1557	58
25-Feb-23 06:00:00	1557	64
10-Feb-23 07:00:00	1556	61
27-Feb-23 11:00:00	1556	71
25-Feb-23 15:00:00	1554	72
25-Feb-23 13:00:00	1554	72
24-Feb-23 22:00:00	1551	65
28-Feb-23 21:00:00	1550	61
01-Mar-23 10:00:00	1549	68
28-Feb-23 05:00:00	1547	72
13-Jan-23 10:00:00	1546	65
02-Feb-23 08:00:00	1545	80
25-Feb-23 14:00:00	1545	71
10-Feb-23 09:00:00	1540	58
26-Feb-23 04:00:00	1537	77
25-Feb-23 23:00:00	1535	74
23-Feb-23 21:00:00	1532	73
28-Feb-23 10:00:00	1530	71

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
23-Feb-23 20:00:00	1530	70
26-Feb-23 13:00:00	1528	57
03-Mar-23 07:00:00	1527	64
26-Feb-23 23:00:00	1527	64
23-Feb-23 19:00:00	1526	72
26-Feb-23 15:00:00	1523	57
02-Feb-23 06:00:00	1523	79
12-Jan-23 17:00:00	1523	60
24-Feb-23 13:00:00	1523	69
01-Mar-23 20:00:00	1521	51
12-Jan-23 08:00:00	1519	64
26-Feb-23 03:00:00	1519	77
13-Jan-23 11:00:00	1519	65
02-Feb-23 18:00:00	1517	77
27-Feb-23 04:00:00	1516	57
23-Feb-23 18:00:00	1516	76
01-Feb-23 19:00:00	1515	77
24-Feb-23 05:00:00	1514	65
04-Feb-23 22:00:00	1513	61
02-Mar-23 09:00:00	1512	63
10-Feb-23 10:00:00	1511	58
27-Feb-23 12:00:00	1511	64
02-Feb-23 19:00:00	1510	77
01-Mar-23 19:00:00	1510	51
27-Feb-23 22:00:00	1510	61
26-Feb-23 00:00:00	1510	76
02-Feb-23 17:00:00	1510	77
26-Feb-23 14:00:00	1510	57
01-Feb-23 18:00:00	1507	77
26-Feb-23 02:00:00	1507	76
27-Feb-23 03:00:00	1506	55
05-Feb-23 17:00:00	1506	65
25-Feb-23 05:00:00	1505	64
27-Feb-23 16:00:00	1505	65
24-Feb-23 16:00:00	1505	71
01-Feb-23 20:00:00	1504	79
02-Mar-23 06:00:00	1504	54
04-Feb-23 07:00:00	1502	77
26-Feb-23 01:00:00	1501	76
27-Feb-23 00:00:00	1500	61
28-Feb-23 16:00:00	1500	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
12-Jan-23 09:00:00	1499	62
13-Jan-23 06:00:00	1496	61
27-Feb-23 01:00:00	1496	59
23-Feb-23 22:00:00	1496	72
27-Feb-23 02:00:00	1496	56
05-Jan-23 17:00:00	1494	51
01-Feb-23 17:00:00	1493	77
28-Feb-23 04:00:00	1493	54
13-Jan-23 12:00:00	1492	61
24-Feb-23 14:00:00	1492	70
28-Feb-23 22:00:00	1491	61
28-Feb-23 11:00:00	1490	68
02-Feb-23 20:00:00	1490	77
05-Feb-23 18:00:00	1489	64
01-Mar-23 18:00:00	1489	50
12-Jan-23 18:00:00	1489	59
24-Feb-23 23:00:00	1489	65
13-Jan-23 16:00:00	1487	61
13-Jan-23 17:00:00	1487	56
02-Feb-23 09:00:00	1485	83
01-Feb-23 21:00:00	1484	80
12-Jan-23 19:00:00	1482	60
01-Feb-23 08:00:00	1482	78
01-Mar-23 11:00:00	1480	64
12-Jan-23 07:00:00	1480	62
01-Mar-23 21:00:00	1477	50
11-Jan-23 17:00:00	1476	69
23-Feb-23 08:00:00	1476	81
23-Feb-23 07:00:00	1475	79
07-Feb-23 08:00:00	1475	76
10-Jan-23 17:00:00	1473	39
01-Mar-23 05:00:00	1472	56
24-Feb-23 15:00:00	1472	70
25-Feb-23 04:00:00	1471	64
03-Mar-23 08:00:00	1470	59
24-Feb-23 04:00:00	1470	65
05-Jan-23 18:00:00	1470	51
12-Jan-23 20:00:00	1470	60
05-Feb-23 19:00:00	1469	63
12-Jan-23 16:00:00	1469	59
12-Feb-23 08:00:00	1467	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Jan-23 19:00:00	1466	51
28-Feb-23 03:00:00	1465	49
13-Jan-23 13:00:00	1464	61
12-Feb-23 09:00:00	1463	61
27-Feb-23 13:00:00	1463	56
05-Feb-23 08:00:00	1463	74
07-Feb-23 19:00:00	1463	58
03-Feb-23 08:00:00	1463	73
28-Feb-23 12:00:00	1461	65
05-Feb-23 09:00:00	1460	74
01-Feb-23 09:00:00	1460	78
10-Jan-23 16:00:00	1459	39
12-Jan-23 10:00:00	1459	64
05-Feb-23 16:00:00	1459	70
07-Feb-23 18:00:00	1459	59
14-Feb-23 10:00:00	1456	68
03-Mar-23 06:00:00	1456	50
07-Feb-23 09:00:00	1455	79
06-Jan-23 09:00:00	1454	31
06-Jan-23 08:00:00	1453	32
14-Feb-23 11:00:00	1453	66
10-Feb-23 17:00:00	1453	66
13-Jan-23 15:00:00	1452	62
27-Feb-23 23:00:00	1452	60
09-Feb-23 19:00:00	1452	68
23-Feb-23 17:00:00	1451	78
10-Jan-23 10:00:00	1451	48
25-Feb-23 03:00:00	1451	64
11-Jan-23 16:00:00	1451	70
10-Feb-23 06:00:00	1450	55
10-Feb-23 11:00:00	1450	58
03-Feb-23 16:00:00	1450	70
25-Feb-23 00:00:00	1450	66
14-Feb-23 17:00:00	1449	57
02-Mar-23 19:00:00	1449	47
07-Feb-23 17:00:00	1449	59
14-Feb-23 09:00:00	1448	68
27-Feb-23 15:00:00	1447	54
14-Feb-23 12:00:00	1447	66
12-Feb-23 17:00:00	1446	67
03-Feb-23 09:00:00	1446	75

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Mar-23 10:00:00	1446	63
20-Feb-23 07:00:00	1446	70
12-Feb-23 18:00:00	1446	67
04-Feb-23 23:00:00	1445	61
02-Mar-23 18:00:00	1445	47
10-Jan-23 09:00:00	1444	52
24-Feb-23 03:00:00	1444	66
09-Feb-23 20:00:00	1444	72
09-Feb-23 18:00:00	1444	65
13-Jan-23 14:00:00	1444	60
23-Feb-23 23:00:00	1444	72
08-Feb-23 08:00:00	1444	66
03-Feb-23 17:00:00	1443	69
02-Feb-23 21:00:00	1443	77
03-Feb-23 07:00:00	1443	72
05-Feb-23 10:00:00	1442	74
28-Feb-23 15:00:00	1442	61
10-Jan-23 12:00:00	1441	41
11-Jan-23 18:00:00	1441	69
12-Jan-23 11:00:00	1441	66
01-Feb-23 07:00:00	1441	78
05-Feb-23 20:00:00	1441	62
28-Feb-23 02:00:00	1440	46
07-Feb-23 07:00:00	1440	59
28-Feb-23 23:00:00	1440	57
25-Feb-23 02:00:00	1439	65
05-Jan-23 20:00:00	1439	51
07-Feb-23 20:00:00	1439	58
01-Mar-23 17:00:00	1438	60
25-Feb-23 01:00:00	1438	67
27-Feb-23 14:00:00	1438	57
14-Feb-23 16:00:00	1437	58
23-Feb-23 09:00:00	1437	80
18-Feb-23 18:00:00	1437	58
10-Jan-23 11:00:00	1437	44
12-Feb-23 10:00:00	1436	64
05-Feb-23 11:00:00	1436	74
10-Feb-23 18:00:00	1436	66
02-Mar-23 20:00:00	1436	46
12-Jan-23 21:00:00	1435	60
14-Dec-23 17:00:00	1435	66

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Feb-23 16:00:00	1435	70
09-Jan-23 08:00:00	1435	67
12-Feb-23 07:00:00	1435	58
01-Mar-23 04:00:00	1434	55
09-Jan-23 17:00:00	1434	54
13-Feb-23 07:00:00	1434	65
06-Jan-23 07:00:00	1433	34
09-Feb-23 17:00:00	1432	63
08-Feb-23 07:00:00	1431	69
02-Feb-23 05:00:00	1431	79
06-Jan-23 10:00:00	1431	32
10-Jan-23 18:00:00	1429	39
01-Feb-23 22:00:00	1429	80
12-Feb-23 19:00:00	1428	61
03-Feb-23 15:00:00	1427	71
13-Jan-23 18:00:00	1427	56
28-Feb-23 13:00:00	1427	58
01-Mar-23 03:00:00	1425	55
18-Feb-23 19:00:00	1425	56
20-Feb-23 08:00:00	1425	70
11-Jan-23 19:00:00	1424	68
02-Feb-23 16:00:00	1424	75
07-Feb-23 10:00:00	1424	72
10-Jan-23 08:00:00	1424	57
14-Feb-23 08:00:00	1423	67
09-Jan-23 16:00:00	1423	55
06-Jan-23 17:00:00	1423	38
11-Jan-23 08:00:00	1423	66
14-Feb-23 18:00:00	1422	58
05-Jan-23 16:00:00	1422	51
02-Feb-23 10:00:00	1422	79
05-Feb-23 12:00:00	1422	74
09-Jan-23 09:00:00	1422	68
24-Feb-23 02:00:00	1422	71
28-Feb-23 01:00:00	1422	45
28-Feb-23 00:00:00	1421	47
18-Feb-23 17:00:00	1421	63
03-Feb-23 10:00:00	1420	75
04-Feb-23 06:00:00	1419	76
09-Feb-23 21:00:00	1418	68
05-Feb-23 07:00:00	1418	75

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Feb-23 00:00:00	1418	72
03-Feb-23 11:00:00	1418	75
01-Mar-23 12:00:00	1417	64
01-Feb-23 10:00:00	1417	80
19-Feb-23 08:00:00	1417	52
02-Mar-23 05:00:00	1416	52
24-Feb-23 01:00:00	1416	70
08-Feb-23 09:00:00	1416	64
05-Feb-23 13:00:00	1415	74
11-Jan-23 09:00:00	1414	67
03-Feb-23 12:00:00	1413	76
28-Feb-23 14:00:00	1413	61
10-Feb-23 19:00:00	1413	65
10-Jan-23 13:00:00	1413	42
09-Jan-23 07:00:00	1412	61
14-Dec-23 18:00:00	1412	65
19-Feb-23 09:00:00	1412	51
01-Mar-23 02:00:00	1412	57
15-Dec-23 08:00:00	1411	74
13-Feb-23 08:00:00	1411	70
11-Jan-23 20:00:00	1410	69
03-Feb-23 14:00:00	1409	67
01-Mar-23 22:00:00	1409	50
05-Feb-23 14:00:00	1409	74
05-Jan-23 08:00:00	1409	57
06-Jan-23 11:00:00	1409	33
03-Feb-23 13:00:00	1406	75
01-Mar-23 00:00:00	1405	57
12-Feb-23 11:00:00	1405	66
14-Feb-23 19:00:00	1405	57
01-Feb-23 16:00:00	1403	78
11-Jan-23 10:00:00	1402	65
14-Feb-23 15:00:00	1402	58
15-Feb-23 08:00:00	1402	61
05-Feb-23 15:00:00	1402	74
14-Feb-23 13:00:00	1402	65
02-Mar-23 21:00:00	1401	46
10-Jan-23 19:00:00	1401	39
07-Feb-23 21:00:00	1401	58
12-Jan-23 12:00:00	1401	67
10-Feb-23 20:00:00	1399	64

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
12-Feb-23 06:00:00	1399	54
01-Mar-23 01:00:00	1399	58
02-Mar-23 11:00:00	1399	64
18-Feb-23 20:00:00	1398	56
02-Mar-23 17:00:00	1397	48
12-Feb-23 20:00:00	1397	53
10-Jan-23 15:00:00	1396	41
06-Jan-23 16:00:00	1396	38
29-Dec-23 17:00:00	1396	49
15-Feb-23 09:00:00	1396	59
24-Mar-23 17:00:00	1395	48
13-Jan-23 05:00:00	1395	55
03-Mar-23 09:00:00	1394	54
15-Dec-23 07:00:00	1394	67
23-Feb-23 10:00:00	1394	80
19-Feb-23 19:00:00	1393	48
11-Jan-23 07:00:00	1393	61
11-Feb-23 18:00:00	1393	61
03-Feb-23 18:00:00	1393	70
20-Mar-23 20:00:00	1393	52
12-Feb-23 16:00:00	1392	67
24-Mar-23 08:00:00	1392	63
11-Jan-23 11:00:00	1392	67
14-Dec-23 19:00:00	1392	64
16-Dec-23 17:00:00	1392	24
12-Jan-23 22:00:00	1392	57
09-Jan-23 10:00:00	1390	67
02-Feb-23 04:00:00	1390	79
14-Dec-23 16:00:00	1389	66
29-Dec-23 18:00:00	1389	48
05-Feb-23 21:00:00	1389	62
06-Jan-23 18:00:00	1389	42
05-Jan-23 09:00:00	1389	56
23-Feb-23 06:00:00	1389	71
14-Dec-23 20:00:00	1388	63
05-Jan-23 21:00:00	1388	50
22-Feb-23 18:00:00	1388	82
07-Feb-23 11:00:00	1386	63
19-Feb-23 18:00:00	1386	48
10-Feb-23 15:00:00	1386	72
10-Jan-23 14:00:00	1386	41

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Feb-23 17:00:00	1385	63
05-Feb-23 00:00:00	1384	61
09-Jan-23 18:00:00	1384	53
29-Dec-23 16:00:00	1383	53
24-Mar-23 16:00:00	1383	48
11-Jan-23 15:00:00	1383	75
06-Jan-23 12:00:00	1383	36
11-Feb-23 19:00:00	1383	58
13-Jan-23 19:00:00	1382	56
19-Feb-23 20:00:00	1382	48
12-Jan-23 15:00:00	1381	65
19-Feb-23 10:00:00	1380	51
04-Mar-23 07:00:00	1380	43
01-Feb-23 11:00:00	1380	81
04-Mar-23 08:00:00	1380	43
24-Mar-23 18:00:00	1380	47
07-Feb-23 16:00:00	1380	60
16-Feb-23 08:00:00	1379	68
22-Feb-23 17:00:00	1379	82
16-Feb-23 07:00:00	1379	71
05-Mar-23 09:00:00	1378	43
11-Jan-23 21:00:00	1378	71
14-Feb-23 07:00:00	1378	67
24-Mar-23 19:00:00	1378	48
07-Dec-23 17:00:00	1377	49
20-Mar-23 19:00:00	1377	52
30-Jan-23 09:00:00	1376	76
20-Mar-23 21:00:00	1376	53
10-Feb-23 12:00:00	1375	57
02-Mar-23 12:00:00	1375	62
22-Feb-23 19:00:00	1375	82
14-Feb-23 14:00:00	1375	62
01-Mar-23 16:00:00	1375	62
29-Dec-23 19:00:00	1375	48
09-Jan-23 11:00:00	1375	66
05-Feb-23 06:00:00	1375	75
23-Feb-23 16:00:00	1374	78
12-Jan-23 06:00:00	1374	63
02-Feb-23 03:00:00	1374	79
20-Feb-23 09:00:00	1373	70
12-Feb-23 12:00:00	1373	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Mar-23 08:00:00	1373	48
23-Feb-23 11:00:00	1373	78
01-Feb-23 23:00:00	1373	80
21-Mar-23 07:00:00	1372	47
04-Mar-23 09:00:00	1372	42
06-Jan-23 19:00:00	1372	42
26-Jan-23 08:00:00	1372	84
05-Mar-23 08:00:00	1372	43
08-Dec-23 08:00:00	1372	47
Average (MW)	**1478**	**64**

Table B-5: Top 5% of Island Interconnected System Load Hours (2024)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Jan-24 07:00:00	1728	53
24-Jan-24 08:00:00	1707	54
24-Jan-24 09:00:00	1666	56
06-Jan-24 17:00:00	1666	47
24-Jan-24 06:00:00	1659	45
06-Jan-24 18:00:00	1658	47
06-Jan-24 19:00:00	1644	47
24-Jan-24 17:00:00	1635	59
06-Jan-24 20:00:00	1627	48
21-Feb-24 07:00:00	1625	42
24-Jan-24 10:00:00	1615	56
06-Jan-24 16:00:00	1613	48
24-Jan-24 18:00:00	1612	63
06-Jan-24 21:00:00	1598	50
30-Jan-24 08:00:00	1598	50
07-Jan-24 09:00:00	1596	41
24-Jan-24 19:00:00	1593	63
22-Feb-24 07:00:00	1593	46
22-Feb-24 08:00:00	1593	46
07-Jan-24 08:00:00	1586	41
30-Jan-24 09:00:00	1584	51
24-Jan-24 20:00:00	1582	61
24-Jan-24 16:00:00	1581	56
21-Feb-24 08:00:00	1576	42
26-Jan-24 08:00:00	1575	52
31-Jan-24 08:00:00	1572	60

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Jan-24 11:00:00	1567	56
07-Jan-24 10:00:00	1558	41
30-Jan-24 10:00:00	1554	50
07-Jan-24 17:00:00	1554	32
30-Jan-24 07:00:00	1552	50
24-Jan-24 05:00:00	1552	48
31-Jan-24 07:00:00	1549	59
24-Jan-24 21:00:00	1548	57
06-Jan-24 22:00:00	1547	44
26-Jan-24 07:00:00	1544	52
07-Jan-24 07:00:00	1537	41
19-Jan-24 08:00:00	1534	64
30-Jan-24 11:00:00	1533	51
10-Jan-24 08:00:00	1531	47
26-Jan-24 09:00:00	1529	51
21-Feb-24 06:00:00	1527	41
07-Jan-24 18:00:00	1527	30
30-Jan-24 17:00:00	1527	46
07-Jan-24 11:00:00	1523	40
19-Jan-24 17:00:00	1522	71
19-Jan-24 16:00:00	1521	56
24-Jan-24 12:00:00	1520	52
31-Jan-24 09:00:00	1520	59
07-Jan-24 16:00:00	1516	32
18-Jan-24 17:00:00	1515	59
20-Feb-24 19:00:00	1515	33
06-Jan-24 15:00:00	1512	48
10-Jan-24 07:00:00	1512	45
22-Feb-24 09:00:00	1511	50
20-Feb-24 18:00:00	1509	33
07-Jan-24 19:00:00	1509	29
19-Jan-24 09:00:00	1507	63
24-Jan-24 15:00:00	1506	43
21-Feb-24 09:00:00	1506	39
19-Jan-24 07:00:00	1505	64
20-Feb-24 20:00:00	1503	34
30-Jan-24 18:00:00	1503	44
18-Jan-24 18:00:00	1503	59
18-Jan-24 19:00:00	1498	59
07-Jan-24 06:00:00	1496	43
07-Jan-24 12:00:00	1495	36

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Jan-24 04:00:00	1495	50
06-Jan-24 23:00:00	1494	44
22-Feb-24 06:00:00	1491	45
08-Jan-24 08:00:00	1491	38
06-Jan-24 13:00:00	1490	48
10-Jan-24 09:00:00	1490	51
26-Feb-24 08:00:00	1488	58
25-Jan-24 08:00:00	1488	48
06-Jan-24 12:00:00	1488	45
30-Jan-24 19:00:00	1487	44
26-Feb-24 07:00:00	1486	58
20-Feb-24 07:00:00	1485	41
24-Jan-24 13:00:00	1485	45
30-Jan-24 16:00:00	1485	46
06-Jan-24 14:00:00	1485	48
07-Jan-24 20:00:00	1483	29
21-Feb-24 19:00:00	1483	32
29-Jan-24 17:00:00	1482	49
24-Jan-24 14:00:00	1480	44
30-Jan-24 12:00:00	1480	51
30-Jan-24 20:00:00	1479	43
19-Jan-24 15:00:00	1478	48
08-Jan-24 09:00:00	1477	37
21-Feb-24 20:00:00	1477	32
06-Jan-24 11:00:00	1476	42
24-Jan-24 22:00:00	1475	52
19-Jan-24 18:00:00	1475	69
18-Jan-24 16:00:00	1475	59
23-Jan-24 21:00:00	1474	49
20-Feb-24 21:00:00	1473	34
19-Jan-24 13:00:00	1472	55
20-Feb-24 17:00:00	1472	34
08-Jan-24 07:00:00	1472	39
21-Feb-24 18:00:00	1472	32
25-Jan-24 07:00:00	1471	48
07-Jan-24 13:00:00	1471	33
25-Jan-24 09:00:00	1471	39
19-Jan-24 14:00:00	1471	49
19-Jan-24 10:00:00	1471	61
01-Feb-24 07:00:00	1470	47
18-Jan-24 20:00:00	1470	58

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Mar-24 19:00:00	1470	74
19-Feb-24 07:00:00	1469	42
01-Mar-24 18:00:00	1467	75
08-Jan-24 17:00:00	1467	42
20-Feb-24 08:00:00	1466	40
23-Jan-24 20:00:00	1465	49
19-Jan-24 12:00:00	1465	62
19-Jan-24 11:00:00	1462	62
31-Jan-24 10:00:00	1460	47
01-Feb-24 08:00:00	1459	50
09-Jan-24 17:00:00	1458	37
07-Jan-24 05:00:00	1458	41
08-Jan-24 16:00:00	1455	39
29-Jan-24 18:00:00	1454	48
24-Jan-24 03:00:00	1454	49
21-Feb-24 10:00:00	1454	32
08-Jan-24 10:00:00	1454	41
21-Feb-24 21:00:00	1454	32
01-Mar-24 20:00:00	1454	72
25-Dec-24 08:00:00	1453	49
26-Jan-24 17:00:00	1452	51
23-Jan-24 19:00:00	1451	49
18-Feb-24 18:00:00	1451	40
07-Jan-24 00:00:00	1451	42
26-Feb-24 09:00:00	1451	58
31-Jan-24 19:00:00	1448	43
25-Dec-24 09:00:00	1447	49
26-Jan-24 18:00:00	1447	50
23-Jan-24 17:00:00	1446	47
06-Jan-24 10:00:00	1446	42
29-Jan-24 19:00:00	1446	48
26-Jan-24 10:00:00	1446	46
18-Feb-24 19:00:00	1445	40
07-Jan-24 15:00:00	1444	32
31-Jan-24 18:00:00	1443	43
23-Jan-24 18:00:00	1443	48
30-Jan-24 21:00:00	1443	43
07-Jan-24 21:00:00	1440	29
30-Jan-24 13:00:00	1439	48
31-Jan-24 06:00:00	1439	53
19-Jan-24 19:00:00	1439	62

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
31-Jan-24 20:00:00	1439	41
24-Dec-24 16:00:00	1439	61
24-Dec-24 17:00:00	1438	61
19-Feb-24 08:00:00	1438	46
26-Jan-24 19:00:00	1438	50
09-Jan-24 18:00:00	1437	37
29-Jan-24 16:00:00	1437	47
08-Jan-24 11:00:00	1437	40
07-Jan-24 14:00:00	1436	32
23-Dec-24 17:00:00	1435	65
30-Jan-24 15:00:00	1435	47
24-Dec-24 10:00:00	1435	61
30-Jan-24 06:00:00	1435	43
09-Jan-24 19:00:00	1435	37
07-Jan-24 04:00:00	1435	39
25-Jan-24 17:00:00	1433	67
25-Jan-24 10:00:00	1433	38
29-Jan-24 20:00:00	1433	47
18-Feb-24 20:00:00	1432	40
10-Jan-24 17:00:00	1431	55
09-Jan-24 20:00:00	1431	37
26-Jan-24 06:00:00	1431	46
18-Jan-24 21:00:00	1431	59
21-Feb-24 05:00:00	1430	34
10-Jan-24 10:00:00	1429	50
24-Dec-24 09:00:00	1429	62
18-Feb-24 17:00:00	1429	39
31-Jan-24 17:00:00	1428	43
07-Jan-24 01:00:00	1428	39
24-Dec-24 11:00:00	1427	60
23-Jan-24 22:00:00	1426	50
07-Jan-24 03:00:00	1425	39
31-Jan-24 11:00:00	1424	51
22-Feb-24 17:00:00	1424	55
26-Jan-24 20:00:00	1423	50
01-Mar-24 17:00:00	1422	75
08-Jan-24 12:00:00	1422	31
08-Jan-24 18:00:00	1422	39
30-Jan-24 14:00:00	1421	47
25-Jan-24 16:00:00	1421	62
21-Feb-24 17:00:00	1421	32

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Mar-24 21:00:00	1421	71
20-Feb-24 22:00:00	1419	32
09-Jan-24 08:00:00	1419	41
22-Feb-24 18:00:00	1418	61
07-Jan-24 02:00:00	1418	39
25-Dec-24 10:00:00	1418	49
19-Jan-24 06:00:00	1414	59
25-Jan-24 11:00:00	1413	35
10-Jan-24 06:00:00	1412	41
31-Jan-24 21:00:00	1410	40
14-Feb-24 17:00:00	1409	55
06-Jan-24 09:00:00	1408	42
10-Jan-24 18:00:00	1408	55
21-Feb-24 11:00:00	1408	33
09-Jan-24 21:00:00	1407	37
23-Dec-24 16:00:00	1407	65
02-Jan-24 17:00:00	1407	60
25-Jan-24 12:00:00	1407	38
25-Jan-24 18:00:00	1406	57
24-Jan-24 02:00:00	1406	49
21-Feb-24 22:00:00	1405	32
02-Jan-24 08:00:00	1405	40
24-Dec-24 12:00:00	1404	60
22-Feb-24 10:00:00	1404	44
08-Feb-24 08:00:00	1404	50
18-Jan-24 15:00:00	1404	60
25-Dec-24 11:00:00	1404	50
08-Jan-24 15:00:00	1403	38
24-Jan-24 23:00:00	1403	48
23-Dec-24 18:00:00	1403	65
22-Feb-24 19:00:00	1402	58
05-Mar-24 07:00:00	1402	69
08-Jan-24 13:00:00	1401	33
02-Jan-24 09:00:00	1401	57
18-Feb-24 21:00:00	1401	41
20-Feb-24 09:00:00	1400	36
19-Jan-24 20:00:00	1400	56
29-Jan-24 21:00:00	1399	47
25-Dec-24 07:00:00	1397	49
23-Dec-24 19:00:00	1395	64
24-Dec-24 18:00:00	1394	59

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Jan-24 19:00:00	1393	53
24-Dec-24 15:00:00	1393	61
14-Feb-24 16:00:00	1393	53
08-Jan-24 19:00:00	1391	38
01-Feb-24 09:00:00	1391	36
03-Feb-24 17:00:00	1391	47
02-Mar-24 07:00:00	1391	70
30-Jan-24 22:00:00	1391	43
08-Mar-24 17:00:00	1391	69
25-Jan-24 13:00:00	1391	34
26-Feb-24 10:00:00	1390	59
09-Jan-24 09:00:00	1390	43
23-Jan-24 16:00:00	1390	50
08-Jan-24 14:00:00	1389	38
24-Dec-24 08:00:00	1389	62
26-Jan-24 21:00:00	1388	50
20-Feb-24 16:00:00	1388	34
19-Feb-24 06:00:00	1388	40
25-Jan-24 15:00:00	1388	48
05-Dec-24 08:00:00	1387	60
02-Jan-24 10:00:00	1387	51
14-Feb-24 11:00:00	1387	49
05-Jan-24 17:00:00	1387	54
09-Jan-24 07:00:00	1387	40
09-Jan-24 16:00:00	1386	41
01-Feb-24 06:00:00	1385	35
10-Jan-24 16:00:00	1385	53
02-Mar-24 08:00:00	1385	69
27-Feb-24 08:00:00	1384	55
25-Jan-24 19:00:00	1384	49
24-Dec-24 13:00:00	1383	60
08-Feb-24 07:00:00	1383	50
31-Jan-24 12:00:00	1383	53
14-Feb-24 10:00:00	1381	48
08-Mar-24 18:00:00	1381	68
22-Feb-24 05:00:00	1381	33
18-Jan-24 08:00:00	1380	53
29-Jan-24 15:00:00	1380	47
27-Jan-24 08:00:00	1380	39
08-Mar-24 16:00:00	1380	69
14-Feb-24 18:00:00	1380	60

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Jan-24 06:00:00	1379	46
07-Feb-24 08:00:00	1378	53
18-Jan-24 22:00:00	1378	58
17-Jan-24 08:00:00	1378	48
04-Feb-24 17:00:00	1378	33
19-Feb-24 17:00:00	1378	35
02-Jan-24 18:00:00	1378	60
20-Feb-24 23:00:00	1377	31
26-Jan-24 11:00:00	1377	42
23-Dec-24 20:00:00	1377	60
27-Feb-24 07:00:00	1376	53
19-Feb-24 18:00:00	1376	36
24-Dec-24 14:00:00	1376	61
10-Jan-24 20:00:00	1375	53
29-Jan-24 14:00:00	1375	45
02-Jan-24 07:00:00	1375	37
01-Mar-24 22:00:00	1375	71
14-Feb-24 12:00:00	1375	50
10-Jan-24 11:00:00	1374	54
07-Jan-24 22:00:00	1374	28
10-Dec-24 08:00:00	1374	63
02-Jan-24 16:00:00	1374	44
21-Feb-24 04:00:00	1374	27
08-Feb-24 09:00:00	1374	50
22-Feb-24 20:00:00	1374	57
25-Dec-24 12:00:00	1374	50
02-Jan-24 11:00:00	1374	39
26-Feb-24 06:00:00	1373	65
05-Jan-24 16:00:00	1373	54
08-Jan-24 06:00:00	1373	33
22-Feb-24 16:00:00	1373	46
20-Feb-24 06:00:00	1373	41
26-Mar-24 07:00:00	1372	77
11-Mar-24 17:00:00	1372	66
25-Feb-24 19:00:00	1371	52
01-Mar-24 16:00:00	1371	75
19-Feb-24 09:00:00	1371	47
26-Jan-24 16:00:00	1371	47
05-Dec-24 07:00:00	1371	59
02-Jan-24 19:00:00	1370	60
08-Dec-24 17:00:00	1370	64

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Mar-24 09:00:00	1369	69
10-Dec-24 17:00:00	1368	61
17-Jan-24 09:00:00	1368	48
24-Dec-24 19:00:00	1367	57
25-Jan-24 20:00:00	1367	48
23-Jan-24 23:00:00	1366	52
04-Feb-24 16:00:00	1366	34
17-Feb-24 17:00:00	1366	44
22-Jan-24 17:00:00	1366	60
20-Jan-24 17:00:00	1365	46
09-Feb-24 08:00:00	1365	48
18-Jan-24 09:00:00	1365	53
25-Jan-24 14:00:00	1365	41
27-Jan-24 09:00:00	1364	39
29-Jan-24 13:00:00	1364	39
22-Feb-24 11:00:00	1364	44
25-Feb-24 20:00:00	1364	52
02-Feb-24 08:00:00	1364	40
02-Mar-24 18:00:00	1364	72
20-Jan-24 11:00:00	1363	45
19-Feb-24 19:00:00	1363	37
04-Jan-24 17:00:00	1363	48
25-Feb-24 18:00:00	1363	52
11-Mar-24 09:00:00	1363	62
20-Jan-24 10:00:00	1362	49
14-Feb-24 09:00:00	1362	47
08-Feb-24 17:00:00	1362	55
24-Jan-24 00:00:00	1362	49
26-Mar-24 08:00:00	1362	78
02-Feb-24 09:00:00	1361	42
24-Jan-24 01:00:00	1361	49
11-Mar-24 08:00:00	1361	65
23-Jan-24 08:00:00	1361	50
11-Mar-24 16:00:00	1360	64
01-Mar-24 08:00:00	1360	69
31-Jan-24 22:00:00	1360	39
06-Feb-24 17:00:00	1360	57
18-Feb-24 16:00:00	1360	39
02-Mar-24 19:00:00	1360	69
03-Feb-24 16:00:00	1359	48
23-Jan-24 09:00:00	1359	49

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Jan-24 17:00:00	1359	34
03-Feb-24 18:00:00	1359	47
20-Feb-24 10:00:00	1358	36
08-Jan-24 20:00:00	1358	37
29-Jan-24 12:00:00	1358	39
11-Mar-24 10:00:00	1357	62
20-Jan-24 09:00:00	1357	51
18-Jan-24 13:00:00	1357	59
15-Feb-24 17:00:00	1356	57
14-Feb-24 19:00:00	1356	61
17-Feb-24 18:00:00	1356	41
02-Mar-24 06:00:00	1356	71
29-Jan-24 11:00:00	1356	43
02-Mar-24 10:00:00	1356	69
22-Dec-24 17:00:00	1355	66
07-Feb-24 17:00:00	1355	56
08-Mar-24 19:00:00	1355	68
07-Feb-24 07:00:00	1355	54
09-Jan-24 10:00:00	1355	44
22-Jan-24 18:00:00	1355	59
22-Jan-24 08:00:00	1355	51
06-Jan-24 08:00:00	1355	42
21-Feb-24 12:00:00	1354	32
10-Dec-24 18:00:00	1354	61
05-Jan-24 18:00:00	1354	54
14-Feb-24 13:00:00	1354	51
21-Feb-24 23:00:00	1354	32
25-Jan-24 00:00:00	1353	45
11-Mar-24 18:00:00	1353	66
05-Mar-24 06:00:00	1353	69
21-Feb-24 03:00:00	1353	26
14-Feb-24 15:00:00	1352	52
18-Jan-24 14:00:00	1352	61
01-Jan-24 16:00:00	1352	34
08-Mar-24 15:00:00	1352	69
08-Feb-24 18:00:00	1352	55
10-Dec-24 07:00:00	1352	64
10-Feb-24 09:00:00	1352	57
07-Feb-24 09:00:00	1351	52
16-Feb-24 08:00:00	1351	45
23-Dec-24 12:00:00	1351	62

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
19-Feb-24 20:00:00	1350	37
11-Mar-24 11:00:00	1350	64
25-Jan-24 21:00:00	1350	48
21-Feb-24 00:00:00	1350	31
23-Jan-24 10:00:00	1350	49
10-Jan-24 21:00:00	1350	53
24-Dec-24 20:00:00	1349	57
19-Feb-24 16:00:00	1349	38
23-Dec-24 11:00:00	1349	61
09-Jan-24 22:00:00	1349	37
26-Feb-24 11:00:00	1349	59
22-Jan-24 19:00:00	1348	57
11-Mar-24 19:00:00	1348	66
29-Jan-24 08:00:00	1348	35
09-Feb-24 09:00:00	1348	47
18-Jan-24 12:00:00	1347	58
21-Feb-24 02:00:00	1347	26
08-Feb-24 10:00:00	1347	49
17-Jan-24 07:00:00	1347	48
23-Dec-24 13:00:00	1347	62
11-Jan-24 08:00:00	1347	49
23-Dec-24 15:00:00	1347	65
10-Dec-24 19:00:00	1347	62
02-Mar-24 11:00:00	1347	69
10-Feb-24 10:00:00	1346	54
04-Feb-24 18:00:00	1346	28
31-Jan-24 05:00:00	1346	53
08-Dec-24 16:00:00	1346	64
18-Jan-24 07:00:00	1345	53
20-Jan-24 18:00:00	1345	42
08-Dec-24 18:00:00	1345	64
18-Jan-24 11:00:00	1345	55
03-Feb-24 19:00:00	1345	47
16-Jan-24 08:00:00	1345	47
08-Mar-24 12:00:00	1345	72
18-Jan-24 10:00:00	1344	52
05-Mar-24 08:00:00	1344	69
23-Jan-24 11:00:00	1344	50
11-Jan-24 07:00:00	1344	50
21-Feb-24 01:00:00	1344	30
02-Feb-24 10:00:00	1343	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Feb-24 16:00:00	1343	57
07-Feb-24 19:00:00	1343	62
Average (MW)	**1424**	**49**

Appendix C

Top 10% of Island Interconnected System Load Hours

(2020–2024)

newfoundland labrador hydro

Table C-1: Top 10% of Island Interconnected System Load Hours (2020)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Feb-20 07:00:00	1641	75
10-Mar-20 07:00:00	1625	53
21-Feb-20 08:00:00	1613	74
10-Mar-20 08:00:00	1610	57
15-Jan-20 08:00:00	1609	53
14-Feb-20 18:00:00	1601	76
10-Jan-20 08:00:00	1601	51
14-Feb-20 19:00:00	1600	75
15-Jan-20 07:00:00	1595	60
20-Feb-20 19:00:00	1585	67
10-Jan-20 07:00:00	1585	53
20-Feb-20 20:00:00	1583	62
14-Feb-20 20:00:00	1581	74
20-Feb-20 18:00:00	1577	66
15-Jan-20 09:00:00	1565	51
22-Jan-20 08:00:00	1563	61
21-Feb-20 09:00:00	1563	70
20-Feb-20 21:00:00	1559	56
14-Feb-20 17:00:00	1555	76
14-Feb-20 21:00:00	1552	64
21-Feb-20 18:00:00	1552	72
20-Feb-20 17:00:00	1551	67
19-Jan-20 10:00:00	1551	30
21-Feb-20 19:00:00	1545	64
17-Mar-20 07:00:00	1543	50
22-Jan-20 07:00:00	1539	63
21-Feb-20 06:00:00	1538	74
18-Jan-20 17:00:00	1538	39
19-Jan-20 09:00:00	1533	28
17-Jan-20 11:00:00	1532	52
17-Jan-20 12:00:00	1532	50
19-Jan-20 11:00:00	1528	30
22-Jan-20 09:00:00	1527	59
10-Mar-20 09:00:00	1527	46
18-Jan-20 18:00:00	1525	37
21-Feb-20 20:00:00	1525	61
15-Feb-20 08:00:00	1524	65
10-Jan-20 09:00:00	1522	46
15-Jan-20 17:00:00	1522	44

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
17-Mar-20 08:00:00	1522	48
21-Feb-20 17:00:00	1520	73
14-Jan-20 08:00:00	1517	64
10-Feb-20 07:00:00	1516	38
14-Jan-20 17:00:00	1516	55
21-Feb-20 10:00:00	1513	67
17-Jan-20 10:00:00	1513	50
19-Jan-20 17:00:00	1510	28
15-Feb-20 07:00:00	1509	68
10-Mar-20 06:00:00	1508	36
10-Jan-20 17:00:00	1506	47
14-Feb-20 22:00:00	1505	64
20-Feb-20 22:00:00	1504	50
06-Feb-20 07:00:00	1502	54
18-Jan-20 19:00:00	1501	34
06-Feb-20 08:00:00	1501	52
22-Feb-20 07:00:00	1501	59
15-Feb-20 09:00:00	1500	65
10-Feb-20 08:00:00	1500	46
19-Jan-20 08:00:00	1500	25
15-Feb-20 18:00:00	1499	73
14-Jan-20 07:00:00	1496	65
22-Feb-20 08:00:00	1496	58
17-Jan-20 13:00:00	1496	49
19-Jan-20 12:00:00	1496	31
14-Jan-20 18:00:00	1494	60
15-Feb-20 19:00:00	1493	67
21-Feb-20 21:00:00	1493	56
15-Jan-20 16:00:00	1492	45
14-Jan-20 19:00:00	1492	60
13-Jan-20 17:00:00	1492	66
16-Jan-20 08:00:00	1491	52
02-Feb-20 11:00:00	1488	52
17-Jan-20 16:00:00	1487	50
02-Feb-20 12:00:00	1487	52
15-Jan-20 18:00:00	1486	47
21-Feb-20 11:00:00	1486	65
10-Jan-20 18:00:00	1485	47
14-Jan-20 20:00:00	1484	57
22-Jan-20 17:00:00	1483	65
17-Jan-20 14:00:00	1483	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Jan-20 07:00:00	1482	51
22-Feb-20 06:00:00	1481	57
17-Jan-20 15:00:00	1481	51
15-Jan-20 10:00:00	1479	49
20-Feb-20 16:00:00	1479	55
13-Jan-20 18:00:00	1477	66
15-Feb-20 17:00:00	1475	73
03-Mar-20 07:00:00	1475	40
18-Jan-20 16:00:00	1475	39
15-Feb-20 10:00:00	1474	61
15-Jan-20 19:00:00	1473	47
15-Feb-20 06:00:00	1473	71
25-Jan-20 08:00:00	1472	52
15-Jan-20 06:00:00	1472	59
21-Feb-20 12:00:00	1470	65
17-Jan-20 09:00:00	1469	50
19-Feb-20 08:00:00	1468	57
16-Feb-20 10:00:00	1468	57
10-Jan-20 16:00:00	1468	47
14-Feb-20 23:00:00	1468	64
22-Feb-20 09:00:00	1468	57
22-Jan-20 10:00:00	1467	55
19-Jan-20 18:00:00	1467	26
17-Jan-20 17:00:00	1467	47
13-Jan-20 19:00:00	1464	64
02-Feb-20 10:00:00	1464	53
14-Feb-20 16:00:00	1464	71
16-Feb-20 09:00:00	1464	54
02-Feb-20 13:00:00	1460	51
19-Feb-20 11:00:00	1460	53
15-Feb-20 11:00:00	1460	49
21-Feb-20 16:00:00	1460	64
14-Jan-20 09:00:00	1460	53
16-Feb-20 11:00:00	1459	56
10-Jan-20 19:00:00	1459	47
10-Mar-20 10:00:00	1458	42
19-Feb-20 10:00:00	1458	50
23-Jan-20 08:00:00	1457	47
15-Feb-20 20:00:00	1457	57
09-Mar-20 20:00:00	1457	45
06-Feb-20 17:00:00	1455	51

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-20 17:00:00	1454	57
14-Jan-20 21:00:00	1454	54
19-Feb-20 09:00:00	1454	58
09-Mar-20 21:00:00	1453	45
14-Feb-20 08:00:00	1453	65
13-Jan-20 20:00:00	1452	62
19-Jan-20 16:00:00	1452	29
15-Jan-20 20:00:00	1452	46
22-Jan-20 16:00:00	1452	54
15-Jan-20 11:00:00	1451	49
09-Feb-20 19:00:00	1451	49
16-Dec-20 17:00:00	1451	66
17-Mar-20 06:00:00	1451	47
14-Jan-20 16:00:00	1450	45
09-Feb-20 18:00:00	1450	48
18-Jan-20 20:00:00	1450	34
31-Jan-20 17:00:00	1449	41
09-Feb-20 20:00:00	1448	55
23-Jan-20 09:00:00	1448	44
16-Feb-20 12:00:00	1448	62
10-Feb-20 17:00:00	1447	46
13-Jan-20 08:00:00	1447	61
22-Jan-20 18:00:00	1447	65
22-Jan-20 06:00:00	1446	60
16-Mar-20 08:00:00	1445	50
21-Feb-20 22:00:00	1445	50
19-Jan-20 19:00:00	1444	26
17-Jan-20 18:00:00	1444	45
11-Mar-20 08:00:00	1444	29
10-Jan-20 06:00:00	1443	54
06-Feb-20 09:00:00	1442	52
19-Feb-20 07:00:00	1441	56
03-Feb-20 17:00:00	1441	61
25-Jan-20 09:00:00	1440	50
17-Mar-20 09:00:00	1440	40
14-Feb-20 07:00:00	1440	75
15-Feb-20 12:00:00	1439	48
16-Jan-20 17:00:00	1439	61
20-Feb-20 23:00:00	1439	47
01-Feb-20 09:00:00	1438	35
06-Feb-20 18:00:00	1438	49

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Jan-20 09:00:00	1437	54
19-Jan-20 07:00:00	1437	25
13-Mar-20 07:00:00	1436	46
18-Feb-20 19:00:00	1435	52
16-Mar-20 07:00:00	1434	37
16-Dec-20 16:00:00	1434	64
18-Feb-20 20:00:00	1434	53
15-Feb-20 16:00:00	1434	51
19-Feb-20 12:00:00	1434	53
13-Feb-20 08:00:00	1434	47
22-Jan-20 19:00:00	1433	64
22-Feb-20 18:00:00	1433	61
12-Jan-20 17:00:00	1433	56
10-Feb-20 09:00:00	1433	50
21-Jan-20 18:00:00	1432	58
13-Feb-20 07:00:00	1432	51
16-Jan-20 19:00:00	1432	59
19-Jan-20 13:00:00	1430	30
13-Mar-20 08:00:00	1430	45
06-Feb-20 16:00:00	1430	58
13-Jan-20 09:00:00	1430	64
13-Jan-20 21:00:00	1430	62
16-Jan-20 18:00:00	1429	61
21-Feb-20 13:00:00	1429	58
31-Jan-20 18:00:00	1429	45
01-Feb-20 08:00:00	1428	34
18-Feb-20 18:00:00	1427	52
22-Feb-20 10:00:00	1427	59
10-Jan-20 10:00:00	1427	41
09-Mar-20 08:00:00	1427	41
15-Feb-20 05:00:00	1427	70
22-Jan-20 11:00:00	1426	49
25-Jan-20 07:00:00	1426	55
23-Mar-20 07:00:00	1426	45
03-Mar-20 08:00:00	1425	40
09-Feb-20 17:00:00	1425	48
21-Jan-20 19:00:00	1425	58
16-Jan-20 20:00:00	1425	57
15-Feb-20 00:00:00	1424	60
18-Feb-20 21:00:00	1424	50
11-Mar-20 07:00:00	1424	29

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-20 08:00:00	1424	46
01-Feb-20 18:00:00	1424	47
20-Feb-20 07:00:00	1424	58
09-Mar-20 19:00:00	1423	45
10-Feb-20 18:00:00	1423	46
02-Feb-20 14:00:00	1423	49
16-Feb-20 17:00:00	1423	56
16-Feb-20 13:00:00	1423	62
15-Feb-20 21:00:00	1423	55
10-Feb-20 16:00:00	1423	45
15-Jan-20 15:00:00	1423	45
09-Jan-20 17:00:00	1422	57
16-Feb-20 08:00:00	1421	57
22-Jan-20 20:00:00	1420	64
01-Feb-20 19:00:00	1420	47
23-Jan-20 17:00:00	1420	53
13-Jan-20 07:00:00	1419	59
21-Feb-20 15:00:00	1419	61
16-Dec-20 18:00:00	1419	67
02-Feb-20 16:00:00	1419	45
10-Feb-20 06:00:00	1419	37
02-Feb-20 17:00:00	1419	43
22-Feb-20 05:00:00	1418	43
21-Feb-20 05:00:00	1418	50
31-Jan-20 16:00:00	1418	41
08-Feb-20 17:00:00	1417	44
11-Mar-20 09:00:00	1417	29
06-Feb-20 19:00:00	1417	48
10-Jan-20 20:00:00	1417	47
09-Feb-20 21:00:00	1416	51
23-Mar-20 08:00:00	1416	50
14-Feb-20 09:00:00	1415	40
31-Jan-20 08:00:00	1415	33
23-Jan-20 07:00:00	1415	48
12-Jan-20 16:00:00	1414	60
02-Feb-20 09:00:00	1414	54
20-Feb-20 08:00:00	1414	64
02-Feb-20 15:00:00	1414	46
08-Feb-20 18:00:00	1413	44
13-Jan-20 16:00:00	1413	66
22-Feb-20 19:00:00	1412	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Mar-20 22:00:00	1412	42
03-Feb-20 16:00:00	1412	62
15-Feb-20 13:00:00	1412	47
03-Feb-20 18:00:00	1411	57
31-Jan-20 07:00:00	1411	32
14-Jan-20 10:00:00	1411	43
10-Mar-20 19:00:00	1410	32
09-Jan-20 19:00:00	1410	56
31-Jan-20 19:00:00	1410	46
07-Feb-20 17:00:00	1410	37
10-Mar-20 05:00:00	1410	35
13-Feb-20 09:00:00	1410	42
10-Mar-20 20:00:00	1409	30
18-Jan-20 21:00:00	1409	31
15-Feb-20 01:00:00	1408	59
01-Feb-20 10:00:00	1408	35
19-Jan-20 20:00:00	1408	26
21-Feb-20 14:00:00	1407	59
21-Jan-20 09:00:00	1407	47
25-Jan-20 18:00:00	1407	55
21-Jan-20 20:00:00	1406	59
01-Feb-20 20:00:00	1406	45
16-Feb-20 18:00:00	1406	56
16-Jan-20 21:00:00	1406	55
10-Feb-20 10:00:00	1405	50
13-Jan-20 10:00:00	1405	67
10-Jan-20 11:00:00	1405	42
17-Jan-20 08:00:00	1405	46
07-Mar-20 17:00:00	1405	54
16-Dec-20 19:00:00	1404	67
25-Jan-20 19:00:00	1404	53
07-Mar-20 18:00:00	1404	54
16-Feb-20 16:00:00	1404	63
15-Feb-20 04:00:00	1403	48
16-Mar-20 09:00:00	1402	49
01-Feb-20 17:00:00	1402	47
19-Jan-20 06:00:00	1402	26
10-Mar-20 11:00:00	1402	40
15-Jan-20 21:00:00	1402	45
16-Feb-20 14:00:00	1401	64
17-Jan-20 19:00:00	1401	42

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Jan-20 18:00:00	1400	57
13-Feb-20 17:00:00	1400	50
25-Jan-20 17:00:00	1400	57
19-Feb-20 13:00:00	1400	51
22-Feb-20 17:00:00	1399	51
09-Mar-20 07:00:00	1399	41
18-Jan-20 15:00:00	1399	44
21-Jan-20 16:00:00	1398	56
21-Feb-20 23:00:00	1398	49
20-Feb-20 15:00:00	1398	56
05-Feb-20 19:00:00	1398	41
15-Feb-20 14:00:00	1397	48
28-Feb-20 09:00:00	1397	39
07-Feb-20 16:00:00	1397	37
05-Feb-20 18:00:00	1396	43
12-Jan-20 18:00:00	1396	55
03-Mar-20 06:00:00	1396	34
27-Feb-20 19:00:00	1396	43
16-Dec-20 20:00:00	1395	66
21-Feb-20 00:00:00	1395	48
10-Feb-20 19:00:00	1395	46
28-Feb-20 08:00:00	1394	39
09-Jan-20 20:00:00	1394	56
06-Feb-20 20:00:00	1394	48
22-Jan-20 12:00:00	1394	45
25-Jan-20 10:00:00	1394	50
05-Feb-20 20:00:00	1394	39
31-Jan-20 20:00:00	1393	44
13-Feb-20 10:00:00	1393	45
22-Jan-20 15:00:00	1393	51
23-Jan-20 10:00:00	1392	50
14-Jan-20 22:00:00	1392	53
09-Jan-20 16:00:00	1392	58
08-Feb-20 19:00:00	1391	43
06-Feb-20 06:00:00	1391	48
15-Feb-20 03:00:00	1391	43
23-Jan-20 18:00:00	1390	54
03-Feb-20 08:00:00	1390	42
22-Feb-20 11:00:00	1390	48
15-Feb-20 02:00:00	1390	45
22-Feb-20 04:00:00	1390	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Feb-20 17:00:00	1390	43
15-Feb-20 15:00:00	1390	48
27-Feb-20 18:00:00	1389	48
24-Feb-20 07:00:00	1389	39
04-Feb-20 07:00:00	1389	62
13-Feb-20 16:00:00	1389	50
21-Jan-20 07:00:00	1388	46
20-Feb-20 09:00:00	1388	52
14-Feb-20 10:00:00	1388	43
16-Dec-20 08:00:00	1388	60
07-Mar-20 19:00:00	1387	54
14-Mar-20 10:00:00	1387	37
16-Feb-20 15:00:00	1387	62
22-Feb-20 20:00:00	1386	66
13-Feb-20 11:00:00	1386	44
10-Feb-20 11:00:00	1385	56
21-Feb-20 01:00:00	1385	46
19-Jan-20 14:00:00	1384	30
11-Mar-20 10:00:00	1384	32
03-Feb-20 19:00:00	1384	55
06-Feb-20 10:00:00	1384	53
09-Feb-20 09:00:00	1384	37
20-Mar-20 08:00:00	1384	21
10-Jan-20 15:00:00	1383	47
14-Feb-20 11:00:00	1383	46
14-Jan-20 06:00:00	1382	68
21-Jan-20 21:00:00	1382	60
21-Feb-20 04:00:00	1382	43
13-Feb-20 18:00:00	1381	51
08-Feb-20 16:00:00	1381	44
25-Jan-20 20:00:00	1380	52
10-Feb-20 12:00:00	1380	57
17-Dec-20 08:00:00	1380	50
14-Feb-20 15:00:00	1380	50
04-Feb-20 08:00:00	1380	57
27-Feb-20 20:00:00	1379	40
21-Feb-20 02:00:00	1379	45
03-Mar-20 09:00:00	1379	40
15-Feb-20 22:00:00	1379	52
09-Mar-20 09:00:00	1378	40
19-Feb-20 14:00:00	1378	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Mar-20 21:00:00	1378	30
22-Feb-20 03:00:00	1378	43
09-Feb-20 08:00:00	1378	37
10-Jan-20 12:00:00	1378	44
18-Feb-20 17:00:00	1378	51
13-Feb-20 12:00:00	1377	43
31-Dec-20 17:00:00	1377	56
10-Mar-20 18:00:00	1377	33
01-Feb-20 21:00:00	1377	47
28-Feb-20 10:00:00	1376	34
22-Jan-20 21:00:00	1375	58
07-Mar-20 16:00:00	1375	50
20-Jan-20 17:00:00	1375	48
07-Feb-20 18:00:00	1375	36
08-Jan-20 17:00:00	1375	63
14-Jan-20 11:00:00	1375	41
13-Jan-20 11:00:00	1375	68
19-Jan-20 15:00:00	1375	29
22-Jan-20 13:00:00	1373	45
21-Feb-20 03:00:00	1373	45
18-Feb-20 08:00:00	1373	46
06-Feb-20 15:00:00	1373	62
15-Jan-20 12:00:00	1372	49
19-Jan-20 21:00:00	1372	25
01-Feb-20 07:00:00	1371	32
23-Mar-20 09:00:00	1371	56
16-Jan-20 06:00:00	1371	46
12-Jan-20 19:00:00	1371	51
23-Jan-20 16:00:00	1370	49
20-Feb-20 10:00:00	1370	53
31-Dec-20 16:00:00	1370	54
14-Mar-20 09:00:00	1370	34
18-Jan-20 22:00:00	1370	30
13-Dec-20 17:00:00	1369	49
22-Mar-20 20:00:00	1369	41
03-Feb-20 09:00:00	1369	47
15-Jan-20 14:00:00	1369	46
16-Jan-20 16:00:00	1368	54
10-Feb-20 15:00:00	1368	51
28-Feb-20 07:00:00	1368	40
05-Feb-20 21:00:00	1368	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
17-Dec-20 09:00:00	1367	47
26-Jan-20 08:00:00	1367	49
18-Feb-20 22:00:00	1367	47
23-Jan-20 19:00:00	1367	49
01-Feb-20 11:00:00	1366	35
16-Feb-20 07:00:00	1366	49
05-Feb-20 08:00:00	1366	52
08-Feb-20 20:00:00	1366	43
22-Feb-20 00:00:00	1365	49
10-Mar-20 17:00:00	1365	34
12-Jan-20 15:00:00	1364	58
16-Feb-20 19:00:00	1364	55
17-Jan-20 20:00:00	1364	41
16-Jan-20 10:00:00	1364	55
22-Jan-20 14:00:00	1364	51
13-Feb-20 15:00:00	1364	50
10-Jan-20 21:00:00	1364	51
17-Dec-20 17:00:00	1364	52
31-Jan-20 15:00:00	1364	41
17-Mar-20 10:00:00	1363	39
02-Feb-20 18:00:00	1363	43
20-Feb-20 12:00:00	1363	58
15-Jan-20 13:00:00	1362	49
31-Jan-20 09:00:00	1362	35
09-Jan-20 21:00:00	1362	56
13-Feb-20 13:00:00	1362	45
22-Feb-20 02:00:00	1361	43
16-Dec-20 07:00:00	1361	59
17-Dec-20 11:00:00	1361	45
12-Feb-20 18:00:00	1361	45
19-Jan-20 05:00:00	1360	25
03-Feb-20 20:00:00	1360	54
08-Jan-20 16:00:00	1360	64
14-Mar-20 11:00:00	1360	38
16-Dec-20 21:00:00	1360	67
14-Feb-20 12:00:00	1360	46
07-Feb-20 15:00:00	1359	37
10-Jan-20 13:00:00	1359	45
20-Mar-20 09:00:00	1359	26
13-Feb-20 19:00:00	1359	51
31-Jan-20 21:00:00	1359	42

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Jan-20 11:00:00	1359	50
07-Feb-20 09:00:00	1359	59
07-Feb-20 10:00:00	1359	50
09-Mar-20 10:00:00	1359	42
06-Jan-20 17:00:00	1359	64
16-Dec-20 09:00:00	1359	60
20-Feb-20 14:00:00	1359	60
03-Feb-20 07:00:00	1358	43
25-Jan-20 06:00:00	1358	51
09-Feb-20 10:00:00	1358	37
30-Dec-20 17:00:00	1358	73
12-Feb-20 17:00:00	1358	52
14-Jan-20 15:00:00	1358	39
17-Dec-20 10:00:00	1358	45
07-Feb-20 08:00:00	1357	58
10-Feb-20 13:00:00	1357	57
10-Feb-20 20:00:00	1357	46
18-Feb-20 09:00:00	1357	50
15-Jan-20 05:00:00	1357	51
07-Feb-20 11:00:00	1357	49
22-Jan-20 05:00:00	1357	57
23-Mar-20 06:00:00	1357	43
10-Mar-20 04:00:00	1356	34
22-Mar-20 09:00:00	1356	45
13-Dec-20 16:00:00	1356	43
20-Feb-20 11:00:00	1356	57
13-Jan-20 22:00:00	1355	63
11-Mar-20 11:00:00	1355	35
03-Feb-20 12:00:00	1354	56
07-Feb-20 12:00:00	1354	47
31-Jan-20 11:00:00	1354	40
26-Jan-20 09:00:00	1353	50
19-Feb-20 16:00:00	1353	41
16-Jan-20 22:00:00	1353	50
12-Mar-20 08:00:00	1353	28
20-Feb-20 13:00:00	1353	61
09-Mar-20 23:00:00	1353	38
03-Feb-20 11:00:00	1352	51
12-Feb-20 19:00:00	1352	42
13-Feb-20 14:00:00	1352	47
22-Mar-20 10:00:00	1352	48

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
31-Jan-20 12:00:00	1352	40
19-Feb-20 17:00:00	1351	41
17-Mar-20 05:00:00	1351	33
18-Jan-20 09:00:00	1351	44
19-Feb-20 15:00:00	1350	51
29-Jan-20 17:00:00	1350	50
17-Dec-20 12:00:00	1350	46
18-Jan-20 10:00:00	1350	43
16-Mar-20 10:00:00	1350	47
03-Feb-20 10:00:00	1350	48
22-Mar-20 19:00:00	1349	41
02-Mar-20 19:00:00	1349	39
27-Feb-20 21:00:00	1349	41
17-Dec-20 16:00:00	1349	51
09-Feb-20 22:00:00	1349	53
07-Mar-20 20:00:00	1348	56
07-Feb-20 19:00:00	1348	36
23-Jan-20 11:00:00	1348	52
27-Feb-20 08:00:00	1348	47
01-Mar-20 17:00:00	1348	38
24-Feb-20 08:00:00	1348	39
05-Feb-20 07:00:00	1348	51
07-Feb-20 13:00:00	1347	40
12-Jan-20 20:00:00	1347	47
06-Feb-20 21:00:00	1346	45
16-Feb-20 20:00:00	1346	55
27-Feb-20 17:00:00	1346	49
18-Jan-20 14:00:00	1346	43
10-Mar-20 12:00:00	1345	41
22-Feb-20 12:00:00	1345	41
03-Feb-20 15:00:00	1345	62
19-Feb-20 06:00:00	1345	49
06-Feb-20 11:00:00	1345	51
30-Jan-20 17:00:00	1345	47
01-Mar-20 18:00:00	1345	38
20-Dec-20 17:00:00	1344	50
22-Mar-20 21:00:00	1344	42
02-Feb-20 08:00:00	1344	54
14-Jan-20 12:00:00	1344	42
07-Feb-20 14:00:00	1344	37
22-Feb-20 01:00:00	1343	46

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
03-Mar-20 10:00:00	1343	40
20-Jan-20 16:00:00	1343	45
08-Jan-20 08:00:00	1343	66
14-Feb-20 14:00:00	1343	50
31-Jan-20 10:00:00	1343	39
22-Feb-20 21:00:00	1342	57
09-Feb-20 11:00:00	1342	37
30-Jan-20 18:00:00	1342	48
08-Mar-20 20:00:00	1342	50
12-Feb-20 09:00:00	1342	53
16-Dec-20 10:00:00	1341	60
16-Jan-20 11:00:00	1341	53
17-Jan-20 07:00:00	1341	46
18-Feb-20 07:00:00	1341	42
23-Mar-20 10:00:00	1341	62
24-Jan-20 17:00:00	1340	49
22-Mar-20 11:00:00	1340	49
14-Feb-20 13:00:00	1340	46
22-Mar-20 08:00:00	1340	43
30-Jan-20 19:00:00	1340	49
13-Mar-20 09:00:00	1339	50
18-Jan-20 23:00:00	1339	30
02-Mar-20 20:00:00	1339	39
17-Dec-20 07:00:00	1339	58
20-Mar-20 07:00:00	1338	20
10-Feb-20 14:00:00	1338	56
23-Nov-20 08:00:00	1338	21
16-Dec-20 15:00:00	1338	61
12-Jan-20 14:00:00	1338	58
24-Jan-20 18:00:00	1338	49
16-Mar-20 06:00:00	1337	22
03-Feb-20 13:00:00	1337	55
22-Feb-20 16:00:00	1337	46
08-Feb-20 11:00:00	1336	39
10-Jan-20 14:00:00	1336	49
09-Feb-20 16:00:00	1336	49
06-Feb-20 14:00:00	1336	61
12-Feb-20 10:00:00	1336	51
24-Jan-20 19:00:00	1335	46
18-Jan-20 13:00:00	1335	41
06-Jan-20 16:00:00	1335	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Feb-20 23:00:00	1335	51
06-Feb-20 12:00:00	1335	54
01-Mar-20 19:00:00	1335	36
13-Dec-20 18:00:00	1335	49
01-Mar-20 09:00:00	1335	42
18-Feb-20 10:00:00	1335	54
20-Jan-20 18:00:00	1334	51
05-Feb-20 09:00:00	1334	52
28-Feb-20 11:00:00	1334	36
08-Feb-20 21:00:00	1334	44
12-Feb-20 11:00:00	1334	48
19-Jan-20 04:00:00	1334	25
12-Feb-20 20:00:00	1334	37
31-Jan-20 13:00:00	1334	40
16-Dec-20 11:00:00	1334	60
07-Feb-20 07:00:00	1334	52
21-Jan-20 12:00:00	1333	49
21-Jan-20 22:00:00	1333	60
10-Jan-20 05:00:00	1333	54
06-Feb-20 13:00:00	1333	59
12-Mar-20 07:00:00	1333	29
25-Jan-20 21:00:00	1333	52
27-Feb-20 07:00:00	1333	48
03-Feb-20 14:00:00	1333	56
12-Jan-20 13:00:00	1333	58
31-Jan-20 14:00:00	1332	41
02-Mar-20 18:00:00	1332	44
23-Jan-20 06:00:00	1332	48
13-Feb-20 06:00:00	1332	45
12-Jan-20 12:00:00	1331	57
23-Nov-20 07:00:00	1331	22
12-Mar-20 09:00:00	1331	28
12-Feb-20 16:00:00	1331	56
21-Jan-20 10:00:00	1331	49
29-Jan-20 18:00:00	1331	49
21-Jan-20 15:00:00	1330	56
08-Feb-20 15:00:00	1330	44
09-Jan-20 15:00:00	1330	58
31-Dec-20 18:00:00	1329	57
13-Feb-20 20:00:00	1329	53
13-Jan-20 12:00:00	1329	69

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Mar-20 03:00:00	1329	36
18-Jan-20 12:00:00	1328	41
03-Mar-20 11:00:00	1328	40
21-Jan-20 11:00:00	1328	55
05-Mar-20 19:00:00	1328	48
15-Jan-20 22:00:00	1328	45
12-Feb-20 08:00:00	1328	54
08-Mar-20 19:00:00	1328	50
19-Feb-20 18:00:00	1328	50
09-Mar-20 11:00:00	1327	34
17-Dec-20 18:00:00	1327	52
15-Dec-20 17:00:00	1326	56
08-Mar-20 11:00:00	1326	51
08-Jan-20 18:00:00	1325	62
24-Jan-20 20:00:00	1325	47
23-Jan-20 20:00:00	1325	49
08-Jan-20 09:00:00	1325	64
07-Mar-20 10:00:00	1325	46
07-Jan-20 17:00:00	1324	56
20-Jan-20 19:00:00	1324	51
26-Jan-20 07:00:00	1324	48
30-Dec-20 16:00:00	1324	63
05-Feb-20 16:00:00	1324	42
16-Feb-20 06:00:00	1323	48
18-Feb-20 11:00:00	1323	53
09-Mar-20 18:00:00	1323	45
01-Feb-20 22:00:00	1323	44
08-Feb-20 10:00:00	1322	42
30-Dec-20 18:00:00	1322	73
03-Mar-20 12:00:00	1322	40
01-Mar-20 08:00:00	1322	42
08-Mar-20 10:00:00	1322	48
01-Mar-20 10:00:00	1321	42
30-Jan-20 20:00:00	1321	49
24-Mar-20 07:00:00	1321	42
11-Mar-20 06:00:00	1321	29
24-Mar-20 08:00:00	1321	43
13-Dec-20 19:00:00	1321	48
14-Jan-20 23:00:00	1320	52
04-Feb-20 18:00:00	1320	46
07-Mar-20 11:00:00	1320	46

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
14-Jan-20 14:00:00	1319	42
07-Jan-20 08:00:00	1319	49
07-Mar-20 12:00:00	1318	46
13-Mar-20 06:00:00	1318	35
03-Mar-20 17:00:00	1318	38
20-Feb-20 06:00:00	1318	54
10-Mar-20 16:00:00	1317	40
04-Feb-20 19:00:00	1317	45
29-Jan-20 19:00:00	1317	49
02-Feb-20 19:00:00	1317	41
04-Feb-20 09:00:00	1316	52
01-Mar-20 16:00:00	1316	37
09-Feb-20 12:00:00	1316	37
10-Mar-20 02:00:00	1316	36
25-Nov-20 17:00:00	1316	67
21-Jan-20 13:00:00	1316	49
17-Jan-20 21:00:00	1316	41
03-Feb-20 21:00:00	1316	55
11-Feb-20 08:00:00	1315	49
20-Dec-20 18:00:00	1315	50
18-Jan-20 11:00:00	1315	43
10-Feb-20 05:00:00	1314	37
07-Mar-20 15:00:00	1314	49
20-Jan-20 20:00:00	1314	51
19-Jan-20 22:00:00	1314	25
14-Dec-20 17:00:00	1313	64
01-Feb-20 12:00:00	1313	35
19-Mar-20 07:00:00	1313	27
05-Mar-20 18:00:00	1313	49
30-Jan-20 08:00:00	1313	52
12-Jan-20 11:00:00	1313	56
08-Mar-20 21:00:00	1313	52
29-Jan-20 08:00:00	1312	56
31-Jan-20 22:00:00	1312	42
07-Mar-20 09:00:00	1312	45
16-Dec-20 12:00:00	1311	60
10-Mar-20 22:00:00	1311	28
10-Feb-20 21:00:00	1311	46
11-Jan-20 17:00:00	1311	48
05-Feb-20 22:00:00	1311	37
02-Mar-20 08:00:00	1311	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Jan-20 10:00:00	1311	60
09-Feb-20 07:00:00	1311	37
23-Mar-20 11:00:00	1311	60
04-Feb-20 17:00:00	1311	47
19-Jan-20 03:00:00	1310	27
14-Feb-20 06:00:00	1310	48
16-Mar-20 11:00:00	1310	48
07-Jan-20 18:00:00	1310	58
20-Mar-20 10:00:00	1310	30
27-Feb-20 09:00:00	1310	48
01-Mar-20 20:00:00	1309	34
14-Mar-20 08:00:00	1309	28
12-Mar-20 20:00:00	1309	22
18-Jan-20 08:00:00	1309	42
19-Mar-20 08:00:00	1309	31
05-Feb-20 10:00:00	1309	48
26-Jan-20 10:00:00	1309	54
20-Dec-20 19:00:00	1309	50
21-Jan-20 14:00:00	1309	55
06-Jan-20 18:00:00	1309	64
07-Feb-20 20:00:00	1308	35
28-Feb-20 06:00:00	1308	39
01-Feb-20 16:00:00	1308	45
23-Jan-20 12:00:00	1308	51
19-Jan-20 00:00:00	1308	30
30-Dec-20 19:00:00	1308	73
04-Feb-20 20:00:00	1308	45
09-Jan-20 22:00:00	1308	53
14-Jan-20 13:00:00	1308	42
08-Mar-20 12:00:00	1307	49
08-Jan-20 07:00:00	1307	66
03-Mar-20 18:00:00	1307	38
05-Mar-20 20:00:00	1307	45
02-Mar-20 21:00:00	1307	38
07-Jan-20 09:00:00	1307	50
19-Feb-20 19:00:00	1307	48
15-Jan-20 04:00:00	1306	49
22-Jan-20 22:00:00	1306	58
25-Jan-20 12:00:00	1306	52
23-Nov-20 09:00:00	1306	19
12-Mar-20 19:00:00	1305	21

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
03-Mar-20 16:00:00	1305	41
30-Mar-20 10:00:00	1305	54
13-Jan-20 06:00:00	1305	54
08-Jan-20 11:00:00	1304	55
22-Mar-20 12:00:00	1304	49
08-Feb-20 12:00:00	1304	38
12-Mar-20 10:00:00	1304	31
02-Mar-20 09:00:00	1304	43
11-Feb-20 18:00:00	1303	47
10-Mar-20 01:00:00	1303	38
18-Feb-20 12:00:00	1303	53
01-Feb-20 06:00:00	1303	32
10-Mar-20 00:00:00	1303	38
24-Jan-20 21:00:00	1302	46
22-Jan-20 04:00:00	1302	56
18-Dec-20 17:00:00	1302	56
07-Mar-20 13:00:00	1302	46
31-Jan-20 06:00:00	1302	33
20-Mar-20 17:00:00	1302	32
30-Mar-20 09:00:00	1301	55
21-Jan-20 06:00:00	1301	45
16-Feb-20 00:00:00	1301	49
22-Mar-20 18:00:00	1301	42
29-Jan-20 16:00:00	1301	50
15-Dec-20 19:00:00	1301	55
11-Mar-20 12:00:00	1301	35
25-Jan-20 05:00:00	1300	47
17-Dec-20 19:00:00	1300	52
12-Jan-20 21:00:00	1300	45
16-Dec-20 22:00:00	1300	71
25-Jan-20 16:00:00	1300	55
18-Feb-20 16:00:00	1300	54
22-Feb-20 13:00:00	1300	42
28-Feb-20 18:00:00	1300	38
19-Jan-20 01:00:00	1300	29
07-Mar-20 21:00:00	1299	56
22-Feb-20 15:00:00	1299	43
17-Mar-20 11:00:00	1299	36
16-Jan-20 12:00:00	1299	49
19-Jan-20 02:00:00	1298	28
08-Feb-20 14:00:00	1298	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Jan-20 22:00:00	1298	52
16-Dec-20 13:00:00	1298	60
30-Mar-20 11:00:00	1298	45
13-Dec-20 20:00:00	1298	48
12-Feb-20 21:00:00	1298	39
31-Dec-20 15:00:00	1298	51
14-Dec-20 16:00:00	1298	58
28-Feb-20 19:00:00	1298	38
14-Mar-20 12:00:00	1297	37
08-Jan-20 19:00:00	1297	57
09-Jan-20 14:00:00	1297	58
30-Jan-20 07:00:00	1297	47
20-Jan-20 10:00:00	1297	29
16-Dec-20 14:00:00	1297	60
20-Mar-20 19:00:00	1297	32
05-Feb-20 11:00:00	1297	45
07-Jan-20 19:00:00	1296	59
24-Feb-20 06:00:00	1296	41
11-Feb-20 19:00:00	1296	45
01-Mar-20 11:00:00	1296	42
27-Mar-20 10:00:00	1296	51
30-Jan-20 09:00:00	1296	52
22-Mar-20 17:00:00	1296	42
23-Nov-20 17:00:00	1296	45
17-Mar-20 04:00:00	1296	33
22-Feb-20 14:00:00	1296	42
16-Feb-20 05:00:00	1295	47
06-Jan-20 19:00:00	1295	64
08-Jan-20 12:00:00	1295	52
18-Mar-20 09:00:00	1295	25
25-Nov-20 08:00:00	1295	59
07-Jan-20 16:00:00	1295	57
29-Jan-20 07:00:00	1295	57
16-Feb-20 21:00:00	1295	54
06-Mar-20 08:00:00	1294	57
05-Jan-20 17:00:00	1294	61
23-Jan-20 15:00:00	1294	50
09-Jan-20 13:00:00	1294	60
19-Apr-20 17:00:00	1294	77
11-Feb-20 17:00:00	1294	52
07-Jan-20 07:00:00	1294	49

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Jan-20 09:00:00	1293	22
20-Jan-20 11:00:00	1293	30
02-Mar-20 17:00:00	1293	47
19-Dec-20 17:00:00	1292	62
11-Feb-20 07:00:00	1292	51
26-Mar-20 07:00:00	1292	52
06-Mar-20 07:00:00	1292	57
22-Feb-20 22:00:00	1292	52
12-Mar-20 11:00:00	1292	30
16-Mar-20 20:00:00	1292	42
08-Jan-20 15:00:00	1292	57
07-Mar-20 08:00:00	1292	45
05-Mar-20 17:00:00	1292	55
20-Dec-20 20:00:00	1292	52
30-Mar-20 08:00:00	1292	54
13-Mar-20 10:00:00	1292	50
16-Mar-20 21:00:00	1291	46
15-Mar-20 20:00:00	1291	22
09-Mar-20 17:00:00	1291	44
28-Jan-20 17:00:00	1291	46
29-Jan-20 20:00:00	1291	49
30-Jan-20 16:00:00	1291	47
20-Mar-20 18:00:00	1291	32
03-Mar-20 13:00:00	1291	41
12-Feb-20 15:00:00	1290	53
01-Jan-20 16:00:00	1290	50
06-Mar-20 19:00:00	1290	64
26-Jan-20 17:00:00	1290	52
24-Mar-20 17:00:00	1289	37
30-Jan-20 21:00:00	1289	46
13-Jan-20 15:00:00	1289	68
28-Feb-20 12:00:00	1289	38
18-Mar-20 08:00:00	1289	26
27-Mar-20 11:00:00	1289	50
08-Mar-20 09:00:00	1289	47
19-Feb-20 20:00:00	1289	48
02-Mar-20 10:00:00	1289	43
08-Feb-20 09:00:00	1288	46
09-Feb-20 13:00:00	1288	37
08-Feb-20 22:00:00	1288	44
26-Jan-20 19:00:00	1288	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Dec-20 16:00:00	1288	56
22-Mar-20 22:00:00	1288	43
26-Jan-20 18:00:00	1288	50
19-Apr-20 16:00:00	1287	77
22-Mar-20 07:00:00	1287	43
20-Dec-20 16:00:00	1287	50
03-Jan-20 17:00:00	1287	58
24-Mar-20 16:00:00	1287	37
10-Mar-20 13:00:00	1287	43
27-Feb-20 22:00:00	1286	41
25-Nov-20 07:00:00	1286	52
08-Mar-20 13:00:00	1285	47
09-Mar-20 12:00:00	1285	32
27-Mar-20 09:00:00	1285	46
18-Feb-20 23:00:00	1285	47
15-Jan-20 03:00:00	1285	49
04-Feb-20 06:00:00	1285	59
Average (MW)	**1377**	**49**

Table C-2: Top 10% of Island Interconnected System Load Hours (2021)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Feb-21 10:00:00	1518	52
11-Feb-21 17:00:00	1516	47
11-Feb-21 11:00:00	1514	53
11-Feb-21 09:00:00	1509	52
16-Dec-21 17:00:00	1506	78
22-Feb-21 08:00:00	1506	65
11-Feb-21 12:00:00	1501	52
16-Dec-21 19:00:00	1500	73
16-Dec-21 18:00:00	1498	75
21-Feb-21 17:00:00	1494	48
11-Feb-21 08:00:00	1493	55
22-Feb-21 07:00:00	1491	63
16-Dec-21 20:00:00	1489	73
11-Feb-21 16:00:00	1487	47
15-Dec-21 16:00:00	1482	65
16-Dec-21 08:00:00	1479	78
15-Dec-21 17:00:00	1478	69
22-Feb-21 09:00:00	1478	65

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Dec-21 17:00:00	1477	73
11-Feb-21 13:00:00	1474	52
11-Feb-21 18:00:00	1471	47
21-Feb-21 16:00:00	1469	58
16-Dec-21 09:00:00	1468	77
24-Dec-21 16:00:00	1466	72
11-Feb-21 14:00:00	1459	51
16-Dec-21 21:00:00	1458	73
11-Feb-21 15:00:00	1456	46
17-Dec-21 08:00:00	1455	64
21-Feb-21 18:00:00	1450	46
20-Dec-21 17:00:00	1447	59
16-Dec-21 16:00:00	1446	79
11-Feb-21 19:00:00	1445	47
15-Dec-21 18:00:00	1445	61
16-Dec-21 10:00:00	1445	77
11-Feb-21 07:00:00	1444	55
17-Dec-21 09:00:00	1440	64
16-Dec-21 07:00:00	1438	78
15-Dec-21 19:00:00	1438	64
24-Dec-21 18:00:00	1434	74
21-Feb-21 19:00:00	1432	43
17-Dec-21 07:00:00	1431	64
17-Dec-21 10:00:00	1429	65
24-Dec-21 11:00:00	1425	72
20-Dec-21 18:00:00	1425	59
22-Feb-21 06:00:00	1424	50
21-Feb-21 10:00:00	1424	57
15-Dec-21 20:00:00	1422	66
16-Dec-21 11:00:00	1421	77
17-Dec-21 11:00:00	1420	69
17-Dec-21 16:00:00	1420	72
21-Feb-21 15:00:00	1420	60
20-Jan-21 17:00:00	1419	70
20-Dec-21 19:00:00	1419	63
19-Feb-21 08:00:00	1418	34
15-Dec-21 15:00:00	1418	61
17-Dec-21 17:00:00	1416	71
24-Dec-21 10:00:00	1415	74
21-Feb-21 11:00:00	1415	57
24-Dec-21 12:00:00	1415	72

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Feb-21 10:00:00	1414	63
21-Jan-21 17:00:00	1411	57
21-Dec-21 08:00:00	1410	69
24-Dec-21 19:00:00	1409	73
11-Feb-21 20:00:00	1408	47
21-Feb-21 20:00:00	1407	41
24-Dec-21 15:00:00	1406	72
15-Dec-21 11:00:00	1406	56
21-Feb-21 09:00:00	1405	59
20-Dec-21 20:00:00	1404	66
15-Dec-21 10:00:00	1404	58
10-Dec-21 17:00:00	1402	68
20-Dec-21 16:00:00	1402	54
15-Dec-21 08:00:00	1401	71
21-Feb-21 14:00:00	1401	57
19-Feb-21 07:00:00	1399	32
24-Dec-21 09:00:00	1399	74
15-Dec-21 09:00:00	1398	64
16-Dec-21 12:00:00	1398	77
17-Dec-21 12:00:00	1396	74
21-Jan-21 16:00:00	1396	57
21-Feb-21 12:00:00	1396	59
21-Dec-21 09:00:00	1393	79
16-Dec-21 22:00:00	1393	73
29-Jan-21 08:00:00	1393	49
19-Dec-21 17:00:00	1392	79
24-Dec-21 13:00:00	1392	72
17-Mar-21 07:00:00	1391	51
15-Dec-21 12:00:00	1391	56
22-Feb-21 11:00:00	1390	63
20-Jan-21 18:00:00	1389	65
21-Feb-21 13:00:00	1388	58
24-Dec-21 14:00:00	1387	72
17-Mar-21 08:00:00	1386	60
15-Dec-21 21:00:00	1384	76
29-Mar-21 11:00:00	1384	65
15-Dec-21 14:00:00	1384	59
25-Jan-21 08:00:00	1384	43
24-Dec-21 20:00:00	1382	67
21-Dec-21 17:00:00	1382	75
18-Mar-21 08:00:00	1381	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
29-Jan-21 17:00:00	1381	50
17-Dec-21 13:00:00	1380	74
15-Dec-21 07:00:00	1380	72
17-Dec-21 15:00:00	1379	72
19-Dec-21 18:00:00	1378	78
19-Feb-21 09:00:00	1378	38
23-Jan-21 17:00:00	1378	52
16-Mar-21 08:00:00	1376	72
19-Feb-21 17:00:00	1375	56
29-Jan-21 09:00:00	1375	49
19-Dec-21 19:00:00	1373	77
17-Dec-21 14:00:00	1373	73
19-Feb-21 18:00:00	1372	53
25-Jan-21 09:00:00	1372	42
20-Jan-21 16:00:00	1372	70
10-Dec-21 18:00:00	1371	68
15-Dec-21 13:00:00	1371	55
21-Feb-21 21:00:00	1370	41
29-Mar-21 12:00:00	1370	66
20-Dec-21 21:00:00	1370	69
17-Dec-21 18:00:00	1369	72
28-Feb-21 11:00:00	1367	42
29-Mar-21 10:00:00	1366	62
20-Dec-21 09:00:00	1365	65
21-Dec-21 16:00:00	1365	76
10-Dec-21 16:00:00	1365	69
16-Dec-21 13:00:00	1364	77
28-Feb-21 12:00:00	1364	48
21-Dec-21 07:00:00	1364	61
01-Feb-21 17:00:00	1363	56
03-Jan-21 17:00:00	1363	48
21-Jan-21 18:00:00	1362	58
18-Mar-21 07:00:00	1361	67
22-Feb-21 12:00:00	1361	62
20-Feb-21 17:00:00	1360	61
21-Jan-21 08:00:00	1360	59
20-Jan-21 19:00:00	1360	66
24-Dec-21 08:00:00	1360	73
02-Feb-21 08:00:00	1359	59
11-Jan-21 17:00:00	1359	75
16-Mar-21 09:00:00	1358	72

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
19-Dec-21 20:00:00	1358	77
10-Dec-21 19:00:00	1357	68
21-Jan-21 09:00:00	1357	62
31-Dec-21 17:00:00	1356	57
04-Jan-21 17:00:00	1356	66
22-Feb-21 18:00:00	1356	35
16-Dec-21 15:00:00	1355	79
29-Jan-21 10:00:00	1355	60
22-Feb-21 19:00:00	1355	33
16-Jan-21 17:00:00	1355	61
19-Feb-21 19:00:00	1355	52
20-Dec-21 10:00:00	1354	59
21-Jan-21 12:00:00	1354	57
29-Mar-21 09:00:00	1354	62
25-Jan-21 07:00:00	1354	42
11-Feb-21 06:00:00	1354	52
20-Feb-21 18:00:00	1353	56
21-Dec-21 18:00:00	1353	75
11-Feb-21 21:00:00	1353	47
29-Jan-21 07:00:00	1353	48
14-Dec-21 17:00:00	1353	75
20-Jan-21 08:00:00	1352	44
21-Feb-21 08:00:00	1352	54
16-Feb-21 08:00:00	1352	43
21-Jan-21 15:00:00	1350	57
20-Dec-21 08:00:00	1349	77
21-Jan-21 11:00:00	1349	60
24-Dec-21 21:00:00	1349	63
19-Feb-21 16:00:00	1348	56
21-Jan-21 10:00:00	1348	62
09-Mar-21 08:00:00	1348	36
13-Feb-21 17:00:00	1348	55
21-Dec-21 10:00:00	1347	85
20-Dec-21 11:00:00	1347	56
29-Jan-21 16:00:00	1347	50
22-Jan-21 09:00:00	1347	61
22-Feb-21 05:00:00	1346	28
25-Jan-21 10:00:00	1346	44
20-Jan-21 09:00:00	1345	44
31-Mar-21 08:00:00	1345	64
20-Feb-21 09:00:00	1345	66

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Jan-21 17:00:00	1345	55
10-Feb-21 17:00:00	1345	59
21-Jan-21 13:00:00	1344	57
23-Jan-21 18:00:00	1344	51
02-Feb-21 09:00:00	1344	63
16-Dec-21 06:00:00	1344	73
23-Feb-21 08:00:00	1344	64
16-Dec-21 14:00:00	1344	78
20-Jan-21 10:00:00	1343	45
13-Feb-21 18:00:00	1343	55
20-Jan-21 11:00:00	1343	46
12-Feb-21 17:00:00	1343	65
11-Dec-21 09:00:00	1343	64
17-Dec-21 06:00:00	1342	64
28-Feb-21 10:00:00	1342	40
15-Feb-21 08:00:00	1342	34
17-Dec-21 19:00:00	1341	71
25-Dec-21 09:00:00	1340	72
16-Feb-21 17:00:00	1340	54
15-Feb-21 09:00:00	1340	38
21-Dec-21 12:00:00	1340	78
22-Jan-21 17:00:00	1339	60
28-Jan-21 17:00:00	1339	56
21-Jan-21 14:00:00	1339	57
22-Dec-21 17:00:00	1338	71
10-Feb-21 18:00:00	1337	65
22-Feb-21 20:00:00	1337	32
28-Feb-21 13:00:00	1337	48
26-Feb-21 18:00:00	1337	51
10-Feb-21 08:00:00	1337	55
11-Jan-21 16:00:00	1336	76
10-Feb-21 19:00:00	1336	62
25-Dec-21 11:00:00	1336	65
20-Feb-21 19:00:00	1336	57
22-Feb-21 17:00:00	1335	47
02-Feb-21 07:00:00	1335	54
10-Dec-21 20:00:00	1335	66
05-Jan-21 17:00:00	1335	70
20-Dec-21 12:00:00	1335	56
29-Mar-21 13:00:00	1334	65
18-Mar-21 09:00:00	1334	68

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
29-Jan-21 18:00:00	1334	50
25-Dec-21 10:00:00	1334	66
19-Dec-21 16:00:00	1334	78
25-Jan-21 17:00:00	1333	56
16-Feb-21 09:00:00	1333	45
19-Feb-21 10:00:00	1333	39
29-Mar-21 08:00:00	1333	62
29-Mar-21 16:00:00	1333	65
31-Mar-21 07:00:00	1333	64
21-Jan-21 19:00:00	1332	60
12-Feb-21 08:00:00	1332	55
01-Feb-21 16:00:00	1332	57
23-Jan-21 16:00:00	1332	52
17-Mar-21 09:00:00	1332	63
12-Feb-21 09:00:00	1332	57
21-Dec-21 19:00:00	1331	73
01-Jan-21 18:00:00	1331	54
16-Mar-21 10:00:00	1331	70
09-Mar-21 09:00:00	1331	36
20-Feb-21 08:00:00	1331	65
27-Jan-21 17:00:00	1330	50
01-Feb-21 18:00:00	1330	42
23-Feb-21 07:00:00	1330	51
19-Feb-21 20:00:00	1329	52
20-Feb-21 16:00:00	1328	58
20-Jan-21 15:00:00	1328	66
15-Dec-21 22:00:00	1328	76
14-Dec-21 18:00:00	1327	77
26-Feb-21 19:00:00	1327	51
12-Jan-21 08:00:00	1327	64
22-Dec-21 19:00:00	1327	71
03-Mar-21 07:00:00	1327	49
15-Feb-21 17:00:00	1326	51
20-Feb-21 10:00:00	1326	64
12-Jan-21 09:00:00	1325	66
10-Dec-21 08:00:00	1325	55
03-Jan-21 18:00:00	1325	49
04-Jan-21 16:00:00	1325	67
12-Feb-21 18:00:00	1325	66
16-Jan-21 16:00:00	1325	57
03-Jan-21 16:00:00	1325	48

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-21 07:00:00	1325	59
23-Feb-21 17:00:00	1325	57
21-Dec-21 13:00:00	1325	73
31-Dec-21 16:00:00	1324	57
19-Feb-21 06:00:00	1324	33
04-Mar-21 08:00:00	1324	41
20-Jan-21 20:00:00	1323	66
10-Feb-21 07:00:00	1323	47
01-Jan-21 19:00:00	1323	53
28-Jan-21 08:00:00	1323	48
22-Dec-21 18:00:00	1323	71
10-Feb-21 20:00:00	1323	64
23-Jan-21 09:00:00	1322	59
01-Jan-21 16:00:00	1322	55
02-Feb-21 17:00:00	1322	55
29-Mar-21 17:00:00	1322	69
16-Feb-21 18:00:00	1322	53
15-Feb-21 18:00:00	1322	50
08-Feb-21 11:00:00	1322	65
01-Feb-21 08:00:00	1321	65
26-Feb-21 17:00:00	1321	50
30-Jan-21 10:00:00	1321	69
30-Jan-21 17:00:00	1321	60
16-Dec-21 23:00:00	1321	67
22-Jan-21 10:00:00	1321	51
13-Feb-21 19:00:00	1320	47
11-Dec-21 17:00:00	1320	65
21-Dec-21 11:00:00	1320	84
30-Dec-21 17:00:00	1320	52
20-Dec-21 13:00:00	1320	54
09-Dec-21 17:00:00	1319	67
16-Mar-21 07:00:00	1319	57
15-Feb-21 10:00:00	1319	39
19-Dec-21 21:00:00	1319	77
30-Jan-21 11:00:00	1319	67
12-Feb-21 10:00:00	1318	58
03-Mar-21 08:00:00	1318	41
22-Dec-21 20:00:00	1318	72
22-Jan-21 08:00:00	1318	53
09-Feb-21 17:00:00	1318	66
25-Jan-21 11:00:00	1317	48

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Dec-21 15:00:00	1317	44
21-Feb-21 22:00:00	1317	41
08-Feb-21 12:00:00	1316	65
16-Jan-21 11:00:00	1316	60
14-Dec-21 16:00:00	1316	69
09-Dec-21 16:00:00	1316	68
23-Jan-21 19:00:00	1316	51
21-Dec-21 14:00:00	1316	75
28-Jan-21 18:00:00	1316	57
19-Feb-21 11:00:00	1316	47
28-Feb-21 16:00:00	1316	49
04-Mar-21 09:00:00	1315	41
20-Jan-21 12:00:00	1315	46
20-Jan-21 07:00:00	1315	48
12-Jan-21 10:00:00	1315	68
11-Jan-21 18:00:00	1314	75
29-Mar-21 15:00:00	1314	64
28-Feb-21 17:00:00	1314	45
22-Jan-21 18:00:00	1314	63
12-Feb-21 16:00:00	1314	68
04-Jan-21 18:00:00	1314	66
14-Dec-21 19:00:00	1314	77
31-Dec-21 18:00:00	1314	58
16-Jan-21 10:00:00	1313	62
23-Jan-21 10:00:00	1313	62
08-Feb-21 10:00:00	1312	64
01-Feb-21 09:00:00	1312	61
11-Dec-21 08:00:00	1312	65
16-Mar-21 20:00:00	1312	52
16-Mar-21 19:00:00	1312	54
14-Feb-21 09:00:00	1311	43
16-Feb-21 16:00:00	1311	58
23-Feb-21 18:00:00	1311	60
16-Jan-21 12:00:00	1311	59
16-Feb-21 07:00:00	1310	45
01-Jan-21 20:00:00	1310	53
22-Dec-21 08:00:00	1310	62
26-Jan-21 08:00:00	1309	53
13-Feb-21 16:00:00	1309	59
30-Jan-21 09:00:00	1309	69
04-Dec-21 17:00:00	1309	71

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Feb-21 04:00:00	1309	29
02-Feb-21 10:00:00	1308	61
01-Feb-21 19:00:00	1308	35
18-Feb-21 17:00:00	1308	31
02-Mar-21 11:00:00	1308	52
18-Feb-21 18:00:00	1308	30
03-Mar-21 18:00:00	1308	48
19-Feb-21 12:00:00	1308	55
26-Feb-21 20:00:00	1307	46
12-Jan-21 11:00:00	1307	68
11-Dec-21 16:00:00	1307	66
16-Jan-21 18:00:00	1307	63
29-Mar-21 14:00:00	1307	63
20-Dec-21 07:00:00	1307	73
16-Feb-21 10:00:00	1307	43
28-Dec-21 17:00:00	1307	65
01-Feb-21 10:00:00	1306	47
05-Jan-21 16:00:00	1306	74
23-Feb-21 16:00:00	1306	39
18-Feb-21 19:00:00	1306	33
18-Feb-21 08:00:00	1306	69
25-Dec-21 08:00:00	1305	68
03-Mar-21 19:00:00	1305	48
10-Dec-21 21:00:00	1305	69
14-Dec-21 20:00:00	1305	77
20-Feb-21 11:00:00	1304	58
20-Feb-21 20:00:00	1304	56
12-Feb-21 11:00:00	1304	59
02-Mar-21 10:00:00	1304	45
28-Jan-21 09:00:00	1304	56
25-Dec-21 16:00:00	1304	75
12-Feb-21 07:00:00	1303	49
26-Jan-21 09:00:00	1303	53
10-Feb-21 09:00:00	1303	43
12-Jan-21 17:00:00	1302	71
03-Jan-21 19:00:00	1302	49
20-Dec-21 14:00:00	1302	51
25-Dec-21 12:00:00	1302	69
15-Mar-21 08:00:00	1302	51
21-Dec-21 15:00:00	1302	75
28-Feb-21 09:00:00	1301	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
28-Feb-21 14:00:00	1301	48
14-Feb-21 08:00:00	1301	43
25-Jan-21 16:00:00	1301	56
10-Dec-21 07:00:00	1300	60
01-Feb-21 11:00:00	1300	46
02-Feb-21 18:00:00	1299	55
16-Feb-21 19:00:00	1299	48
24-Dec-21 22:00:00	1299	61
14-Feb-21 18:00:00	1299	36
15-Jan-21 17:00:00	1299	58
09-Feb-21 18:00:00	1298	72
22-Feb-21 21:00:00	1298	32
03-Mar-21 17:00:00	1298	48
02-Jan-21 17:00:00	1298	47
19-Feb-21 15:00:00	1298	56
26-Jan-21 17:00:00	1297	46
28-Feb-21 15:00:00	1297	49
09-Mar-21 10:00:00	1297	36
08-Mar-21 07:00:00	1297	43
09-Mar-21 07:00:00	1297	44
28-Jan-21 16:00:00	1297	57
28-Jan-21 19:00:00	1296	55
16-Feb-21 11:00:00	1296	45
18-Dec-21 17:00:00	1296	70
28-Jan-21 07:00:00	1296	52
16-Mar-21 17:00:00	1296	59
19-Dec-21 10:00:00	1296	74
23-Jan-21 11:00:00	1296	61
22-Feb-21 03:00:00	1296	29
22-Jan-21 19:00:00	1296	61
29-Jan-21 19:00:00	1295	50
19-Dec-21 11:00:00	1295	75
25-Jan-21 18:00:00	1295	56
20-Dec-21 22:00:00	1295	68
27-Jan-21 18:00:00	1295	57
31-Dec-21 10:00:00	1294	61
04-Mar-21 07:00:00	1294	41
25-Dec-21 17:00:00	1294	76
10-Feb-21 21:00:00	1294	63
06-Dec-21 17:00:00	1294	64
11-Jan-21 19:00:00	1293	75

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Mar-21 17:00:00	1293	68
29-Dec-21 17:00:00	1293	66
27-Feb-21 08:00:00	1293	43
03-Feb-21 10:00:00	1293	58
16-Jan-21 09:00:00	1293	66
27-Feb-21 07:00:00	1293	39
12-Feb-21 19:00:00	1292	65
09-Dec-21 19:00:00	1292	61
27-Dec-21 17:00:00	1292	61
10-Jan-21 17:00:00	1292	74
14-Feb-21 10:00:00	1292	43
02-Mar-21 09:00:00	1292	37
21-Jan-21 20:00:00	1292	60
09-Dec-21 18:00:00	1292	65
29-Jan-21 15:00:00	1292	46
12-Jan-21 16:00:00	1291	73
03-Feb-21 09:00:00	1291	56
06-Dec-21 08:00:00	1291	61
26-Jan-21 10:00:00	1291	55
01-Feb-21 07:00:00	1291	57
24-Dec-21 07:00:00	1291	66
30-Jan-21 12:00:00	1290	67
15-Feb-21 07:00:00	1290	32
19-Feb-21 21:00:00	1290	52
20-Jan-21 21:00:00	1290	66
04-Jan-21 19:00:00	1290	66
15-Feb-21 19:00:00	1290	49
28-Feb-21 18:00:00	1290	43
27-Feb-21 18:00:00	1290	46
27-Feb-21 19:00:00	1290	46
17-Dec-21 20:00:00	1290	71
12-Feb-21 12:00:00	1290	60
04-Mar-21 10:00:00	1289	39
08-Feb-21 17:00:00	1289	66
10-Dec-21 09:00:00	1289	56
09-Dec-21 12:00:00	1288	69
04-Dec-21 18:00:00	1288	72
08-Feb-21 16:00:00	1288	66
09-Feb-21 16:00:00	1288	66
16-Feb-21 12:00:00	1288	50
08-Mar-21 08:00:00	1288	36

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
17-Mar-21 06:00:00	1288	40
14-Feb-21 17:00:00	1288	40
22-Dec-21 21:00:00	1288	70
31-Dec-21 11:00:00	1287	61
22-Feb-21 13:00:00	1287	58
16-Mar-21 18:00:00	1287	60
22-Jan-21 11:00:00	1287	53
28-Dec-21 18:00:00	1286	65
13-Feb-21 20:00:00	1286	41
29-Jan-21 20:00:00	1286	50
09-Dec-21 11:00:00	1286	69
12-Jan-21 07:00:00	1286	69
23-Feb-21 09:00:00	1286	67
15-Feb-21 11:00:00	1286	41
05-Jan-21 18:00:00	1286	68
10-Feb-21 16:00:00	1285	59
03-Jan-21 11:00:00	1285	52
12-Jan-21 18:00:00	1285	69
31-Dec-21 09:00:00	1285	59
18-Feb-21 20:00:00	1285	41
15-Jan-21 16:00:00	1285	59
20-Feb-21 12:00:00	1285	55
03-Jan-21 12:00:00	1285	53
27-Mar-21 16:00:00	1285	70
01-Jan-21 21:00:00	1284	53
25-Jan-21 12:00:00	1284	47
22-Feb-21 02:00:00	1284	32
23-Jan-21 20:00:00	1284	46
15-Feb-21 16:00:00	1284	48
19-Feb-21 13:00:00	1284	50
16-Mar-21 16:00:00	1284	40
22-Jan-21 20:00:00	1284	54
16-Mar-21 11:00:00	1283	43
08-Feb-21 13:00:00	1283	65
03-Feb-21 11:00:00	1283	56
30-Dec-21 18:00:00	1283	51
09-Mar-21 11:00:00	1283	35
02-Feb-21 16:00:00	1283	55
11-Feb-21 22:00:00	1283	47
21-Dec-21 06:00:00	1282	63
01-Feb-21 20:00:00	1282	34

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Feb-21 07:00:00	1282	58
21-Feb-21 23:00:00	1282	35
18-Feb-21 09:00:00	1282	73
21-Dec-21 20:00:00	1281	72
15-Feb-21 20:00:00	1281	44
30-Jan-21 16:00:00	1281	60
04-Dec-21 16:00:00	1281	64
26-Jan-21 11:00:00	1280	58
31-Dec-21 19:00:00	1280	59
14-Feb-21 19:00:00	1280	34
16-Jan-21 13:00:00	1280	57
26-Feb-21 16:00:00	1280	51
09-Feb-21 19:00:00	1280	72
19-Dec-21 09:00:00	1280	72
11-Dec-21 10:00:00	1280	64
25-Dec-21 19:00:00	1280	76
26-Jan-21 07:00:00	1279	53
28-Dec-21 16:00:00	1279	69
21-Feb-21 07:00:00	1279	33
23-Feb-21 19:00:00	1279	45
23-Dec-21 17:00:00	1279	65
17-Mar-21 10:00:00	1279	44
22-Feb-21 16:00:00	1279	55
22-Dec-21 09:00:00	1279	66
27-Dec-21 16:00:00	1279	59
18-Feb-21 16:00:00	1279	34
25-Dec-21 18:00:00	1278	76
23-Jan-21 08:00:00	1278	50
17-Jan-21 11:00:00	1278	66
02-Feb-21 19:00:00	1278	55
16-Mar-21 21:00:00	1278	54
22-Dec-21 16:00:00	1278	72
07-Feb-21 18:00:00	1277	69
07-Mar-21 18:00:00	1277	32
16-Jan-21 19:00:00	1277	64
05-Jan-21 09:00:00	1277	74
31-Jan-21 17:00:00	1277	59
08-Feb-21 09:00:00	1277	63
17-Jan-21 12:00:00	1277	64
06-Dec-21 16:00:00	1277	57
12-Feb-21 15:00:00	1277	70

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Jan-21 08:00:00	1277	72
12-Jan-21 12:00:00	1277	68
27-Mar-21 19:00:00	1276	63
10-Dec-21 10:00:00	1276	55
30-Jan-21 18:00:00	1276	56
07-Mar-21 19:00:00	1276	36
28-Jan-21 20:00:00	1276	48
01-Feb-21 15:00:00	1276	59
03-Mar-21 20:00:00	1276	43
27-Jan-21 19:00:00	1276	58
25-Dec-21 20:00:00	1276	73
27-Jan-21 16:00:00	1276	44
02-Mar-21 12:00:00	1275	60
27-Feb-21 09:00:00	1275	42
20-Feb-21 15:00:00	1275	46
18-Dec-21 18:00:00	1275	71
23-Jan-21 15:00:00	1275	48
14-Feb-21 20:00:00	1275	33
15-Mar-21 09:00:00	1274	60
20-Jan-21 14:00:00	1274	61
11-Dec-21 18:00:00	1274	65
18-Mar-21 10:00:00	1274	66
30-Dec-21 16:00:00	1274	54
06-Dec-21 07:00:00	1274	62
23-Feb-21 15:00:00	1274	39
09-Dec-21 20:00:00	1274	63
27-Jan-21 08:00:00	1274	48
04-Dec-21 19:00:00	1273	72
23-Jan-21 12:00:00	1273	53
22-Feb-21 01:00:00	1273	31
26-Feb-21 21:00:00	1273	40
10-Jan-21 16:00:00	1272	75
25-Dec-21 15:00:00	1272	68
11-Jan-21 12:00:00	1272	74
03-Jan-21 10:00:00	1272	52
11-Jan-21 11:00:00	1272	74
27-Feb-21 20:00:00	1272	47
29-Jan-21 12:00:00	1271	51
30-Dec-21 19:00:00	1271	47
04-Mar-21 11:00:00	1271	41
31-Mar-21 09:00:00	1271	72

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Mar-21 18:00:00	1270	63
22-Jan-21 16:00:00	1270	44
31-Dec-21 12:00:00	1270	60
01-Feb-21 12:00:00	1270	46
03-Mar-21 09:00:00	1270	34
03-Feb-21 08:00:00	1270	52
03-Jan-21 20:00:00	1270	48
11-Jan-21 15:00:00	1270	75
27-Mar-21 20:00:00	1270	62
09-Dec-21 15:00:00	1270	70
28-Jan-21 10:00:00	1270	54
09-Dec-21 13:00:00	1270	69
16-Jan-21 15:00:00	1270	57
07-Feb-21 19:00:00	1269	69
30-Mar-21 08:00:00	1269	65
29-Jan-21 14:00:00	1269	44
29-Mar-21 18:00:00	1269	69
29-Dec-21 16:00:00	1269	65
16-Feb-21 20:00:00	1269	47
10-Dec-21 11:00:00	1269	52
02-Feb-21 11:00:00	1268	58
26-Jan-21 18:00:00	1268	48
12-Feb-21 13:00:00	1268	60
17-Dec-21 05:00:00	1268	64
10-Feb-21 10:00:00	1268	48
26-Jan-21 16:00:00	1268	48
23-Dec-21 18:00:00	1268	64
29-Jan-21 11:00:00	1268	60
25-Dec-21 13:00:00	1267	70
14-Dec-21 21:00:00	1267	77
09-Dec-21 10:00:00	1267	66
11-Dec-21 11:00:00	1267	64
19-Jan-21 17:00:00	1267	51
29-Mar-21 07:00:00	1267	63
03-Jan-21 13:00:00	1267	51
30-Mar-21 09:00:00	1267	66
12-Jan-21 19:00:00	1266	69
28-Mar-21 09:00:00	1266	64
03-Jan-21 15:00:00	1266	48
24-Feb-21 17:00:00	1266	27
16-Jan-21 14:00:00	1266	57

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Feb-21 21:00:00	1266	45
17-Dec-21 00:00:00	1265	68
11-Jan-21 10:00:00	1265	74
27-Mar-21 11:00:00	1265	69
11-Feb-21 05:00:00	1265	31
25-Jan-21 19:00:00	1264	56
29-Jan-21 13:00:00	1264	47
25-Feb-21 16:00:00	1264	36
26-Jan-21 12:00:00	1264	51
22-Jan-21 07:00:00	1263	56
24-Jan-21 17:00:00	1263	49
12-Jan-21 15:00:00	1263	72
27-Feb-21 10:00:00	1263	42
10-Dec-21 15:00:00	1263	67
16-Feb-21 13:00:00	1263	54
07-Feb-21 17:00:00	1263	70
12-Jan-21 13:00:00	1263	69
25-Dec-21 14:00:00	1263	68
22-Feb-21 00:00:00	1262	30
05-Jan-21 10:00:00	1262	74
27-Mar-21 13:00:00	1262	70
07-Mar-21 17:00:00	1262	32
05-Dec-21 17:00:00	1262	71
13-Feb-21 12:00:00	1262	49
18-Dec-21 16:00:00	1262	70
14-Jan-21 17:00:00	1262	72
16-Feb-21 15:00:00	1262	60
30-Jan-21 08:00:00	1262	63
16-Mar-21 12:00:00	1261	39
11-Jan-21 13:00:00	1261	75
20-Feb-21 13:00:00	1261	50
19-Dec-21 12:00:00	1261	66
17-Feb-21 17:00:00	1261	52
02-Jan-21 16:00:00	1260	47
01-Jan-21 15:00:00	1260	55
04-Dec-21 20:00:00	1260	72
24-Jan-21 18:00:00	1260	54
19-Feb-21 14:00:00	1260	51
02-Jan-21 18:00:00	1260	47
25-Feb-21 17:00:00	1260	39
18-Feb-21 07:00:00	1259	47

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
07-Mar-21 20:00:00	1259	37
22-Dec-21 07:00:00	1259	62
13-Feb-21 11:00:00	1259	52
13-Jan-21 17:00:00	1259	75
28-Feb-21 19:00:00	1259	43
12-Jan-21 14:00:00	1259	71
28-Dec-21 19:00:00	1259	66
15-Jan-21 18:00:00	1259	60
27-Mar-21 12:00:00	1259	69
23-Jan-21 13:00:00	1259	48
11-Dec-21 12:00:00	1259	64
09-Feb-21 11:00:00	1258	67
17-Jan-21 17:00:00	1258	53
02-Mar-21 08:00:00	1258	44
13-Jan-21 08:00:00	1258	56
17-Jan-21 10:00:00	1258	65
11-Jan-21 09:00:00	1258	73
09-Dec-21 14:00:00	1257	68
18-Dec-21 19:00:00	1257	70
20-Feb-21 14:00:00	1257	46
03-Jan-21 14:00:00	1257	48
04-Jan-21 20:00:00	1256	66
14-Feb-21 11:00:00	1256	41
15-Jan-21 09:00:00	1256	67
09-Feb-21 20:00:00	1256	72
24-Jan-21 19:00:00	1255	57
20-Jan-21 13:00:00	1255	51
13-Jan-21 09:00:00	1255	57
15-Dec-21 06:00:00	1255	69
17-Jan-21 16:00:00	1255	54
27-Jan-21 09:00:00	1255	48
29-Dec-21 18:00:00	1255	66
23-Dec-21 19:00:00	1255	64
13-Feb-21 15:00:00	1255	58
30-Jan-21 13:00:00	1255	61
10-Dec-21 22:00:00	1255	69
08-Feb-21 15:00:00	1254	66
06-Dec-21 09:00:00	1254	63
13-Feb-21 13:00:00	1254	49
03-Mar-21 11:00:00	1254	37
27-Dec-21 18:00:00	1254	60

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
31-Dec-21 08:00:00	1254	54
04-Jan-21 15:00:00	1254	70
09-Dec-21 21:00:00	1254	62
15-Feb-21 12:00:00	1254	41
27-Mar-21 14:00:00	1253	70
08-Feb-21 18:00:00	1253	68
03-Feb-21 07:00:00	1253	48
12-Feb-21 14:00:00	1252	66
18-Mar-21 06:00:00	1252	48
27-Feb-21 06:00:00	1252	37
18-Feb-21 21:00:00	1252	39
10-Jan-21 18:00:00	1252	74
23-Jan-21 14:00:00	1252	48
04-Jan-21 09:00:00	1252	59
04-Jan-21 11:00:00	1252	63
05-Jan-21 11:00:00	1251	72
11-Jan-21 14:00:00	1251	75
11-Dec-21 07:00:00	1251	66
24-Jan-21 09:00:00	1251	43
28-Mar-21 10:00:00	1251	66
12-Feb-21 20:00:00	1251	65
08-Mar-21 09:00:00	1250	36
27-Jan-21 20:00:00	1250	58
31-Jan-21 18:00:00	1250	62
15-Mar-21 07:00:00	1250	48
03-Feb-21 12:00:00	1250	47
04-Jan-21 12:00:00	1250	64
25-Dec-21 21:00:00	1250	72
15-Jan-21 08:00:00	1250	64
06-Dec-21 18:00:00	1250	66
08-Dec-21 17:00:00	1250	72
26-Dec-21 17:00:00	1249	70
31-Dec-21 15:00:00	1249	59
17-Mar-21 20:00:00	1249	33
01-Feb-21 21:00:00	1249	35
27-Jan-21 07:00:00	1249	45
31-Jan-21 19:00:00	1249	41
01-Jan-21 14:00:00	1249	55
09-Mar-21 19:00:00	1249	46
26-Jan-21 19:00:00	1248	51
30-Dec-21 20:00:00	1248	47

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
31-Jan-21 16:00:00	1248	53
17-Feb-21 18:00:00	1248	52
16-Dec-21 05:00:00	1248	69
22-Jan-21 12:00:00	1248	51
28-Dec-21 20:00:00	1248	66
07-Feb-21 20:00:00	1247	68
08-Feb-21 14:00:00	1247	66
24-Feb-21 18:00:00	1247	34
09-Feb-21 12:00:00	1247	66
15-Dec-21 23:00:00	1247	74
23-Feb-21 06:00:00	1247	41
14-Feb-21 07:00:00	1247	43
25-Jan-21 15:00:00	1247	52
04-Jan-21 10:00:00	1247	60
22-Jan-21 21:00:00	1246	54
15-Feb-21 13:00:00	1246	41
07-Feb-21 11:00:00	1246	61
17-Dec-21 04:00:00	1246	64
16-Mar-21 13:00:00	1246	36
11-Jan-21 20:00:00	1246	75
29-Jan-21 06:00:00	1246	43
26-Jan-21 13:00:00	1246	49
10-Mar-21 07:00:00	1246	32
09-Feb-21 09:00:00	1246	65
24-Jan-21 20:00:00	1245	57
19-Dec-21 22:00:00	1245	76
09-Feb-21 10:00:00	1245	66
24-Jan-21 10:00:00	1245	39
05-Jan-21 19:00:00	1245	70
04-Jan-21 08:00:00	1244	59
16-Feb-21 14:00:00	1244	59
27-Feb-21 17:00:00	1244	44
10-Feb-21 11:00:00	1244	54
15-Jan-21 10:00:00	1244	69
16-Mar-21 15:00:00	1244	33
02-Jan-21 08:00:00	1244	56
29-Jan-21 21:00:00	1244	52
23-Dec-21 20:00:00	1244	64
11-Dec-21 15:00:00	1244	67
31-Dec-21 13:00:00	1244	59
15-Feb-21 21:00:00	1244	31

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
07-Mar-21 11:00:00	1244	32
01-Feb-21 13:00:00	1244	46
09-Feb-21 15:00:00	1244	66
28-Jan-21 21:00:00	1244	48
27-Mar-21 15:00:00	1243	70
09-Mar-21 12:00:00	1243	35
13-Jan-21 19:00:00	1243	75
13-Jan-21 18:00:00	1243	75
21-Dec-21 21:00:00	1243	72
12-Jan-21 20:00:00	1243	69
03-Mar-21 16:00:00	1243	40
13-Jan-21 07:00:00	1243	55
11-Jan-21 08:00:00	1243	73
05-Mar-21 08:00:00	1242	35
13-Feb-21 21:00:00	1242	40
10-Dec-21 12:00:00	1242	57
17-Jan-21 13:00:00	1242	64
07-Mar-21 10:00:00	1242	32
05-Dec-21 16:00:00	1242	71
06-Mar-21 18:00:00	1241	46
02-Feb-21 20:00:00	1241	54
19-Feb-21 05:00:00	1241	35
28-Feb-21 08:00:00	1241	34
11-Dec-21 13:00:00	1241	66
17-Dec-21 01:00:00	1241	68
19-Jan-21 18:00:00	1241	52
05-Mar-21 09:00:00	1240	35
25-Dec-21 07:00:00	1240	67
05-Jan-21 12:00:00	1240	66
01-Feb-21 14:00:00	1240	48
03-Mar-21 12:00:00	1240	35
06-Mar-21 19:00:00	1240	46
23-Dec-21 08:00:00	1240	59
27-Feb-21 21:00:00	1240	46
02-Jan-21 09:00:00	1240	56
05-Jan-21 07:00:00	1239	69
05-Dec-21 18:00:00	1239	70
16-Jan-21 20:00:00	1239	59
31-Dec-21 20:00:00	1239	60
30-Jan-21 15:00:00	1239	61
03-Jan-21 09:00:00	1239	52

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Jan-21 19:00:00	1239	59
14-Jan-21 08:00:00	1239	60
23-Jan-21 21:00:00	1239	45
15-Jan-21 15:00:00	1239	68
19-Feb-21 22:00:00	1239	49
29-Mar-21 19:00:00	1239	69
24-Dec-21 23:00:00	1238	60
03-Mar-21 21:00:00	1238	42
10-Feb-21 22:00:00	1238	61
04-Mar-21 12:00:00	1238	42
01-Mar-21 09:00:00	1238	41
14-Dec-21 15:00:00	1238	70
14-Jan-21 16:00:00	1238	64
03-Mar-21 10:00:00	1237	35
09-Feb-21 13:00:00	1237	66
15-Mar-21 20:00:00	1237	51
16-Mar-21 14:00:00	1237	33
11-Dec-21 19:00:00	1237	65
10-Mar-21 08:00:00	1237	32
08-Dec-21 16:00:00	1237	70
21-Jan-21 06:00:00	1237	59
09-Feb-21 08:00:00	1237	65
09-Dec-21 09:00:00	1236	69
30-Jan-21 19:00:00	1236	53
02-Jan-21 19:00:00	1236	48
30-Jan-21 14:00:00	1236	61
07-Feb-21 10:00:00	1236	61
19-Jan-21 19:00:00	1236	48
16-Feb-21 06:00:00	1236	38
18-Dec-21 20:00:00	1236	65
26-Feb-21 08:00:00	1236	45
17-Mar-21 11:00:00	1235	38
17-Feb-21 08:00:00	1235	36
04-Jan-21 13:00:00	1235	68
19-Dec-21 08:00:00	1235	73
15-Jan-21 11:00:00	1235	66
08-Feb-21 19:00:00	1235	74
24-Feb-21 19:00:00	1235	35
Average (MW)	**1307**	**58**

Table C-3: Top 10% of Island Interconnected System Load Hours (2022)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
16-Feb-22 07:00:00	1614	66
16-Feb-22 08:00:00	1613	66
07-Feb-22 08:00:00	1600	86
07-Feb-22 07:00:00	1599	86
16-Feb-22 18:00:00	1583	76
16-Feb-22 17:00:00	1573	77
16-Feb-22 09:00:00	1571	66
12-Jan-22 08:00:00	1568	77
16-Feb-22 19:00:00	1568	76
28-Jan-22 08:00:00	1549	73
04-Jan-22 17:00:00	1545	75
07-Feb-22 09:00:00	1545	86
01-Mar-22 08:00:00	1541	76
16-Feb-22 10:00:00	1541	71
29-Dec-22 17:00:00	1540	60
12-Jan-22 09:00:00	1539	77
06-Feb-22 17:00:00	1539	86
01-Mar-22 07:00:00	1538	78
06-Feb-22 18:00:00	1538	86
06-Feb-22 19:00:00	1537	86
28-Jan-22 07:00:00	1531	68
06-Feb-22 20:00:00	1523	86
04-Jan-22 16:00:00	1523	66
16-Feb-22 20:00:00	1519	76
12-Jan-22 17:00:00	1519	76
29-Dec-22 18:00:00	1516	60
16-Feb-22 11:00:00	1513	78
04-Jan-22 18:00:00	1512	83
16-Feb-22 06:00:00	1511	66
12-Jan-22 07:00:00	1510	79
15-Feb-22 18:00:00	1509	76
16-Feb-22 16:00:00	1509	79
15-Feb-22 17:00:00	1508	76
01-Mar-22 09:00:00	1506	71
02-Feb-22 08:00:00	1504	82
05-Jan-22 08:00:00	1504	76
15-Feb-22 19:00:00	1504	76
04-Jan-22 19:00:00	1502	83
29-Dec-22 16:00:00	1500	62

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
14-Feb-22 17:00:00	1497	78
01-Mar-22 19:00:00	1494	73
12-Jan-22 10:00:00	1494	77
02-Mar-22 07:00:00	1493	64
07-Feb-22 06:00:00	1492	85
16-Feb-22 21:00:00	1492	73
29-Dec-22 19:00:00	1492	58
07-Feb-22 10:00:00	1492	86
01-Mar-22 18:00:00	1489	73
16-Feb-22 12:00:00	1487	78
12-Jan-22 16:00:00	1486	76
15-Feb-22 20:00:00	1486	67
06-Feb-22 16:00:00	1483	86
01-Mar-22 20:00:00	1483	73
02-Feb-22 09:00:00	1480	82
28-Jan-22 09:00:00	1480	73
06-Feb-22 21:00:00	1479	86
25-Feb-22 07:00:00	1478	74
04-Jan-22 20:00:00	1478	83
25-Feb-22 08:00:00	1477	75
17-Feb-22 08:00:00	1475	73
05-Jan-22 07:00:00	1475	63
14-Feb-22 16:00:00	1475	78
02-Feb-22 07:00:00	1472	82
17-Jan-22 08:00:00	1472	81
05-Jan-22 09:00:00	1470	74
29-Dec-22 11:00:00	1469	65
16-Jan-22 17:00:00	1469	82
12-Jan-22 11:00:00	1467	75
07-Feb-22 17:00:00	1466	86
29-Dec-22 10:00:00	1465	65
29-Dec-22 20:00:00	1463	54
14-Feb-22 18:00:00	1463	76
17-Feb-22 07:00:00	1459	67
02-Mar-22 08:00:00	1458	65
11-Jan-22 17:00:00	1457	69
01-Mar-22 10:00:00	1457	76
16-Feb-22 13:00:00	1456	75
17-Feb-22 09:00:00	1455	70
29-Dec-22 12:00:00	1455	65
07-Feb-22 11:00:00	1455	86

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-22 09:00:00	1453	78
01-Mar-22 21:00:00	1453	73
15-Feb-22 09:00:00	1452	71
05-Jan-22 10:00:00	1452	76
12-Jan-22 18:00:00	1450	74
07-Feb-22 18:00:00	1450	86
15-Feb-22 21:00:00	1450	64
16-Feb-22 15:00:00	1449	73
15-Feb-22 16:00:00	1448	76
16-Jan-22 16:00:00	1446	83
26-Feb-22 10:00:00	1446	78
26-Feb-22 19:00:00	1446	76
26-Feb-22 18:00:00	1445	80
14-Feb-22 08:00:00	1445	77
15-Feb-22 08:00:00	1445	71
01-Mar-22 17:00:00	1444	77
29-Dec-22 09:00:00	1444	67
01-Mar-22 06:00:00	1443	77
14-Mar-22 09:00:00	1442	77
12-Jan-22 12:00:00	1442	72
04-Jan-22 21:00:00	1441	77
25-Feb-22 09:00:00	1440	75
16-Feb-22 14:00:00	1440	71
14-Mar-22 08:00:00	1439	77
14-Feb-22 19:00:00	1439	76
09-Jan-22 09:00:00	1439	66
16-Feb-22 22:00:00	1438	70
02-Feb-22 10:00:00	1438	81
04-Jan-22 15:00:00	1438	64
07-Feb-22 19:00:00	1438	85
16-Mar-22 07:00:00	1436	75
22-Jan-22 17:00:00	1435	83
02-Mar-22 06:00:00	1435	64
16-Jan-22 18:00:00	1434	82
17-Jan-22 07:00:00	1434	82
22-Jan-22 18:00:00	1433	83
09-Jan-22 10:00:00	1433	72
15-Feb-22 10:00:00	1432	69
11-Jan-22 16:00:00	1431	69
26-Feb-22 20:00:00	1429	76
29-Dec-22 13:00:00	1429	62

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-22 08:00:00	1429	79
06-Feb-22 15:00:00	1427	86
26-Feb-22 11:00:00	1427	78
11-Jan-22 08:00:00	1426	77
16-Mar-22 08:00:00	1425	74
05-Jan-22 11:00:00	1425	70
22-Jan-22 08:00:00	1424	83
28-Dec-22 17:00:00	1424	78
11-Jan-22 18:00:00	1424	76
11-Jan-22 19:00:00	1423	77
14-Mar-22 10:00:00	1423	73
04-Jan-22 12:00:00	1423	64
17-Feb-22 10:00:00	1422	70
01-Mar-22 11:00:00	1422	76
12-Jan-22 19:00:00	1422	73
29-Dec-22 21:00:00	1421	52
28-Jan-22 17:00:00	1421	73
14-Feb-22 15:00:00	1420	77
16-Jan-22 13:00:00	1420	83
14-Feb-22 13:00:00	1420	78
16-Jan-22 12:00:00	1419	83
25-Feb-22 18:00:00	1418	82
14-Feb-22 12:00:00	1418	78
22-Jan-22 09:00:00	1417	83
30-Dec-22 17:00:00	1417	45
11-Jan-22 10:00:00	1417	80
29-Dec-22 15:00:00	1416	62
24-Feb-22 19:00:00	1416	84
24-Feb-22 18:00:00	1416	84
04-Jan-22 14:00:00	1416	62
19-Jan-22 17:00:00	1416	80
28-Jan-22 06:00:00	1415	68
14-Feb-22 20:00:00	1415	76
22-Jan-22 19:00:00	1415	82
04-Jan-22 11:00:00	1414	60
25-Feb-22 17:00:00	1414	82
16-Jan-22 19:00:00	1413	83
05-Mar-22 18:00:00	1413	68
27-Jan-22 17:00:00	1413	75
21-Jan-22 17:00:00	1413	80
07-Feb-22 12:00:00	1413	85

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
04-Jan-22 13:00:00	1413	61
17-Jan-22 09:00:00	1413	80
11-Jan-22 09:00:00	1412	78
24-Nov-22 17:00:00	1412	19
06-Feb-22 22:00:00	1411	81
12-Jan-22 06:00:00	1411	78
09-Jan-22 17:00:00	1411	63
29-Dec-22 14:00:00	1411	62
07-Feb-22 20:00:00	1410	83
15-Feb-22 11:00:00	1410	69
16-Jan-22 15:00:00	1409	83
24-Feb-22 17:00:00	1408	84
12-Jan-22 15:00:00	1408	76
14-Mar-22 07:00:00	1407	75
25-Feb-22 10:00:00	1407	73
16-Jan-22 14:00:00	1407	83
05-Mar-22 19:00:00	1407	68
11-Jan-22 11:00:00	1406	76
24-Nov-22 16:00:00	1406	14
29-Dec-22 08:00:00	1405	70
14-Mar-22 11:00:00	1405	72
12-Jan-22 13:00:00	1405	72
01-Feb-22 17:00:00	1405	86
11-Jan-22 20:00:00	1404	77
05-Jan-22 17:00:00	1404	65
16-Feb-22 05:00:00	1404	64
09-Jan-22 11:00:00	1404	72
06-Feb-22 14:00:00	1403	86
15-Feb-22 07:00:00	1403	75
14-Feb-22 14:00:00	1403	77
14-Feb-22 07:00:00	1403	75
28-Jan-22 16:00:00	1402	74
06-Feb-22 11:00:00	1401	86
06-Feb-22 10:00:00	1401	84
01-Feb-22 19:00:00	1401	86
25-Feb-22 19:00:00	1400	82
01-Mar-22 22:00:00	1400	73
27-Feb-22 18:00:00	1400	71
27-Jan-22 18:00:00	1400	74
28-Jan-22 10:00:00	1399	73
01-Feb-22 18:00:00	1399	86

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
07-Feb-22 16:00:00	1399	86
17-Feb-22 11:00:00	1398	69
16-Jan-22 11:00:00	1398	83
27-Feb-22 19:00:00	1398	71
15-Feb-22 12:00:00	1398	68
02-Mar-22 09:00:00	1398	68
12-Jan-22 20:00:00	1397	73
30-Dec-22 08:00:00	1397	42
07-Feb-22 05:00:00	1397	83
30-Dec-22 09:00:00	1397	40
06-Feb-22 13:00:00	1396	86
23-Feb-22 08:00:00	1396	77
04-Jan-22 10:00:00	1396	58
26-Feb-22 21:00:00	1396	76
14-Mar-22 20:00:00	1396	81
28-Dec-22 18:00:00	1395	77
06-Feb-22 12:00:00	1394	86
04-Mar-22 19:00:00	1394	66
24-Feb-22 20:00:00	1393	84
22-Jan-22 20:00:00	1392	81
21-Feb-22 08:00:00	1392	82
15-Feb-22 15:00:00	1392	74
19-Jan-22 18:00:00	1392	82
26-Feb-22 17:00:00	1391	80
14-Feb-22 11:00:00	1391	78
05-Jan-22 06:00:00	1391	64
01-Mar-22 12:00:00	1390	73
22-Jan-22 10:00:00	1390	83
04-Jan-22 22:00:00	1390	75
14-Feb-22 09:00:00	1389	77
27-Jan-22 19:00:00	1389	68
28-Dec-22 16:00:00	1388	77
21-Jan-22 16:00:00	1388	81
16-Jan-22 20:00:00	1388	83
05-Mar-22 20:00:00	1388	68
27-Feb-22 08:00:00	1388	77
26-Feb-22 12:00:00	1387	78
04-Mar-22 18:00:00	1386	66
22-Jan-22 07:00:00	1384	84
01-Feb-22 20:00:00	1384	86
09-Mar-22 07:00:00	1384	63

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Jan-22 16:00:00	1384	57
15-Feb-22 22:00:00	1384	64
30-Dec-22 16:00:00	1384	45
25-Feb-22 06:00:00	1383	75
09-Jan-22 08:00:00	1383	58
21-Feb-22 09:00:00	1383	83
26-Feb-22 07:00:00	1383	79
06-Feb-22 09:00:00	1383	83
08-Jan-22 17:00:00	1383	58
17-Mar-22 08:00:00	1383	75
30-Dec-22 18:00:00	1383	45
19-Jan-22 19:00:00	1383	82
09-Jan-22 16:00:00	1382	62
28-Jan-22 18:00:00	1381	73
23-Jan-22 17:00:00	1381	82
04-Mar-22 20:00:00	1380	66
04-Jan-22 09:00:00	1380	56
27-Feb-22 17:00:00	1380	72
16-Jan-22 10:00:00	1380	83
12-Jan-22 14:00:00	1380	76
24-Nov-22 18:00:00	1379	27
17-Feb-22 12:00:00	1379	68
21-Jan-22 18:00:00	1378	80
01-Mar-22 16:00:00	1378	78
23-Feb-22 09:00:00	1378	76
14-Mar-22 12:00:00	1378	73
15-Mar-22 08:00:00	1377	77
14-Mar-22 19:00:00	1376	81
25-Feb-22 11:00:00	1376	76
23-Jan-22 09:00:00	1376	83
11-Jan-22 12:00:00	1376	73
14-Feb-22 10:00:00	1376	77
30-Dec-22 07:00:00	1376	45
27-Jan-22 20:00:00	1375	68
17-Mar-22 07:00:00	1375	75
17-Feb-22 06:00:00	1375	63
28-Dec-22 19:00:00	1375	77
28-Feb-22 08:00:00	1374	81
19-Jan-22 16:00:00	1374	77
30-Dec-22 10:00:00	1374	40
13-Jan-22 08:00:00	1374	70

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Feb-22 20:00:00	1373	82
11-Jan-22 21:00:00	1373	76
27-Feb-22 09:00:00	1373	77
23-Feb-22 10:00:00	1373	76
15-Mar-22 07:00:00	1372	77
27-Feb-22 07:00:00	1372	76
02-Feb-22 11:00:00	1372	79
19-Jan-22 20:00:00	1372	82
23-Jan-22 11:00:00	1372	82
24-Feb-22 16:00:00	1372	81
02-Feb-22 06:00:00	1371	82
14-Mar-22 21:00:00	1371	80
13-Jan-22 09:00:00	1371	58
09-Jan-22 18:00:00	1371	59
15-Feb-22 14:00:00	1370	68
30-Nov-22 08:00:00	1370	55
07-Feb-22 13:00:00	1370	86
27-Feb-22 20:00:00	1370	71
10-Mar-22 08:00:00	1369	58
16-Feb-22 23:00:00	1369	65
09-Mar-22 08:00:00	1368	62
11-Jan-22 15:00:00	1368	69
14-Feb-22 21:00:00	1368	77
05-Mar-22 17:00:00	1368	68
15-Feb-22 13:00:00	1367	69
21-Feb-22 07:00:00	1367	82
04-Mar-22 08:00:00	1367	69
24-Nov-22 19:00:00	1367	32
27-Feb-22 11:00:00	1366	76
21-Feb-22 10:00:00	1365	84
11-Jan-22 07:00:00	1364	73
21-Jan-22 19:00:00	1364	80
14-Mar-22 17:00:00	1364	81
27-Feb-22 10:00:00	1364	77
12-Jan-22 21:00:00	1364	71
23-Jan-22 12:00:00	1364	82
23-Feb-22 07:00:00	1362	77
25-Feb-22 16:00:00	1362	81
16-Mar-22 09:00:00	1362	73
07-Feb-22 21:00:00	1362	83
02-Mar-22 10:00:00	1361	69

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Jan-22 18:00:00	1361	57
05-Jan-22 12:00:00	1361	69
17-Jan-22 10:00:00	1360	79
22-Jan-22 11:00:00	1359	83
09-Jan-22 12:00:00	1359	71
20-Jan-22 08:00:00	1359	81
24-Feb-22 21:00:00	1359	84
30-Dec-22 19:00:00	1359	45
05-Mar-22 21:00:00	1358	67
30-Nov-22 17:00:00	1358	34
29-Dec-22 07:00:00	1358	75
03-Jan-22 17:00:00	1358	73
30-Nov-22 18:00:00	1358	34
28-Feb-22 07:00:00	1358	76
20-Jan-22 09:00:00	1358	81
28-Dec-22 20:00:00	1357	77
23-Dec-22 17:00:00	1357	83
29-Dec-22 22:00:00	1357	45
27-Jan-22 16:00:00	1357	78
10-Mar-22 07:00:00	1356	58
23-Feb-22 11:00:00	1356	73
02-Mar-22 05:00:00	1356	64
04-Mar-22 21:00:00	1356	66
08-Feb-22 08:00:00	1356	82
28-Jan-22 15:00:00	1356	74
23-Jan-22 10:00:00	1356	82
16-Feb-22 04:00:00	1356	65
30-Nov-22 19:00:00	1355	36
23-Jan-22 18:00:00	1355	82
23-Jan-22 16:00:00	1355	82
22-Jan-22 21:00:00	1354	81
07-Feb-22 14:00:00	1354	86
04-Feb-22 17:00:00	1354	86
26-Feb-22 22:00:00	1354	76
17-Mar-22 09:00:00	1353	75
08-Jan-22 19:00:00	1353	56
01-Feb-22 09:00:00	1352	86
27-Feb-22 16:00:00	1352	73
11-Jan-22 13:00:00	1352	70
13-Mar-22 20:00:00	1352	72
28-Jan-22 11:00:00	1352	74

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Feb-22 07:00:00	1352	82
05-Jan-22 18:00:00	1351	63
04-Mar-22 17:00:00	1351	66
27-Jan-22 08:00:00	1351	84
22-Jan-22 16:00:00	1351	83
04-Jan-22 08:00:00	1350	54
27-Feb-22 12:00:00	1350	77
13-Jan-22 10:00:00	1350	61
14-Mar-22 18:00:00	1350	81
07-Feb-22 04:00:00	1350	84
24-Jan-22 17:00:00	1349	72
30-Dec-22 11:00:00	1349	42
24-Nov-22 08:00:00	1349	19
01-Mar-22 05:00:00	1349	73
01-Mar-22 13:00:00	1349	64
01-Feb-22 21:00:00	1349	86
30-Nov-22 07:00:00	1348	56
02-Feb-22 18:00:00	1348	84
30-Dec-22 20:00:00	1348	40
06-Feb-22 23:00:00	1348	81
17-Jan-22 06:00:00	1348	82
28-Jan-22 13:00:00	1347	78
02-Feb-22 19:00:00	1347	84
24-Nov-22 15:00:00	1347	15
16-Jan-22 21:00:00	1347	83
24-Nov-22 20:00:00	1347	27
07-Feb-22 15:00:00	1347	86
12-Dec-22 17:00:00	1346	19
24-Nov-22 09:00:00	1346	17
20-Feb-22 19:00:00	1346	82
20-Jan-22 10:00:00	1346	80
28-Jan-22 19:00:00	1346	73
27-Jan-22 21:00:00	1345	68
14-Mar-22 16:00:00	1345	81
20-Feb-22 18:00:00	1345	82
02-Feb-22 17:00:00	1345	84
21-Feb-22 11:00:00	1345	84
23-Dec-22 09:00:00	1345	82
13-Jan-22 17:00:00	1344	68
01-Feb-22 08:00:00	1344	86
21-Jan-22 20:00:00	1344	80

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Dec-22 17:00:00	1344	32
09-Jan-22 19:00:00	1343	56
25-Feb-22 12:00:00	1343	76
28-Jan-22 14:00:00	1343	75
24-Dec-22 16:00:00	1342	78
30-Nov-22 20:00:00	1342	36
07-Mar-22 17:00:00	1342	53
16-Jan-22 09:00:00	1342	81
08-Feb-22 17:00:00	1341	80
01-Mar-22 23:00:00	1341	71
07-Mar-22 08:00:00	1341	64
06-Mar-22 19:00:00	1341	68
13-Mar-22 21:00:00	1341	72
28-Jan-22 12:00:00	1340	78
13-Jan-22 11:00:00	1340	57
24-Jan-22 09:00:00	1339	79
03-Feb-22 08:00:00	1339	82
06-Mar-22 18:00:00	1339	68
30-Nov-22 09:00:00	1339	50
14-Mar-22 13:00:00	1338	74
13-Jan-22 16:00:00	1338	70
19-Jan-22 21:00:00	1338	82
12-Dec-22 16:00:00	1337	24
24-Dec-22 14:00:00	1337	75
04-Feb-22 16:00:00	1337	88
21-Jan-22 15:00:00	1336	81
22-Dec-22 17:00:00	1336	81
22-Feb-22 20:00:00	1336	80
24-Dec-22 11:00:00	1336	75
24-Jan-22 08:00:00	1336	79
06-Mar-22 08:00:00	1336	58
22-Feb-22 19:00:00	1336	80
08-Jan-22 20:00:00	1335	56
07-Mar-22 09:00:00	1335	64
23-Jan-22 19:00:00	1335	82
07-Mar-22 18:00:00	1335	54
23-Dec-22 10:00:00	1335	82
23-Dec-22 18:00:00	1334	82
25-Feb-22 21:00:00	1334	82
27-Feb-22 06:00:00	1334	73
05-Mar-22 16:00:00	1333	68

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Nov-22 07:00:00	1333	19
16-Feb-22 03:00:00	1333	70
24-Dec-22 15:00:00	1333	75
26-Feb-22 13:00:00	1333	78
11-Jan-22 14:00:00	1332	69
16-Mar-22 06:00:00	1332	78
17-Feb-22 13:00:00	1332	68
24-Dec-22 13:00:00	1332	75
04-Mar-22 07:00:00	1332	69
17-Jan-22 17:00:00	1332	80
13-Jan-22 07:00:00	1332	72
24-Dec-22 12:00:00	1332	75
06-Mar-22 09:00:00	1332	61
02-Feb-22 20:00:00	1331	84
21-Feb-22 12:00:00	1331	84
23-Jan-22 13:00:00	1330	82
11-Dec-22 16:00:00	1330	34
29-Jan-22 17:00:00	1330	76
15-Feb-22 23:00:00	1330	66
15-Feb-22 06:00:00	1330	71
06-Mar-22 20:00:00	1330	68
23-Dec-22 08:00:00	1330	82
22-Feb-22 18:00:00	1329	82
30-Dec-22 12:00:00	1329	42
03-Jan-22 18:00:00	1329	73
06-Feb-22 08:00:00	1329	85
07-Mar-22 07:00:00	1329	63
01-Feb-22 10:00:00	1329	86
13-Jan-22 12:00:00	1328	53
08-Jan-22 16:00:00	1328	58
12-Dec-22 09:00:00	1328	37
04-Feb-22 18:00:00	1328	99
22-Jan-22 06:00:00	1328	84
20-Feb-22 20:00:00	1328	82
20-Jan-22 11:00:00	1327	76
07-Feb-22 03:00:00	1327	84
12-Jan-22 05:00:00	1327	68
24-Jan-22 16:00:00	1327	73
09-Jan-22 07:00:00	1327	56
04-Mar-22 09:00:00	1327	70
01-Mar-22 15:00:00	1327	78

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
13-Mar-22 19:00:00	1326	72
22-Feb-22 07:00:00	1326	84
24-Nov-22 12:00:00	1326	15
23-Dec-22 19:00:00	1326	79
12-Dec-22 08:00:00	1326	40
26-Feb-22 06:00:00	1325	79
17-Feb-22 00:00:00	1325	65
23-Dec-22 16:00:00	1324	83
24-Nov-22 14:00:00	1324	15
24-Jan-22 11:00:00	1324	80
07-Mar-22 16:00:00	1324	53
27-Feb-22 21:00:00	1324	71
21-Nov-22 17:00:00	1323	35
24-Nov-22 11:00:00	1323	15
01-Mar-22 14:00:00	1323	77
09-Mar-22 09:00:00	1322	59
08-Feb-22 09:00:00	1322	81
20-Feb-22 17:00:00	1322	82
22-Jan-22 12:00:00	1322	84
23-Jan-22 15:00:00	1322	83
05-Jan-22 05:00:00	1322	65
24-Jan-22 10:00:00	1322	79
07-Mar-22 10:00:00	1321	63
28-Jan-22 05:00:00	1321	68
07-Mar-22 19:00:00	1321	55
17-Feb-22 17:00:00	1321	78
30-Dec-22 06:00:00	1321	43
27-Feb-22 13:00:00	1321	77
24-Dec-22 17:00:00	1320	82
23-Jan-22 08:00:00	1320	83
02-Mar-22 04:00:00	1320	64
26-Feb-22 16:00:00	1320	81
24-Nov-22 13:00:00	1319	15
20-Mar-22 19:00:00	1319	68
03-Feb-22 09:00:00	1318	84
10-Mar-22 09:00:00	1318	61
08-Feb-22 18:00:00	1318	79
02-Mar-22 16:00:00	1318	70
27-Jan-22 09:00:00	1317	82
12-Dec-22 10:00:00	1317	29
09-Jan-22 13:00:00	1317	71

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Jan-22 14:00:00	1317	81
21-Jan-22 12:00:00	1317	80
16-Feb-22 02:00:00	1317	75
01-Feb-22 16:00:00	1317	86
22-Dec-22 18:00:00	1317	81
28-Feb-22 09:00:00	1317	81
05-Jan-22 19:00:00	1316	61
05-Mar-22 07:00:00	1316	52
20-Mar-22 17:00:00	1316	70
04-Mar-22 22:00:00	1316	65
08-Mar-22 20:00:00	1316	57
21-Jan-22 13:00:00	1315	81
14-Mar-22 15:00:00	1315	81
03-Feb-22 07:00:00	1315	83
21-Feb-22 16:00:00	1315	84
14-Mar-22 14:00:00	1315	76
22-Feb-22 08:00:00	1314	82
17-Feb-22 16:00:00	1314	76
16-Mar-22 10:00:00	1314	72
24-Jan-22 12:00:00	1314	79
28-Dec-22 21:00:00	1314	77
21-Feb-22 17:00:00	1314	84
04-Jan-22 23:00:00	1314	71
07-Feb-22 00:00:00	1314	83
25-Mar-22 07:00:00	1314	64
02-Mar-22 17:00:00	1314	76
21-Mar-22 10:00:00	1313	64
30-Nov-22 21:00:00	1313	37
11-Jan-22 22:00:00	1313	76
05-Jan-22 15:00:00	1313	52
05-Mar-22 22:00:00	1313	65
06-Mar-22 07:00:00	1313	61
26-Feb-22 23:00:00	1313	76
17-Jan-22 11:00:00	1312	80
05-Mar-22 11:00:00	1312	54
21-Nov-22 16:00:00	1312	36
23-Jan-22 14:00:00	1312	83
27-Feb-22 15:00:00	1312	73
08-Mar-22 18:00:00	1312	60
20-Feb-22 10:00:00	1312	82
07-Feb-22 02:00:00	1312	84

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Dec-22 17:00:00	1312	87
23-Jan-22 20:00:00	1312	83
09-Mar-22 06:00:00	1311	62
12-Dec-22 18:00:00	1311	19
04-Mar-22 16:00:00	1311	68
24-Jan-22 18:00:00	1311	72
27-Feb-22 14:00:00	1311	75
06-Mar-22 17:00:00	1311	68
17-Mar-22 10:00:00	1310	76
20-Mar-22 20:00:00	1310	67
24-Dec-22 10:00:00	1310	75
09-Jan-22 20:00:00	1310	57
07-Mar-22 11:00:00	1310	65
14-Mar-22 22:00:00	1310	79
16-Jan-22 08:00:00	1310	77
03-Feb-22 17:00:00	1310	83
17-Feb-22 01:00:00	1310	65
21-Mar-22 09:00:00	1309	68
20-Feb-22 11:00:00	1309	82
03-Jan-22 16:00:00	1309	66
24-Nov-22 21:00:00	1308	25
22-Dec-22 19:00:00	1308	81
05-Mar-22 08:00:00	1308	52
02-Mar-22 03:00:00	1307	65
14-Mar-22 06:00:00	1307	71
21-Jan-22 21:00:00	1307	80
19-Jan-22 15:00:00	1307	76
30-Nov-22 10:00:00	1307	49
20-Jan-22 07:00:00	1307	79
05-Jan-22 04:00:00	1307	65
05-Jan-22 13:00:00	1307	63
24-Feb-22 15:00:00	1306	77
21-Mar-22 11:00:00	1306	59
05-Mar-22 10:00:00	1306	51
29-Jan-22 18:00:00	1305	74
22-Jan-22 22:00:00	1305	80
30-Dec-22 21:00:00	1305	38
27-Jan-22 07:00:00	1305	80
07-Feb-22 01:00:00	1304	84
09-Jan-22 15:00:00	1304	67
17-Feb-22 14:00:00	1304	71

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Mar-22 19:00:00	1304	65
25-Feb-22 13:00:00	1304	76
01-Feb-22 07:00:00	1304	86
27-Feb-22 05:00:00	1304	74
19-Feb-22 19:00:00	1303	82
20-Mar-22 16:00:00	1303	69
06-Mar-22 10:00:00	1303	62
08-Mar-22 19:00:00	1303	58
12-Dec-22 11:00:00	1303	27
02-Mar-22 00:00:00	1303	70
22-Dec-22 20:00:00	1303	81
21-Mar-22 08:00:00	1303	71
21-Feb-22 18:00:00	1303	84
08-Feb-22 16:00:00	1303	80
20-Feb-22 09:00:00	1303	82
20-Mar-22 18:00:00	1303	70
08-Mar-22 09:00:00	1302	60
11-Dec-22 18:00:00	1302	24
08-Jan-22 21:00:00	1302	57
02-Mar-22 02:00:00	1302	66
17-Jan-22 18:00:00	1302	81
22-Feb-22 17:00:00	1302	83
05-Mar-22 09:00:00	1302	52
08-Mar-22 10:00:00	1301	54
30-Dec-22 15:00:00	1301	45
13-Jan-22 15:00:00	1301	65
23-Feb-22 12:00:00	1301	67
20-Jan-22 12:00:00	1301	75
12-Jan-22 22:00:00	1300	69
22-Feb-22 21:00:00	1300	80
14-Feb-22 22:00:00	1300	77
08-Feb-22 19:00:00	1300	79
13-Jan-22 13:00:00	1299	56
08-Mar-22 17:00:00	1299	57
19-Feb-22 18:00:00	1299	82
21-Mar-22 12:00:00	1299	62
17-Dec-22 17:00:00	1299	73
05-Jan-22 02:00:00	1299	62
24-Jan-22 13:00:00	1299	79
02-Mar-22 18:00:00	1298	76
24-Jan-22 14:00:00	1298	76

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Feb-22 21:00:00	1298	83
05-Mar-22 12:00:00	1298	60
22-Dec-22 16:00:00	1298	81
25-Feb-22 15:00:00	1298	80
16-Feb-22 01:00:00	1298	76
17-Feb-22 02:00:00	1298	64
30-Nov-22 16:00:00	1298	35
25-Mar-22 08:00:00	1298	67
24-Feb-22 22:00:00	1298	84
17-Feb-22 05:00:00	1297	63
05-Jan-22 14:00:00	1297	54
04-Feb-22 15:00:00	1297	88
05-Jan-22 03:00:00	1297	64
21-Feb-22 13:00:00	1297	84
14-Feb-22 06:00:00	1296	76
05-Jan-22 01:00:00	1296	63
02-Mar-22 11:00:00	1296	69
07-Mar-22 20:00:00	1296	58
02-Feb-22 12:00:00	1296	79
18-Jan-22 16:00:00	1296	64
28-Jan-22 20:00:00	1295	74
16-Feb-22 00:00:00	1295	75
30-Dec-22 13:00:00	1295	43
01-Feb-22 11:00:00	1295	86
01-Feb-22 22:00:00	1295	86
24-Jan-22 07:00:00	1295	79
02-Mar-22 01:00:00	1295	69
13-Mar-22 22:00:00	1294	72
15-Mar-22 09:00:00	1294	76
21-Jan-22 11:00:00	1294	79
13-Jan-22 18:00:00	1294	69
19-Dec-22 17:00:00	1294	83
03-Jan-22 19:00:00	1294	73
17-Feb-22 15:00:00	1293	74
09-Jan-22 14:00:00	1293	70
11-Dec-22 19:00:00	1293	23
07-Feb-22 22:00:00	1292	82
29-Dec-22 06:00:00	1292	74
07-Jan-22 09:00:00	1292	61
08-Mar-22 11:00:00	1292	54
10-Mar-22 18:00:00	1292	65

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Dec-22 08:00:00	1292	60
21-Nov-22 18:00:00	1291	29
07-Mar-22 12:00:00	1291	64
28-Dec-22 15:00:00	1291	74
23-Dec-22 11:00:00	1290	82
11-Mar-22 07:00:00	1290	43
24-Nov-22 10:00:00	1289	15
21-Jan-22 10:00:00	1289	79
02-Mar-22 19:00:00	1289	76
24-Jan-22 19:00:00	1289	71
05-Mar-22 15:00:00	1289	68
17-Jan-22 19:00:00	1289	79
18-Jan-22 17:00:00	1288	69
27-Dec-22 17:00:00	1288	82
29-Jan-22 16:00:00	1288	77
23-Dec-22 20:00:00	1287	79
26-Feb-22 14:00:00	1287	80
16-Mar-22 20:00:00	1287	76
27-Dec-22 16:00:00	1287	81
06-Mar-22 21:00:00	1287	67
27-Feb-22 04:00:00	1287	76
12-Dec-22 19:00:00	1287	19
05-Mar-22 13:00:00	1287	68
17-Feb-22 03:00:00	1286	66
16-Jan-22 22:00:00	1286	82
27-Jan-22 22:00:00	1286	69
12-Dec-22 07:00:00	1286	32
31-Jan-22 17:00:00	1286	86
21-Dec-22 16:00:00	1286	87
27-Dec-22 11:00:00	1286	82
20-Feb-22 21:00:00	1286	82
08-Mar-22 08:00:00	1286	60
05-Jan-22 00:00:00	1285	65
28-Feb-22 20:00:00	1285	77
17-Feb-22 18:00:00	1285	76
03-Feb-22 18:00:00	1285	83
09-Mar-22 10:00:00	1285	58
01-Mar-22 04:00:00	1284	68
07-Jan-22 17:00:00	1284	66
19-Dec-22 16:00:00	1283	83
21-Feb-22 15:00:00	1283	84

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
03-Jan-22 21:00:00	1283	67
08-Feb-22 10:00:00	1283	81
27-Jan-22 15:00:00	1283	74
12-Jan-22 04:00:00	1282	64
07-Mar-22 15:00:00	1282	53
27-Feb-22 03:00:00	1282	76
03-Feb-22 10:00:00	1282	85
10-Mar-22 10:00:00	1282	63
24-Jan-22 15:00:00	1282	73
02-Feb-22 05:00:00	1282	82
29-Jan-22 19:00:00	1282	73
04-Jan-22 07:00:00	1282	55
19-Jan-22 22:00:00	1282	82
27-Dec-22 12:00:00	1281	80
15-Mar-22 20:00:00	1281	76
09-Jan-22 06:00:00	1281	56
25-Feb-22 05:00:00	1281	75
21-Feb-22 19:00:00	1281	84
19-Feb-22 20:00:00	1281	82
27-Dec-22 10:00:00	1280	82
04-Mar-22 10:00:00	1280	69
25-Nov-22 08:00:00	1280	25
29-Dec-22 23:00:00	1280	40
21-Mar-22 13:00:00	1280	62
20-Feb-22 16:00:00	1280	81
08-Mar-22 21:00:00	1279	56
21-Feb-22 14:00:00	1279	84
30-Dec-22 14:00:00	1279	43
12-Dec-22 12:00:00	1279	29
13-Jan-22 14:00:00	1279	61
16-Nov-22 18:00:00	1278	20
26-Dec-22 17:00:00	1278	84
04-Feb-22 19:00:00	1278	87
04-Feb-22 14:00:00	1278	86
25-Feb-22 14:00:00	1278	78
17-Jan-22 16:00:00	1277	80
21-Jan-22 09:00:00	1277	79
20-Dec-22 17:00:00	1277	84
22-Jan-22 13:00:00	1277	84
03-Jan-22 20:00:00	1277	70
29-Nov-22 17:00:00	1277	63

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Mar-22 06:00:00	1277	52
01-Dec-22 07:00:00	1277	61
18-Jan-22 08:00:00	1277	63
26-Feb-22 15:00:00	1277	80
09-Mar-22 20:00:00	1277	65
04-Feb-22 12:00:00	1277	85
11-Dec-22 15:00:00	1277	37
04-Feb-22 13:00:00	1277	85
18-Jan-22 09:00:00	1277	62
15-Dec-22 17:00:00	1277	55
28-Jan-22 04:00:00	1276	67
07-Jan-22 10:00:00	1276	60
27-Feb-22 02:00:00	1276	76
10-Mar-22 20:00:00	1276	65
03-Feb-22 16:00:00	1275	84
10-Mar-22 17:00:00	1275	65
28-Feb-22 21:00:00	1275	76
29-Nov-22 18:00:00	1275	65
27-Feb-22 00:00:00	1275	76
12-Dec-22 20:00:00	1275	19
23-Mar-22 08:00:00	1275	57
26-Mar-22 11:00:00	1275	69
16-Mar-22 21:00:00	1275	76
27-Jan-22 10:00:00	1275	73
23-Jan-22 21:00:00	1274	82
15-Mar-22 06:00:00	1274	77
10-Mar-22 11:00:00	1274	63
13-Dec-22 17:00:00	1274	24
21-Dec-22 18:00:00	1274	87
17-Feb-22 04:00:00	1273	64
06-Mar-22 11:00:00	1273	62
12-Dec-22 15:00:00	1273	27
06-Mar-22 06:00:00	1273	64
10-Jan-22 17:00:00	1273	76
21-Dec-22 08:00:00	1273	71
11-Dec-22 20:00:00	1273	23
28-Feb-22 19:00:00	1273	78
05-Jan-22 20:00:00	1273	60
07-Jan-22 08:00:00	1273	64
17-Jan-22 12:00:00	1273	79
16-Mar-22 11:00:00	1272	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Dec-22 11:00:00	1272	47
19-Jan-22 11:00:00	1272	68
21-Nov-22 19:00:00	1272	26
04-Mar-22 23:00:00	1272	66
17-Dec-22 18:00:00	1272	71
18-Jan-22 11:00:00	1272	64
07-Mar-22 13:00:00	1272	64
22-Dec-22 21:00:00	1271	82
17-Mar-22 06:00:00	1271	66
21-Feb-22 06:00:00	1271	82
24-Mar-22 08:00:00	1271	62
08-Feb-22 20:00:00	1271	79
26-Feb-22 05:00:00	1271	81
01-Jan-22 17:00:00	1271	57
17-Dec-22 16:00:00	1270	74
29-Nov-22 19:00:00	1270	60
24-Jan-22 20:00:00	1270	71
28-Feb-22 18:00:00	1270	77
02-Mar-22 20:00:00	1269	76
24-Mar-22 20:00:00	1269	65
11-Dec-22 10:00:00	1269	47
20-Feb-22 12:00:00	1269	82
02-Feb-22 16:00:00	1269	84
02-Mar-22 15:00:00	1269	67
24-Feb-22 14:00:00	1269	64
09-Mar-22 19:00:00	1269	66
24-Feb-22 12:00:00	1269	57
23-Dec-22 07:00:00	1269	82
22-Nov-22 08:00:00	1269	50
03-Mar-22 08:00:00	1269	65
22-Jan-22 05:00:00	1269	84
07-Jan-22 16:00:00	1268	66
20-Mar-22 21:00:00	1268	67
18-Jan-22 12:00:00	1268	63
28-Dec-22 12:00:00	1268	75
01-Dec-22 09:00:00	1268	54
17-Jan-22 20:00:00	1267	75
01-Feb-22 12:00:00	1267	86
21-Dec-22 09:00:00	1267	78
11-Dec-22 12:00:00	1266	45
25-Feb-22 22:00:00	1266	82

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Mar-22 16:00:00	1266	56
08-Feb-22 06:00:00	1266	82
27-Feb-22 01:00:00	1266	76
31-Jan-22 16:00:00	1265	86
20-Jan-22 17:00:00	1265	82
02-Mar-22 12:00:00	1265	69
03-Feb-22 11:00:00	1265	83
22-Nov-22 17:00:00	1265	50
26-Mar-22 10:00:00	1265	68
09-Jan-22 21:00:00	1265	56
15-Mar-22 19:00:00	1264	76
16-Nov-22 17:00:00	1264	21
05-Mar-22 14:00:00	1264	69
25-Nov-22 07:00:00	1263	13
24-Dec-22 09:00:00	1263	74
13-Dec-22 16:00:00	1263	28
26-Mar-22 12:00:00	1263	68
Average (MW)	**1352**	**70**

Table C-4: Top 10% of Island Interconnected System Load Hours (2023)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Feb-23 07:00:00	1770	77
24-Feb-23 08:00:00	1761	64
24-Feb-23 09:00:00	1744	63
28-Feb-23 07:00:00	1733	77
27-Feb-23 08:00:00	1732	78
24-Feb-23 07:00:00	1726	64
04-Feb-23 12:00:00	1714	68
04-Feb-23 11:00:00	1710	69
04-Feb-23 17:00:00	1702	77
04-Feb-23 16:00:00	1702	77
24-Feb-23 10:00:00	1697	66
28-Feb-23 08:00:00	1691	73
26-Feb-23 08:00:00	1690	76
04-Feb-23 13:00:00	1690	68
04-Feb-23 15:00:00	1688	77
26-Feb-23 19:00:00	1686	58
26-Feb-23 09:00:00	1686	74
04-Feb-23 10:00:00	1683	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
04-Feb-23 14:00:00	1682	68
26-Feb-23 20:00:00	1679	61
25-Feb-23 18:00:00	1677	73
26-Feb-23 18:00:00	1676	57
01-Mar-23 08:00:00	1676	66
01-Mar-23 07:00:00	1675	69
25-Feb-23 09:00:00	1674	66
25-Feb-23 19:00:00	1667	73
27-Feb-23 06:00:00	1663	75
04-Feb-23 18:00:00	1663	75
25-Feb-23 08:00:00	1660	66
26-Feb-23 07:00:00	1658	77
27-Feb-23 09:00:00	1658	78
04-Feb-23 19:00:00	1656	71
25-Feb-23 17:00:00	1650	72
25-Feb-23 20:00:00	1650	72
26-Feb-23 10:00:00	1649	73
25-Feb-23 10:00:00	1649	66
28-Feb-23 06:00:00	1647	77
26-Feb-23 21:00:00	1645	64
04-Feb-23 09:00:00	1643	73
04-Feb-23 20:00:00	1632	65
24-Feb-23 18:00:00	1631	71
26-Feb-23 17:00:00	1631	57
24-Feb-23 11:00:00	1631	73
24-Feb-23 19:00:00	1624	71
25-Feb-23 11:00:00	1624	66
25-Feb-23 21:00:00	1621	71
24-Feb-23 20:00:00	1617	65
24-Feb-23 06:00:00	1614	64
01-Mar-23 09:00:00	1614	69
25-Feb-23 07:00:00	1611	68
13-Jan-23 08:00:00	1611	63
26-Feb-23 06:00:00	1608	78
26-Feb-23 11:00:00	1606	72
28-Feb-23 09:00:00	1604	73
25-Feb-23 16:00:00	1602	70
27-Feb-23 19:00:00	1601	70
02-Mar-23 07:00:00	1601	66
13-Jan-23 07:00:00	1598	64
27-Feb-23 20:00:00	1597	70

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Feb-23 12:00:00	1597	67
27-Feb-23 10:00:00	1597	77
24-Feb-23 21:00:00	1596	65
27-Feb-23 18:00:00	1589	71
28-Feb-23 18:00:00	1588	67
28-Feb-23 19:00:00	1587	62
04-Feb-23 21:00:00	1586	62
02-Mar-23 08:00:00	1584	64
26-Feb-23 22:00:00	1583	64
10-Feb-23 08:00:00	1582	64
24-Feb-23 12:00:00	1579	71
04-Feb-23 08:00:00	1577	74
28-Feb-23 20:00:00	1577	61
25-Feb-23 22:00:00	1575	71
26-Feb-23 16:00:00	1574	57
13-Jan-23 09:00:00	1573	66
27-Feb-23 21:00:00	1571	61
27-Feb-23 17:00:00	1571	72
01-Mar-23 06:00:00	1568	67
24-Feb-23 17:00:00	1564	73
26-Feb-23 05:00:00	1564	77
26-Feb-23 12:00:00	1560	64
02-Feb-23 07:00:00	1558	80
28-Feb-23 17:00:00	1558	62
27-Feb-23 05:00:00	1557	58
25-Feb-23 06:00:00	1557	64
10-Feb-23 07:00:00	1556	61
27-Feb-23 11:00:00	1556	71
25-Feb-23 15:00:00	1554	72
25-Feb-23 13:00:00	1554	72
24-Feb-23 22:00:00	1551	65
28-Feb-23 21:00:00	1550	61
01-Mar-23 10:00:00	1549	68
28-Feb-23 05:00:00	1547	72
13-Jan-23 10:00:00	1546	65
02-Feb-23 08:00:00	1545	80
25-Feb-23 14:00:00	1545	71
10-Feb-23 09:00:00	1540	58
26-Feb-23 04:00:00	1537	77
25-Feb-23 23:00:00	1535	74
23-Feb-23 21:00:00	1532	73

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
28-Feb-23 10:00:00	1530	71
23-Feb-23 20:00:00	1530	70
26-Feb-23 13:00:00	1528	57
03-Mar-23 07:00:00	1527	64
26-Feb-23 23:00:00	1527	64
23-Feb-23 19:00:00	1526	72
26-Feb-23 15:00:00	1523	57
02-Feb-23 06:00:00	1523	79
12-Jan-23 17:00:00	1523	60
24-Feb-23 13:00:00	1523	69
01-Mar-23 20:00:00	1521	51
12-Jan-23 08:00:00	1519	64
26-Feb-23 03:00:00	1519	77
13-Jan-23 11:00:00	1519	65
02-Feb-23 18:00:00	1517	77
27-Feb-23 04:00:00	1516	57
23-Feb-23 18:00:00	1516	76
01-Feb-23 19:00:00	1515	77
24-Feb-23 05:00:00	1514	65
04-Feb-23 22:00:00	1513	61
02-Mar-23 09:00:00	1512	63
10-Feb-23 10:00:00	1511	58
27-Feb-23 12:00:00	1511	64
02-Feb-23 19:00:00	1510	77
01-Mar-23 19:00:00	1510	51
27-Feb-23 22:00:00	1510	61
26-Feb-23 00:00:00	1510	76
02-Feb-23 17:00:00	1510	77
26-Feb-23 14:00:00	1510	57
01-Feb-23 18:00:00	1507	77
26-Feb-23 02:00:00	1507	76
27-Feb-23 03:00:00	1506	55
05-Feb-23 17:00:00	1506	65
25-Feb-23 05:00:00	1505	64
27-Feb-23 16:00:00	1505	65
24-Feb-23 16:00:00	1505	71
01-Feb-23 20:00:00	1504	79
02-Mar-23 06:00:00	1504	54
04-Feb-23 07:00:00	1502	77
26-Feb-23 01:00:00	1501	76
27-Feb-23 00:00:00	1500	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
28-Feb-23 16:00:00	1500	61
12-Jan-23 09:00:00	1499	62
13-Jan-23 06:00:00	1496	61
27-Feb-23 01:00:00	1496	59
23-Feb-23 22:00:00	1496	72
27-Feb-23 02:00:00	1496	56
05-Jan-23 17:00:00	1494	51
01-Feb-23 17:00:00	1493	77
28-Feb-23 04:00:00	1493	54
13-Jan-23 12:00:00	1492	61
24-Feb-23 14:00:00	1492	70
28-Feb-23 22:00:00	1491	61
28-Feb-23 11:00:00	1490	68
02-Feb-23 20:00:00	1490	77
05-Feb-23 18:00:00	1489	64
01-Mar-23 18:00:00	1489	50
12-Jan-23 18:00:00	1489	59
24-Feb-23 23:00:00	1489	65
13-Jan-23 16:00:00	1487	61
13-Jan-23 17:00:00	1487	56
02-Feb-23 09:00:00	1485	83
01-Feb-23 21:00:00	1484	80
12-Jan-23 19:00:00	1482	60
01-Feb-23 08:00:00	1482	78
01-Mar-23 11:00:00	1480	64
12-Jan-23 07:00:00	1480	62
01-Mar-23 21:00:00	1477	50
11-Jan-23 17:00:00	1476	69
23-Feb-23 08:00:00	1476	81
23-Feb-23 07:00:00	1475	79
07-Feb-23 08:00:00	1475	76
10-Jan-23 17:00:00	1473	39
01-Mar-23 05:00:00	1472	56
24-Feb-23 15:00:00	1472	70
25-Feb-23 04:00:00	1471	64
03-Mar-23 08:00:00	1470	59
24-Feb-23 04:00:00	1470	65
05-Jan-23 18:00:00	1470	51
12-Jan-23 20:00:00	1470	60
05-Feb-23 19:00:00	1469	63
12-Jan-23 16:00:00	1469	59

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
12-Feb-23 08:00:00	1467	61
05-Jan-23 19:00:00	1466	51
28-Feb-23 03:00:00	1465	49
13-Jan-23 13:00:00	1464	61
12-Feb-23 09:00:00	1463	61
27-Feb-23 13:00:00	1463	56
05-Feb-23 08:00:00	1463	74
07-Feb-23 19:00:00	1463	58
03-Feb-23 08:00:00	1463	73
28-Feb-23 12:00:00	1461	65
05-Feb-23 09:00:00	1460	74
01-Feb-23 09:00:00	1460	78
10-Jan-23 16:00:00	1459	39
12-Jan-23 10:00:00	1459	64
05-Feb-23 16:00:00	1459	70
07-Feb-23 18:00:00	1459	59
14-Feb-23 10:00:00	1456	68
03-Mar-23 06:00:00	1456	50
07-Feb-23 09:00:00	1455	79
06-Jan-23 09:00:00	1454	31
06-Jan-23 08:00:00	1453	32
14-Feb-23 11:00:00	1453	66
10-Feb-23 17:00:00	1453	66
13-Jan-23 15:00:00	1452	62
27-Feb-23 23:00:00	1452	60
09-Feb-23 19:00:00	1452	68
23-Feb-23 17:00:00	1451	78
10-Jan-23 10:00:00	1451	48
25-Feb-23 03:00:00	1451	64
11-Jan-23 16:00:00	1451	70
10-Feb-23 06:00:00	1450	55
10-Feb-23 11:00:00	1450	58
03-Feb-23 16:00:00	1450	70
25-Feb-23 00:00:00	1450	66
14-Feb-23 17:00:00	1449	57
02-Mar-23 19:00:00	1449	47
07-Feb-23 17:00:00	1449	59
14-Feb-23 09:00:00	1448	68
27-Feb-23 15:00:00	1447	54
14-Feb-23 12:00:00	1447	66
12-Feb-23 17:00:00	1446	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
03-Feb-23 09:00:00	1446	75
02-Mar-23 10:00:00	1446	63
20-Feb-23 07:00:00	1446	70
12-Feb-23 18:00:00	1446	67
04-Feb-23 23:00:00	1445	61
02-Mar-23 18:00:00	1445	47
10-Jan-23 09:00:00	1444	52
24-Feb-23 03:00:00	1444	66
09-Feb-23 20:00:00	1444	72
09-Feb-23 18:00:00	1444	65
13-Jan-23 14:00:00	1444	60
23-Feb-23 23:00:00	1444	72
08-Feb-23 08:00:00	1444	66
03-Feb-23 17:00:00	1443	69
02-Feb-23 21:00:00	1443	77
03-Feb-23 07:00:00	1443	72
05-Feb-23 10:00:00	1442	74
28-Feb-23 15:00:00	1442	61
10-Jan-23 12:00:00	1441	41
11-Jan-23 18:00:00	1441	69
12-Jan-23 11:00:00	1441	66
01-Feb-23 07:00:00	1441	78
05-Feb-23 20:00:00	1441	62
28-Feb-23 02:00:00	1440	46
07-Feb-23 07:00:00	1440	59
28-Feb-23 23:00:00	1440	57
25-Feb-23 02:00:00	1439	65
05-Jan-23 20:00:00	1439	51
07-Feb-23 20:00:00	1439	58
01-Mar-23 17:00:00	1438	60
25-Feb-23 01:00:00	1438	67
27-Feb-23 14:00:00	1438	57
14-Feb-23 16:00:00	1437	58
23-Feb-23 09:00:00	1437	80
18-Feb-23 18:00:00	1437	58
10-Jan-23 11:00:00	1437	44
12-Feb-23 10:00:00	1436	64
05-Feb-23 11:00:00	1436	74
10-Feb-23 18:00:00	1436	66
02-Mar-23 20:00:00	1436	46
12-Jan-23 21:00:00	1435	60

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
14-Dec-23 17:00:00	1435	66
10-Feb-23 16:00:00	1435	70
09-Jan-23 08:00:00	1435	67
12-Feb-23 07:00:00	1435	58
01-Mar-23 04:00:00	1434	55
09-Jan-23 17:00:00	1434	54
13-Feb-23 07:00:00	1434	65
06-Jan-23 07:00:00	1433	34
09-Feb-23 17:00:00	1432	63
08-Feb-23 07:00:00	1431	69
02-Feb-23 05:00:00	1431	79
06-Jan-23 10:00:00	1431	32
10-Jan-23 18:00:00	1429	39
01-Feb-23 22:00:00	1429	80
12-Feb-23 19:00:00	1428	61
03-Feb-23 15:00:00	1427	71
13-Jan-23 18:00:00	1427	56
28-Feb-23 13:00:00	1427	58
01-Mar-23 03:00:00	1425	55
18-Feb-23 19:00:00	1425	56
20-Feb-23 08:00:00	1425	70
11-Jan-23 19:00:00	1424	68
02-Feb-23 16:00:00	1424	75
07-Feb-23 10:00:00	1424	72
10-Jan-23 08:00:00	1424	57
14-Feb-23 08:00:00	1423	67
09-Jan-23 16:00:00	1423	55
06-Jan-23 17:00:00	1423	38
11-Jan-23 08:00:00	1423	66
14-Feb-23 18:00:00	1422	58
05-Jan-23 16:00:00	1422	51
02-Feb-23 10:00:00	1422	79
05-Feb-23 12:00:00	1422	74
09-Jan-23 09:00:00	1422	68
24-Feb-23 02:00:00	1422	71
28-Feb-23 01:00:00	1422	45
28-Feb-23 00:00:00	1421	47
18-Feb-23 17:00:00	1421	63
03-Feb-23 10:00:00	1420	75
04-Feb-23 06:00:00	1419	76
09-Feb-23 21:00:00	1418	68

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Feb-23 07:00:00	1418	75
24-Feb-23 00:00:00	1418	72
03-Feb-23 11:00:00	1418	75
01-Mar-23 12:00:00	1417	64
01-Feb-23 10:00:00	1417	80
19-Feb-23 08:00:00	1417	52
02-Mar-23 05:00:00	1416	52
24-Feb-23 01:00:00	1416	70
08-Feb-23 09:00:00	1416	64
05-Feb-23 13:00:00	1415	74
11-Jan-23 09:00:00	1414	67
03-Feb-23 12:00:00	1413	76
28-Feb-23 14:00:00	1413	61
10-Feb-23 19:00:00	1413	65
10-Jan-23 13:00:00	1413	42
09-Jan-23 07:00:00	1412	61
14-Dec-23 18:00:00	1412	65
19-Feb-23 09:00:00	1412	51
01-Mar-23 02:00:00	1412	57
15-Dec-23 08:00:00	1411	74
13-Feb-23 08:00:00	1411	70
11-Jan-23 20:00:00	1410	69
03-Feb-23 14:00:00	1409	67
01-Mar-23 22:00:00	1409	50
05-Feb-23 14:00:00	1409	74
05-Jan-23 08:00:00	1409	57
06-Jan-23 11:00:00	1409	33
03-Feb-23 13:00:00	1406	75
01-Mar-23 00:00:00	1405	57
12-Feb-23 11:00:00	1405	66
14-Feb-23 19:00:00	1405	57
01-Feb-23 16:00:00	1403	78
11-Jan-23 10:00:00	1402	65
14-Feb-23 15:00:00	1402	58
15-Feb-23 08:00:00	1402	61
05-Feb-23 15:00:00	1402	74
14-Feb-23 13:00:00	1402	65
02-Mar-23 21:00:00	1401	46
10-Jan-23 19:00:00	1401	39
07-Feb-23 21:00:00	1401	58
12-Jan-23 12:00:00	1401	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Feb-23 20:00:00	1399	64
12-Feb-23 06:00:00	1399	54
01-Mar-23 01:00:00	1399	58
02-Mar-23 11:00:00	1399	64
18-Feb-23 20:00:00	1398	56
02-Mar-23 17:00:00	1397	48
12-Feb-23 20:00:00	1397	53
10-Jan-23 15:00:00	1396	41
06-Jan-23 16:00:00	1396	38
29-Dec-23 17:00:00	1396	49
15-Feb-23 09:00:00	1396	59
24-Mar-23 17:00:00	1395	48
13-Jan-23 05:00:00	1395	55
03-Mar-23 09:00:00	1394	54
15-Dec-23 07:00:00	1394	67
23-Feb-23 10:00:00	1394	80
19-Feb-23 19:00:00	1393	48
11-Jan-23 07:00:00	1393	61
11-Feb-23 18:00:00	1393	61
03-Feb-23 18:00:00	1393	70
20-Mar-23 20:00:00	1393	52
12-Feb-23 16:00:00	1392	67
24-Mar-23 08:00:00	1392	63
11-Jan-23 11:00:00	1392	67
14-Dec-23 19:00:00	1392	64
16-Dec-23 17:00:00	1392	24
12-Jan-23 22:00:00	1392	57
09-Jan-23 10:00:00	1390	67
02-Feb-23 04:00:00	1390	79
14-Dec-23 16:00:00	1389	66
29-Dec-23 18:00:00	1389	48
05-Feb-23 21:00:00	1389	62
06-Jan-23 18:00:00	1389	42
05-Jan-23 09:00:00	1389	56
23-Feb-23 06:00:00	1389	71
14-Dec-23 20:00:00	1388	63
05-Jan-23 21:00:00	1388	50
22-Feb-23 18:00:00	1388	82
07-Feb-23 11:00:00	1386	63
19-Feb-23 18:00:00	1386	48
10-Feb-23 15:00:00	1386	72

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Jan-23 14:00:00	1386	41
11-Feb-23 17:00:00	1385	63
05-Feb-23 00:00:00	1384	61
09-Jan-23 18:00:00	1384	53
29-Dec-23 16:00:00	1383	53
24-Mar-23 16:00:00	1383	48
11-Jan-23 15:00:00	1383	75
06-Jan-23 12:00:00	1383	36
11-Feb-23 19:00:00	1383	58
13-Jan-23 19:00:00	1382	56
19-Feb-23 20:00:00	1382	48
12-Jan-23 15:00:00	1381	65
19-Feb-23 10:00:00	1380	51
04-Mar-23 07:00:00	1380	43
01-Feb-23 11:00:00	1380	81
04-Mar-23 08:00:00	1380	43
24-Mar-23 18:00:00	1380	47
07-Feb-23 16:00:00	1380	60
16-Feb-23 08:00:00	1379	68
22-Feb-23 17:00:00	1379	82
16-Feb-23 07:00:00	1379	71
05-Mar-23 09:00:00	1378	43
11-Jan-23 21:00:00	1378	71
14-Feb-23 07:00:00	1378	67
24-Mar-23 19:00:00	1378	48
07-Dec-23 17:00:00	1377	49
20-Mar-23 19:00:00	1377	52
30-Jan-23 09:00:00	1376	76
20-Mar-23 21:00:00	1376	53
10-Feb-23 12:00:00	1375	57
02-Mar-23 12:00:00	1375	62
22-Feb-23 19:00:00	1375	82
14-Feb-23 14:00:00	1375	62
01-Mar-23 16:00:00	1375	62
29-Dec-23 19:00:00	1375	48
09-Jan-23 11:00:00	1375	66
05-Feb-23 06:00:00	1375	75
23-Feb-23 16:00:00	1374	78
12-Jan-23 06:00:00	1374	63
02-Feb-23 03:00:00	1374	79
20-Feb-23 09:00:00	1373	70

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
12-Feb-23 12:00:00	1373	67
21-Mar-23 08:00:00	1373	48
23-Feb-23 11:00:00	1373	78
01-Feb-23 23:00:00	1373	80
21-Mar-23 07:00:00	1372	47
04-Mar-23 09:00:00	1372	42
06-Jan-23 19:00:00	1372	42
26-Jan-23 08:00:00	1372	84
05-Mar-23 08:00:00	1372	43
08-Dec-23 08:00:00	1372	47
24-Mar-23 09:00:00	1371	62
02-Feb-23 11:00:00	1371	76
05-Mar-23 07:00:00	1371	42
10-Jan-23 07:00:00	1371	61
08-Dec-23 09:00:00	1371	40
06-Dec-23 17:00:00	1371	48
14-Feb-23 20:00:00	1371	57
11-Jan-23 12:00:00	1371	73
27-Dec-23 17:00:00	1371	54
20-Feb-23 17:00:00	1370	72
15-Dec-23 09:00:00	1370	68
10-Jan-23 20:00:00	1370	39
30-Jan-23 08:00:00	1370	76
02-Feb-23 02:00:00	1369	79
08-Feb-23 10:00:00	1369	61
29-Dec-23 08:00:00	1369	45
09-Feb-23 16:00:00	1368	62
11-Feb-23 20:00:00	1368	59
08-Feb-23 17:00:00	1368	70
02-Feb-23 22:00:00	1368	77
09-Feb-23 08:00:00	1368	65
24-Mar-23 10:00:00	1368	62
18-Feb-23 16:00:00	1367	64
05-Mar-23 10:00:00	1367	45
29-Dec-23 11:00:00	1367	51
02-Mar-23 04:00:00	1367	53
09-Feb-23 22:00:00	1366	64
15-Feb-23 07:00:00	1366	63
19-Feb-23 07:00:00	1366	52
15-Feb-23 10:00:00	1366	59
07-Feb-23 12:00:00	1365	59

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
18-Feb-23 21:00:00	1365	56
21-Jan-23 17:00:00	1365	72
09-Jan-23 12:00:00	1365	56
09-Jan-23 15:00:00	1364	58
01-Mar-23 23:00:00	1364	53
29-Dec-23 09:00:00	1364	48
10-Feb-23 21:00:00	1363	62
24-Mar-23 07:00:00	1363	65
29-Dec-23 10:00:00	1362	51
20-Feb-23 18:00:00	1362	71
22-Jan-23 17:00:00	1362	70
15-Dec-23 10:00:00	1361	53
29-Dec-23 12:00:00	1361	51
05-Jan-23 07:00:00	1361	57
19-Feb-23 17:00:00	1360	46
09-Jan-23 13:00:00	1360	46
23-Jan-23 08:00:00	1358	74
23-Dec-23 17:00:00	1358	31
09-Jan-23 19:00:00	1358	53
04-Mar-23 19:00:00	1357	50
24-Mar-23 20:00:00	1357	49
02-Feb-23 12:00:00	1357	79
03-Mar-23 05:00:00	1357	43
30-Jan-23 10:00:00	1356	73
12-Jan-23 13:00:00	1355	67
05-Feb-23 01:00:00	1355	61
10-Feb-23 05:00:00	1354	55
28-Dec-23 17:00:00	1354	27
08-Jan-23 17:00:00	1354	53
22-Feb-23 20:00:00	1354	79
15-Feb-23 19:00:00	1354	52
02-Jan-23 17:00:00	1354	61
07-Dec-23 08:00:00	1353	38
04-Mar-23 10:00:00	1353	44
24-Mar-23 11:00:00	1353	61
19-Feb-23 11:00:00	1353	52
08-Dec-23 17:00:00	1353	53
27-Dec-23 18:00:00	1353	54
14-Dec-23 21:00:00	1352	63
05-Jan-23 10:00:00	1352	56
12-Feb-23 05:00:00	1352	52

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Feb-23 18:00:00	1352	70
07-Feb-23 22:00:00	1351	61
12-Jan-23 14:00:00	1351	67
08-Dec-23 16:00:00	1351	52
25-Dec-23 10:00:00	1350	32
02-Mar-23 16:00:00	1350	46
03-Feb-23 06:00:00	1350	72
06-Dec-23 18:00:00	1349	49
05-Mar-23 06:00:00	1349	42
06-Jan-23 13:00:00	1349	40
26-Jan-23 07:00:00	1349	84
02-Feb-23 01:00:00	1349	79
24-Mar-23 15:00:00	1349	49
03-Jan-23 17:00:00	1348	67
29-Dec-23 13:00:00	1348	51
07-Dec-23 18:00:00	1348	49
09-Feb-23 09:00:00	1348	65
13-Feb-23 09:00:00	1348	71
19-Feb-23 21:00:00	1347	69
01-Feb-23 12:00:00	1347	81
23-Jan-23 09:00:00	1347	78
23-Mar-23 08:00:00	1347	62
04-Mar-23 20:00:00	1347	52
09-Feb-23 07:00:00	1346	67
20-Mar-23 17:00:00	1346	51
22-Jan-23 18:00:00	1346	70
16-Dec-23 18:00:00	1345	24
10-Feb-23 14:00:00	1345	69
08-Dec-23 07:00:00	1345	48
09-Jan-23 14:00:00	1345	50
21-Jan-23 16:00:00	1345	75
04-Mar-23 18:00:00	1345	47
08-Dec-23 10:00:00	1345	46
15-Feb-23 18:00:00	1345	52
02-Mar-23 22:00:00	1344	50
12-Feb-23 21:00:00	1344	50
29-Dec-23 14:00:00	1344	51
01-Mar-23 13:00:00	1344	63
30-Jan-23 11:00:00	1344	73
23-Feb-23 12:00:00	1344	78
20-Feb-23 06:00:00	1343	70

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Feb-23 05:00:00	1343	65
13-Jan-23 04:00:00	1343	54
11-Feb-23 21:00:00	1342	58
14-Mar-23 07:00:00	1342	69
06-Dec-23 19:00:00	1342	48
13-Jan-23 20:00:00	1342	56
24-Mar-23 12:00:00	1341	60
15-Mar-23 08:00:00	1341	73
20-Feb-23 16:00:00	1341	70
13-Feb-23 18:00:00	1341	54
07-Feb-23 13:00:00	1341	59
29-Dec-23 20:00:00	1341	48
12-Feb-23 13:00:00	1340	68
22-Feb-23 16:00:00	1340	82
07-Dec-23 09:00:00	1340	38
06-Jan-23 06:00:00	1340	33
08-Feb-23 16:00:00	1340	70
15-Dec-23 16:00:00	1340	68
23-Mar-23 07:00:00	1340	62
29-Jan-23 17:00:00	1340	82
02-Feb-23 00:00:00	1340	80
05-Feb-23 02:00:00	1340	62
07-Feb-23 15:00:00	1340	60
06-Jan-23 20:00:00	1340	42
08-Feb-23 11:00:00	1339	63
07-Dec-23 16:00:00	1339	45
02-Feb-23 15:00:00	1339	74
13-Feb-23 06:00:00	1339	59
16-Dec-23 16:00:00	1339	24
23-Dec-23 18:00:00	1338	31
27-Dec-23 19:00:00	1338	53
08-Feb-23 19:00:00	1337	70
23-Jan-23 07:00:00	1337	72
29-Jan-23 18:00:00	1337	79
15-Feb-23 20:00:00	1336	52
03-Mar-23 19:00:00	1336	45
09-Jan-23 20:00:00	1336	53
29-Dec-23 15:00:00	1336	51
24-Mar-23 14:00:00	1336	53
02-Mar-23 13:00:00	1336	59
08-Jan-23 16:00:00	1335	53

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Feb-23 08:00:00	1335	73
12-Jan-23 23:00:00	1335	55
19-Feb-23 12:00:00	1335	54
13-Feb-23 19:00:00	1335	54
15-Dec-23 12:00:00	1335	44
23-Feb-23 13:00:00	1335	79
28-Dec-23 18:00:00	1335	29
04-Feb-23 05:00:00	1335	76
06-Dec-23 16:00:00	1335	46
20-Mar-23 18:00:00	1334	52
08-Feb-23 06:00:00	1334	67
05-Feb-23 04:00:00	1334	63
06-Feb-23 08:00:00	1334	60
07-Dec-23 19:00:00	1334	46
02-Mar-23 03:00:00	1334	53
18-Feb-23 12:00:00	1333	56
12-Feb-23 15:00:00	1333	67
02-Mar-23 00:00:00	1333	55
24-Mar-23 13:00:00	1333	56
30-Jan-23 07:00:00	1333	76
22-Jan-23 19:00:00	1333	70
25-Dec-23 09:00:00	1333	32
03-Feb-23 19:00:00	1333	70
15-Dec-23 11:00:00	1333	44
10-Feb-23 13:00:00	1333	57
23-Jan-23 10:00:00	1332	77
15-Feb-23 11:00:00	1332	53
20-Feb-23 19:00:00	1332	67
07-Feb-23 06:00:00	1332	62
21-Jan-23 12:00:00	1332	78
06-Jan-23 15:00:00	1331	40
22-Feb-23 09:00:00	1331	72
03-Mar-23 18:00:00	1331	44
18-Feb-23 11:00:00	1330	55
05-Feb-23 03:00:00	1330	62
18-Feb-23 13:00:00	1330	61
06-Feb-23 17:00:00	1330	70
02-Feb-23 13:00:00	1330	71
05-Mar-23 11:00:00	1329	46
29-Jan-23 19:00:00	1329	86
18-Feb-23 10:00:00	1329	54

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
15-Mar-23 09:00:00	1329	71
04-Mar-23 06:00:00	1329	42
11-Feb-23 16:00:00	1328	63
02-Mar-23 02:00:00	1328	54
12-Feb-23 14:00:00	1328	67
05-Mar-23 18:00:00	1328	49
05-Jan-23 11:00:00	1328	56
09-Mar-23 08:00:00	1327	41
01-Feb-23 06:00:00	1327	78
14-Feb-23 21:00:00	1327	57
06-Mar-23 07:00:00	1327	57
14-Mar-23 08:00:00	1327	68
27-Dec-23 16:00:00	1327	32
03-Mar-23 10:00:00	1326	55
13-Feb-23 17:00:00	1326	55
08-Dec-23 11:00:00	1326	50
18-Feb-23 22:00:00	1325	56
18-Feb-23 09:00:00	1325	54
21-Jan-23 13:00:00	1325	78
13-Mar-23 08:00:00	1325	70
05-Mar-23 19:00:00	1325	51
04-Mar-23 11:00:00	1325	44
11-Jan-23 22:00:00	1325	69
22-Feb-23 11:00:00	1325	70
21-Jan-23 18:00:00	1325	72
03-Mar-23 20:00:00	1325	45
04-Mar-23 21:00:00	1324	51
19-Feb-23 06:00:00	1324	53
07-Jan-23 17:00:00	1324	40
08-Jan-23 18:00:00	1323	53
16-Feb-23 17:00:00	1323	60
06-Dec-23 20:00:00	1323	48
01-Mar-23 15:00:00	1323	61
11-Jan-23 14:00:00	1323	84
06-Feb-23 09:00:00	1323	62
13-Feb-23 20:00:00	1323	52
15-Dec-23 13:00:00	1322	44
22-Feb-23 10:00:00	1322	70
09-Mar-23 07:00:00	1322	42
22-Feb-23 12:00:00	1322	77
10-Jan-23 21:00:00	1322	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
18-Feb-23 14:00:00	1322	60
18-Feb-23 15:00:00	1322	61
02-Jan-23 16:00:00	1321	65
02-Mar-23 15:00:00	1321	47
23-Jan-23 17:00:00	1321	79
22-Feb-23 21:00:00	1321	75
16-Jan-23 10:00:00	1321	81
07-Dec-23 20:00:00	1321	52
25-Dec-23 11:00:00	1321	30
15-Dec-23 15:00:00	1321	50
07-Feb-23 14:00:00	1320	59
20-Mar-23 08:00:00	1320	43
26-Jan-23 17:00:00	1320	76
23-Dec-23 19:00:00	1320	31
07-Jan-23 10:00:00	1320	35
26-Jan-23 09:00:00	1320	84
21-Mar-23 09:00:00	1319	49
20-Feb-23 10:00:00	1319	70
21-Jan-23 11:00:00	1319	78
07-Mar-23 08:00:00	1318	46
29-Dec-23 07:00:00	1318	41
05-Jan-23 22:00:00	1318	50
07-Dec-23 10:00:00	1318	39
26-Jan-23 16:00:00	1318	76
16-Jan-23 11:00:00	1318	83
23-Feb-23 14:00:00	1318	78
11-Jan-23 13:00:00	1317	85
07-Dec-23 07:00:00	1317	40
13-Jan-23 03:00:00	1317	54
02-Jan-23 18:00:00	1317	61
10-Mar-23 08:00:00	1317	75
29-Jan-23 20:00:00	1317	87
24-Mar-23 21:00:00	1317	44
02-Mar-23 01:00:00	1316	54
05-Feb-23 22:00:00	1316	61
05-Jan-23 15:00:00	1316	52
22-Jan-23 16:00:00	1316	70
23-Feb-23 15:00:00	1316	78
07-Jan-23 11:00:00	1316	35
21-Jan-23 14:00:00	1316	76
03-Jan-23 16:00:00	1316	67

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Feb-23 15:00:00	1316	78
09-Feb-23 23:00:00	1315	61
12-Feb-23 04:00:00	1314	53
19-Feb-23 13:00:00	1314	55
27-Dec-23 20:00:00	1314	48
25-Dec-23 08:00:00	1314	32
02-Feb-23 14:00:00	1314	72
15-Mar-23 07:00:00	1314	73
03-Jan-23 18:00:00	1314	67
15-Feb-23 17:00:00	1313	52
28-Dec-23 16:00:00	1313	26
22-Jan-23 20:00:00	1313	72
05-Mar-23 20:00:00	1313	51
31-Jan-23 17:00:00	1313	83
06-Jan-23 14:00:00	1313	40
05-Jan-23 12:00:00	1312	56
08-Feb-23 20:00:00	1312	69
23-Dec-23 16:00:00	1312	31
16-Jan-23 09:00:00	1312	81
06-Feb-23 07:00:00	1311	60
01-Feb-23 13:00:00	1311	79
23-Jan-23 11:00:00	1311	78
05-Mar-23 17:00:00	1311	46
08-Dec-23 18:00:00	1311	54
19-Feb-23 16:00:00	1311	39
15-Dec-23 17:00:00	1311	69
06-Mar-23 08:00:00	1310	63
10-Feb-23 22:00:00	1310	62
28-Dec-23 10:00:00	1310	30
21-Jan-23 15:00:00	1310	76
02-Mar-23 14:00:00	1310	50
07-Jan-23 16:00:00	1310	40
06-Apr-23 07:00:00	1309	51
03-Mar-23 21:00:00	1309	49
28-Dec-23 19:00:00	1309	28
08-Feb-23 12:00:00	1308	66
06-Jan-23 21:00:00	1308	42
01-Mar-23 14:00:00	1308	61
08-Jan-23 19:00:00	1308	53
13-Mar-23 07:00:00	1308	61
10-Feb-23 04:00:00	1308	55

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
22-Mar-23 08:00:00	1307	52
30-Jan-23 12:00:00	1307	79
09-Feb-23 10:00:00	1307	64
10-Mar-23 07:00:00	1306	75
14-Feb-23 06:00:00	1306	68
27-Dec-23 10:00:00	1306	55
15-Feb-23 21:00:00	1306	53
11-Feb-23 22:00:00	1306	58
16-Jan-23 17:00:00	1306	80
05-Mar-23 05:00:00	1305	42
07-Jan-23 09:00:00	1305	33
22-Feb-23 13:00:00	1305	77
15-Mar-23 10:00:00	1305	71
20-Mar-23 22:00:00	1305	52
20-Mar-23 16:00:00	1305	52
02-Feb-23 23:00:00	1305	77
13-Jan-23 00:00:00	1304	55
07-Mar-23 09:00:00	1304	48
16-Feb-23 18:00:00	1303	60
07-Jan-23 12:00:00	1303	35
27-Mar-23 08:00:00	1303	56
27-Dec-23 11:00:00	1303	47
03-Mar-23 04:00:00	1303	47
16-Feb-23 09:00:00	1302	65
08-Jan-23 10:00:00	1302	50
13-Feb-23 21:00:00	1302	51
16-Mar-23 09:00:00	1301	70
13-Jan-23 02:00:00	1301	55
16-Jan-23 12:00:00	1301	79
07-Jan-23 18:00:00	1301	41
28-Dec-23 11:00:00	1301	30
09-Jan-23 21:00:00	1300	53
20-Feb-23 20:00:00	1300	66
04-Dec-23 17:00:00	1300	44
08-Dec-23 15:00:00	1300	51
16-Jan-23 08:00:00	1300	80
06-Feb-23 16:00:00	1299	71
08-Dec-23 12:00:00	1299	51
23-Jan-23 16:00:00	1298	79
13-Feb-23 10:00:00	1298	71
28-Dec-23 09:00:00	1298	30

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Dec-23 16:00:00	1298	27
23-Dec-23 20:00:00	1298	31
31-Jan-23 18:00:00	1297	83
22-Feb-23 14:00:00	1297	79
02-Jan-23 19:00:00	1297	61
15-Feb-23 12:00:00	1296	48
04-Dec-23 16:00:00	1296	43
17-Dec-23 17:00:00	1296	37
08-Mar-23 08:00:00	1296	72
20-Feb-23 11:00:00	1296	70
23-Mar-23 09:00:00	1295	63
24-Dec-23 10:00:00	1295	27
14-Dec-23 22:00:00	1295	61
20-Mar-23 09:00:00	1295	48
20-Mar-23 07:00:00	1295	43
13-Jan-23 01:00:00	1295	55
07-Mar-23 07:00:00	1295	44
11-Feb-23 09:00:00	1295	70
09-Jan-23 06:00:00	1294	51
08-Jan-23 09:00:00	1294	43
03-Jan-23 19:00:00	1294	66
16-Dec-23 20:00:00	1294	28
04-Mar-23 22:00:00	1294	51
29-Dec-23 21:00:00	1294	45
16-Jan-23 16:00:00	1294	80
10-Mar-23 09:00:00	1294	75
17-Dec-23 08:00:00	1294	45
16-Dec-23 19:00:00	1294	25
21-Mar-23 06:00:00	1294	46
24-Dec-23 17:00:00	1293	27
16-Mar-23 08:00:00	1293	72
06-Feb-23 18:00:00	1293	70
31-Mar-23 08:00:00	1293	34
20-Jan-23 17:00:00	1292	85
03-Mar-23 11:00:00	1292	56
04-Mar-23 17:00:00	1292	46
09-Mar-23 18:00:00	1292	53
11-Feb-23 10:00:00	1292	70
15-Feb-23 06:00:00	1292	62
22-Feb-23 15:00:00	1291	81
06-Feb-23 10:00:00	1291	65

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Feb-23 03:00:00	1291	57
25-Mar-23 09:00:00	1291	64
25-Mar-23 10:00:00	1291	59
01-Feb-23 14:00:00	1291	78
21-Jan-23 10:00:00	1291	78
09-Mar-23 19:00:00	1291	53
17-Dec-23 09:00:00	1291	43
07-Feb-23 23:00:00	1290	65
15-Dec-23 14:00:00	1290	44
22-Mar-23 07:00:00	1290	54
09-Feb-23 11:00:00	1290	64
13-Jan-23 21:00:00	1290	54
23-Feb-23 05:00:00	1290	75
06-Feb-23 19:00:00	1290	69
20-Mar-23 10:00:00	1290	48
15-Dec-23 06:00:00	1290	68
20-Mar-23 11:00:00	1290	48
03-Feb-23 20:00:00	1290	71
05-Jan-23 13:00:00	1290	59
11-Jan-23 06:00:00	1289	49
08-Feb-23 15:00:00	1289	69
19-Feb-23 22:00:00	1289	70
07-Dec-23 21:00:00	1289	51
12-Feb-23 03:00:00	1289	53
30-Nov-23 17:00:00	1289	42
31-Mar-23 07:00:00	1288	35
02-Mar-23 23:00:00	1288	50
20-Mar-23 12:00:00	1288	51
11-Feb-23 11:00:00	1288	69
03-Mar-23 17:00:00	1287	44
05-Mar-23 16:00:00	1287	45
10-Feb-23 00:00:00	1287	61
10-Apr-23 08:00:00	1287	48
24-Dec-23 09:00:00	1286	27
25-Mar-23 11:00:00	1286	58
16-Mar-23 10:00:00	1285	68
04-Mar-23 12:00:00	1285	44
23-Jan-23 12:00:00	1285	79
Average (MW)	**1402**	**61**

Table C-5: Top 10% of Island Interconnected System Load Hours (2024)

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
24-Jan-24 07:00:00	1728	53
24-Jan-24 08:00:00	1707	54
24-Jan-24 09:00:00	1666	56
06-Jan-24 17:00:00	1666	47
24-Jan-24 06:00:00	1659	45
06-Jan-24 18:00:00	1658	47
06-Jan-24 19:00:00	1644	47
24-Jan-24 17:00:00	1635	59
06-Jan-24 20:00:00	1627	48
21-Feb-24 07:00:00	1625	42
24-Jan-24 10:00:00	1615	56
06-Jan-24 16:00:00	1613	48
24-Jan-24 18:00:00	1612	63
06-Jan-24 21:00:00	1598	50
30-Jan-24 08:00:00	1598	50
07-Jan-24 09:00:00	1596	41
24-Jan-24 19:00:00	1593	63
22-Feb-24 07:00:00	1593	46
22-Feb-24 08:00:00	1593	46
07-Jan-24 08:00:00	1586	41
30-Jan-24 09:00:00	1584	51
24-Jan-24 20:00:00	1582	61
24-Jan-24 16:00:00	1581	56
21-Feb-24 08:00:00	1576	42
26-Jan-24 08:00:00	1575	52
31-Jan-24 08:00:00	1572	60
24-Jan-24 11:00:00	1567	56
07-Jan-24 10:00:00	1558	41
30-Jan-24 10:00:00	1554	50
07-Jan-24 17:00:00	1554	32
30-Jan-24 07:00:00	1552	50
24-Jan-24 05:00:00	1552	48
31-Jan-24 07:00:00	1549	59
24-Jan-24 21:00:00	1548	57
06-Jan-24 22:00:00	1547	44
26-Jan-24 07:00:00	1544	52
07-Jan-24 07:00:00	1537	41
19-Jan-24 08:00:00	1534	64
30-Jan-24 11:00:00	1533	51

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Jan-24 08:00:00	1531	47
26-Jan-24 09:00:00	1529	51
21-Feb-24 06:00:00	1527	41
07-Jan-24 18:00:00	1527	30
30-Jan-24 17:00:00	1527	46
07-Jan-24 11:00:00	1523	40
19-Jan-24 17:00:00	1522	71
19-Jan-24 16:00:00	1521	56
24-Jan-24 12:00:00	1520	52
31-Jan-24 09:00:00	1520	59
07-Jan-24 16:00:00	1516	32
18-Jan-24 17:00:00	1515	59
20-Feb-24 19:00:00	1515	33
06-Jan-24 15:00:00	1512	48
10-Jan-24 07:00:00	1512	45
22-Feb-24 09:00:00	1511	50
20-Feb-24 18:00:00	1509	33
07-Jan-24 19:00:00	1509	29
19-Jan-24 09:00:00	1507	63
24-Jan-24 15:00:00	1506	43
21-Feb-24 09:00:00	1506	39
19-Jan-24 07:00:00	1505	64
20-Feb-24 20:00:00	1503	34
30-Jan-24 18:00:00	1503	44
18-Jan-24 18:00:00	1503	59
18-Jan-24 19:00:00	1498	59
07-Jan-24 06:00:00	1496	43
07-Jan-24 12:00:00	1495	36
24-Jan-24 04:00:00	1495	50
06-Jan-24 23:00:00	1494	44
22-Feb-24 06:00:00	1491	45
08-Jan-24 08:00:00	1491	38
06-Jan-24 13:00:00	1490	48
10-Jan-24 09:00:00	1490	51
26-Feb-24 08:00:00	1488	58
25-Jan-24 08:00:00	1488	48
06-Jan-24 12:00:00	1488	45
30-Jan-24 19:00:00	1487	44
26-Feb-24 07:00:00	1486	58
20-Feb-24 07:00:00	1485	41
24-Jan-24 13:00:00	1485	45

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
30-Jan-24 16:00:00	1485	46
06-Jan-24 14:00:00	1485	48
07-Jan-24 20:00:00	1483	29
21-Feb-24 19:00:00	1483	32
29-Jan-24 17:00:00	1482	49
24-Jan-24 14:00:00	1480	44
30-Jan-24 12:00:00	1480	51
30-Jan-24 20:00:00	1479	43
19-Jan-24 15:00:00	1478	48
08-Jan-24 09:00:00	1477	37
21-Feb-24 20:00:00	1477	32
06-Jan-24 11:00:00	1476	42
24-Jan-24 22:00:00	1475	52
19-Jan-24 18:00:00	1475	69
18-Jan-24 16:00:00	1475	59
23-Jan-24 21:00:00	1474	49
20-Feb-24 21:00:00	1473	34
19-Jan-24 13:00:00	1472	55
20-Feb-24 17:00:00	1472	34
08-Jan-24 07:00:00	1472	39
21-Feb-24 18:00:00	1472	32
25-Jan-24 07:00:00	1471	48
07-Jan-24 13:00:00	1471	33
25-Jan-24 09:00:00	1471	39
19-Jan-24 14:00:00	1471	49
19-Jan-24 10:00:00	1471	61
01-Feb-24 07:00:00	1470	47
18-Jan-24 20:00:00	1470	58
01-Mar-24 19:00:00	1470	74
19-Feb-24 07:00:00	1469	42
01-Mar-24 18:00:00	1467	75
08-Jan-24 17:00:00	1467	42
20-Feb-24 08:00:00	1466	40
23-Jan-24 20:00:00	1465	49
19-Jan-24 12:00:00	1465	62
19-Jan-24 11:00:00	1462	62
31-Jan-24 10:00:00	1460	47
01-Feb-24 08:00:00	1459	50
09-Jan-24 17:00:00	1458	37
07-Jan-24 05:00:00	1458	41
08-Jan-24 16:00:00	1455	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
29-Jan-24 18:00:00	1454	48
24-Jan-24 03:00:00	1454	49
21-Feb-24 10:00:00	1454	32
08-Jan-24 10:00:00	1454	41
21-Feb-24 21:00:00	1454	32
01-Mar-24 20:00:00	1454	72
25-Dec-24 08:00:00	1453	49
26-Jan-24 17:00:00	1452	51
23-Jan-24 19:00:00	1451	49
18-Feb-24 18:00:00	1451	40
07-Jan-24 00:00:00	1451	42
26-Feb-24 09:00:00	1451	58
31-Jan-24 19:00:00	1448	43
25-Dec-24 09:00:00	1447	49
26-Jan-24 18:00:00	1447	50
23-Jan-24 17:00:00	1446	47
06-Jan-24 10:00:00	1446	42
29-Jan-24 19:00:00	1446	48
26-Jan-24 10:00:00	1446	46
18-Feb-24 19:00:00	1445	40
07-Jan-24 15:00:00	1444	32
31-Jan-24 18:00:00	1443	43
23-Jan-24 18:00:00	1443	48
30-Jan-24 21:00:00	1443	43
07-Jan-24 21:00:00	1440	29
30-Jan-24 13:00:00	1439	48
31-Jan-24 06:00:00	1439	53
19-Jan-24 19:00:00	1439	62
31-Jan-24 20:00:00	1439	41
24-Dec-24 16:00:00	1439	61
24-Dec-24 17:00:00	1438	61
19-Feb-24 08:00:00	1438	46
26-Jan-24 19:00:00	1438	50
09-Jan-24 18:00:00	1437	37
29-Jan-24 16:00:00	1437	47
08-Jan-24 11:00:00	1437	40
07-Jan-24 14:00:00	1436	32
23-Dec-24 17:00:00	1435	65
30-Jan-24 15:00:00	1435	47
24-Dec-24 10:00:00	1435	61
30-Jan-24 06:00:00	1435	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Jan-24 19:00:00	1435	37
07-Jan-24 04:00:00	1435	39
25-Jan-24 17:00:00	1433	67
25-Jan-24 10:00:00	1433	38
29-Jan-24 20:00:00	1433	47
18-Feb-24 20:00:00	1432	40
10-Jan-24 17:00:00	1431	55
09-Jan-24 20:00:00	1431	37
26-Jan-24 06:00:00	1431	46
18-Jan-24 21:00:00	1431	59
21-Feb-24 05:00:00	1430	34
10-Jan-24 10:00:00	1429	50
24-Dec-24 09:00:00	1429	62
18-Feb-24 17:00:00	1429	39
31-Jan-24 17:00:00	1428	43
07-Jan-24 01:00:00	1428	39
24-Dec-24 11:00:00	1427	60
23-Jan-24 22:00:00	1426	50
07-Jan-24 03:00:00	1425	39
31-Jan-24 11:00:00	1424	51
22-Feb-24 17:00:00	1424	55
26-Jan-24 20:00:00	1423	50
01-Mar-24 17:00:00	1422	75
08-Jan-24 12:00:00	1422	31
08-Jan-24 18:00:00	1422	39
30-Jan-24 14:00:00	1421	47
25-Jan-24 16:00:00	1421	62
21-Feb-24 17:00:00	1421	32
01-Mar-24 21:00:00	1421	71
20-Feb-24 22:00:00	1419	32
09-Jan-24 08:00:00	1419	41
22-Feb-24 18:00:00	1418	61
07-Jan-24 02:00:00	1418	39
25-Dec-24 10:00:00	1418	49
19-Jan-24 06:00:00	1414	59
25-Jan-24 11:00:00	1413	35
10-Jan-24 06:00:00	1412	41
31-Jan-24 21:00:00	1410	40
14-Feb-24 17:00:00	1409	55
06-Jan-24 09:00:00	1408	42
10-Jan-24 18:00:00	1408	55

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
21-Feb-24 11:00:00	1408	33
09-Jan-24 21:00:00	1407	37
23-Dec-24 16:00:00	1407	65
02-Jan-24 17:00:00	1407	60
25-Jan-24 12:00:00	1407	38
25-Jan-24 18:00:00	1406	57
24-Jan-24 02:00:00	1406	49
21-Feb-24 22:00:00	1405	32
02-Jan-24 08:00:00	1405	40
24-Dec-24 12:00:00	1404	60
22-Feb-24 10:00:00	1404	44
08-Feb-24 08:00:00	1404	50
18-Jan-24 15:00:00	1404	60
25-Dec-24 11:00:00	1404	50
08-Jan-24 15:00:00	1403	38
24-Jan-24 23:00:00	1403	48
23-Dec-24 18:00:00	1403	65
22-Feb-24 19:00:00	1402	58
05-Mar-24 07:00:00	1402	69
08-Jan-24 13:00:00	1401	33
02-Jan-24 09:00:00	1401	57
18-Feb-24 21:00:00	1401	41
20-Feb-24 09:00:00	1400	36
19-Jan-24 20:00:00	1400	56
29-Jan-24 21:00:00	1399	47
25-Dec-24 07:00:00	1397	49
23-Dec-24 19:00:00	1395	64
24-Dec-24 18:00:00	1394	59
10-Jan-24 19:00:00	1393	53
24-Dec-24 15:00:00	1393	61
14-Feb-24 16:00:00	1393	53
08-Jan-24 19:00:00	1391	38
01-Feb-24 09:00:00	1391	36
03-Feb-24 17:00:00	1391	47
02-Mar-24 07:00:00	1391	70
30-Jan-24 22:00:00	1391	43
08-Mar-24 17:00:00	1391	69
25-Jan-24 13:00:00	1391	34
26-Feb-24 10:00:00	1390	59
09-Jan-24 09:00:00	1390	43
23-Jan-24 16:00:00	1390	50

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Jan-24 14:00:00	1389	38
24-Dec-24 08:00:00	1389	62
26-Jan-24 21:00:00	1388	50
20-Feb-24 16:00:00	1388	34
19-Feb-24 06:00:00	1388	40
25-Jan-24 15:00:00	1388	48
05-Dec-24 08:00:00	1387	60
02-Jan-24 10:00:00	1387	51
14-Feb-24 11:00:00	1387	49
05-Jan-24 17:00:00	1387	54
09-Jan-24 07:00:00	1387	40
09-Jan-24 16:00:00	1386	41
01-Feb-24 06:00:00	1385	35
10-Jan-24 16:00:00	1385	53
02-Mar-24 08:00:00	1385	69
27-Feb-24 08:00:00	1384	55
25-Jan-24 19:00:00	1384	49
24-Dec-24 13:00:00	1383	60
08-Feb-24 07:00:00	1383	50
31-Jan-24 12:00:00	1383	53
14-Feb-24 10:00:00	1381	48
08-Mar-24 18:00:00	1381	68
22-Feb-24 05:00:00	1381	33
18-Jan-24 08:00:00	1380	53
29-Jan-24 15:00:00	1380	47
27-Jan-24 08:00:00	1380	39
08-Mar-24 16:00:00	1380	69
14-Feb-24 18:00:00	1380	60
25-Jan-24 06:00:00	1379	46
07-Feb-24 08:00:00	1378	53
18-Jan-24 22:00:00	1378	58
17-Jan-24 08:00:00	1378	48
04-Feb-24 17:00:00	1378	33
19-Feb-24 17:00:00	1378	35
02-Jan-24 18:00:00	1378	60
20-Feb-24 23:00:00	1377	31
26-Jan-24 11:00:00	1377	42
23-Dec-24 20:00:00	1377	60
27-Feb-24 07:00:00	1376	53
19-Feb-24 18:00:00	1376	36
24-Dec-24 14:00:00	1376	61

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
10-Jan-24 20:00:00	1375	53
29-Jan-24 14:00:00	1375	45
02-Jan-24 07:00:00	1375	37
01-Mar-24 22:00:00	1375	71
14-Feb-24 12:00:00	1375	50
10-Jan-24 11:00:00	1374	54
07-Jan-24 22:00:00	1374	28
10-Dec-24 08:00:00	1374	63
02-Jan-24 16:00:00	1374	44
21-Feb-24 04:00:00	1374	27
08-Feb-24 09:00:00	1374	50
22-Feb-24 20:00:00	1374	57
25-Dec-24 12:00:00	1374	50
02-Jan-24 11:00:00	1374	39
26-Feb-24 06:00:00	1373	65
05-Jan-24 16:00:00	1373	54
08-Jan-24 06:00:00	1373	33
22-Feb-24 16:00:00	1373	46
20-Feb-24 06:00:00	1373	41
26-Mar-24 07:00:00	1372	77
11-Mar-24 17:00:00	1372	66
25-Feb-24 19:00:00	1371	52
01-Mar-24 16:00:00	1371	75
19-Feb-24 09:00:00	1371	47
26-Jan-24 16:00:00	1371	47
05-Dec-24 07:00:00	1371	59
02-Jan-24 19:00:00	1370	60
08-Dec-24 17:00:00	1370	64
02-Mar-24 09:00:00	1369	69
10-Dec-24 17:00:00	1368	61
17-Jan-24 09:00:00	1368	48
24-Dec-24 19:00:00	1367	57
25-Jan-24 20:00:00	1367	48
23-Jan-24 23:00:00	1366	52
04-Feb-24 16:00:00	1366	34
17-Feb-24 17:00:00	1366	44
22-Jan-24 17:00:00	1366	60
20-Jan-24 17:00:00	1365	46
09-Feb-24 08:00:00	1365	48
18-Jan-24 09:00:00	1365	53
25-Jan-24 14:00:00	1365	41

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
27-Jan-24 09:00:00	1364	39
29-Jan-24 13:00:00	1364	39
22-Feb-24 11:00:00	1364	44
25-Feb-24 20:00:00	1364	52
02-Feb-24 08:00:00	1364	40
02-Mar-24 18:00:00	1364	72
20-Jan-24 11:00:00	1363	45
19-Feb-24 19:00:00	1363	37
04-Jan-24 17:00:00	1363	48
25-Feb-24 18:00:00	1363	52
11-Mar-24 09:00:00	1363	62
20-Jan-24 10:00:00	1362	49
14-Feb-24 09:00:00	1362	47
08-Feb-24 17:00:00	1362	55
24-Jan-24 00:00:00	1362	49
26-Mar-24 08:00:00	1362	78
02-Feb-24 09:00:00	1361	42
24-Jan-24 01:00:00	1361	49
11-Mar-24 08:00:00	1361	65
23-Jan-24 08:00:00	1361	50
11-Mar-24 16:00:00	1360	64
01-Mar-24 08:00:00	1360	69
31-Jan-24 22:00:00	1360	39
06-Feb-24 17:00:00	1360	57
18-Feb-24 16:00:00	1360	39
02-Mar-24 19:00:00	1360	69
03-Feb-24 16:00:00	1359	48
23-Jan-24 09:00:00	1359	49
01-Jan-24 17:00:00	1359	34
03-Feb-24 18:00:00	1359	47
20-Feb-24 10:00:00	1358	36
08-Jan-24 20:00:00	1358	37
29-Jan-24 12:00:00	1358	39
11-Mar-24 10:00:00	1357	62
20-Jan-24 09:00:00	1357	51
18-Jan-24 13:00:00	1357	59
15-Feb-24 17:00:00	1356	57
14-Feb-24 19:00:00	1356	61
17-Feb-24 18:00:00	1356	41
02-Mar-24 06:00:00	1356	71
29-Jan-24 11:00:00	1356	43

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
02-Mar-24 10:00:00	1356	69
22-Dec-24 17:00:00	1355	66
07-Feb-24 17:00:00	1355	56
08-Mar-24 19:00:00	1355	68
07-Feb-24 07:00:00	1355	54
09-Jan-24 10:00:00	1355	44
22-Jan-24 18:00:00	1355	59
22-Jan-24 08:00:00	1355	51
06-Jan-24 08:00:00	1355	42
21-Feb-24 12:00:00	1354	32
10-Dec-24 18:00:00	1354	61
05-Jan-24 18:00:00	1354	54
14-Feb-24 13:00:00	1354	51
21-Feb-24 23:00:00	1354	32
25-Jan-24 00:00:00	1353	45
11-Mar-24 18:00:00	1353	66
05-Mar-24 06:00:00	1353	69
21-Feb-24 03:00:00	1353	26
14-Feb-24 15:00:00	1352	52
18-Jan-24 14:00:00	1352	61
01-Jan-24 16:00:00	1352	34
08-Mar-24 15:00:00	1352	69
08-Feb-24 18:00:00	1352	55
10-Dec-24 07:00:00	1352	64
10-Feb-24 09:00:00	1352	57
07-Feb-24 09:00:00	1351	52
16-Feb-24 08:00:00	1351	45
23-Dec-24 12:00:00	1351	62
19-Feb-24 20:00:00	1350	37
11-Mar-24 11:00:00	1350	64
25-Jan-24 21:00:00	1350	48
21-Feb-24 00:00:00	1350	31
23-Jan-24 10:00:00	1350	49
10-Jan-24 21:00:00	1350	53
24-Dec-24 20:00:00	1349	57
19-Feb-24 16:00:00	1349	38
23-Dec-24 11:00:00	1349	61
09-Jan-24 22:00:00	1349	37
26-Feb-24 11:00:00	1349	59
22-Jan-24 19:00:00	1348	57
11-Mar-24 19:00:00	1348	66

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
29-Jan-24 08:00:00	1348	35
09-Feb-24 09:00:00	1348	47
18-Jan-24 12:00:00	1347	58
21-Feb-24 02:00:00	1347	26
08-Feb-24 10:00:00	1347	49
17-Jan-24 07:00:00	1347	48
23-Dec-24 13:00:00	1347	62
11-Jan-24 08:00:00	1347	49
23-Dec-24 15:00:00	1347	65
10-Dec-24 19:00:00	1347	62
02-Mar-24 11:00:00	1347	69
10-Feb-24 10:00:00	1346	54
04-Feb-24 18:00:00	1346	28
31-Jan-24 05:00:00	1346	53
08-Dec-24 16:00:00	1346	64
18-Jan-24 07:00:00	1345	53
20-Jan-24 18:00:00	1345	42
08-Dec-24 18:00:00	1345	64
18-Jan-24 11:00:00	1345	55
03-Feb-24 19:00:00	1345	47
16-Jan-24 08:00:00	1345	47
08-Mar-24 12:00:00	1345	72
18-Jan-24 10:00:00	1344	52
05-Mar-24 08:00:00	1344	69
23-Jan-24 11:00:00	1344	50
11-Jan-24 07:00:00	1344	50
21-Feb-24 01:00:00	1344	30
02-Feb-24 10:00:00	1343	43
15-Feb-24 16:00:00	1343	57
07-Feb-24 19:00:00	1343	62
29-Jan-24 09:00:00	1343	35
23-Dec-24 08:00:00	1343	64
02-Jan-24 20:00:00	1342	61
18-Feb-24 22:00:00	1342	41
08-Feb-24 19:00:00	1342	55
16-Jan-24 17:00:00	1342	59
07-Feb-24 20:00:00	1342	62
29-Jan-24 10:00:00	1342	37
19-Feb-24 10:00:00	1341	37
16-Feb-24 09:00:00	1341	49
23-Dec-24 21:00:00	1341	60

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
29-Jan-24 22:00:00	1341	46
15-Feb-24 18:00:00	1340	54
22-Feb-24 15:00:00	1340	39
22-Feb-24 12:00:00	1339	47
22-Feb-24 14:00:00	1339	40
15-Dec-24 17:00:00	1339	60
19-Jan-24 21:00:00	1339	55
14-Feb-24 14:00:00	1338	51
11-Mar-24 12:00:00	1338	65
02-Feb-24 07:00:00	1338	39
02-Jan-24 12:00:00	1338	39
05-Jan-24 19:00:00	1338	52
02-Mar-24 20:00:00	1338	69
10-Dec-24 20:00:00	1338	62
22-Feb-24 04:00:00	1337	31
07-Feb-24 18:00:00	1337	58
19-Feb-24 11:00:00	1337	28
17-Jan-24 10:00:00	1337	49
08-Mar-24 13:00:00	1336	72
26-Jan-24 22:00:00	1336	50
04-Feb-24 15:00:00	1336	34
20-Jan-24 12:00:00	1336	46
09-Jan-24 11:00:00	1336	44
06-Feb-24 16:00:00	1336	58
04-Dec-24 17:00:00	1335	57
08-Mar-24 14:00:00	1335	69
01-Jan-24 18:00:00	1335	34
03-Feb-24 11:00:00	1335	39
09-Feb-24 07:00:00	1335	49
05-Dec-24 17:00:00	1335	54
27-Jan-24 07:00:00	1335	39
30-Jan-24 23:00:00	1335	43
14-Jan-24 12:00:00	1334	44
26-Feb-24 19:00:00	1334	60
06-Feb-24 18:00:00	1334	57
27-Feb-24 09:00:00	1334	55
30-Jan-24 05:00:00	1333	36
08-Mar-24 11:00:00	1333	72
25-Feb-24 21:00:00	1333	52
17-Feb-24 19:00:00	1333	40
20-Jan-24 16:00:00	1333	46

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-24 18:00:00	1333	57
25-Dec-24 13:00:00	1333	50
02-Feb-24 17:00:00	1333	45
18-Feb-24 11:00:00	1333	46
19-Jan-24 05:00:00	1333	50
22-Feb-24 13:00:00	1332	39
07-Dec-24 17:00:00	1332	64
01-Mar-24 07:00:00	1332	69
01-Mar-24 09:00:00	1332	66
22-Dec-24 16:00:00	1332	66
20-Feb-24 11:00:00	1332	28
19-Feb-24 12:00:00	1332	31
01-Feb-24 10:00:00	1331	36
23-Dec-24 14:00:00	1331	64
04-Feb-24 09:00:00	1331	34
08-Dec-24 19:00:00	1331	64
04-Feb-24 19:00:00	1331	28
05-Dec-24 09:00:00	1331	61
16-Dec-24 08:00:00	1331	56
22-Jan-24 20:00:00	1331	54
26-Jan-24 05:00:00	1331	44
16-Jan-24 18:00:00	1330	58
04-Jan-24 16:00:00	1330	49
04-Jan-24 18:00:00	1330	48
22-Dec-24 18:00:00	1330	66
11-Mar-24 15:00:00	1330	58
23-Jan-24 15:00:00	1330	51
24-Dec-24 21:00:00	1330	55
03-Feb-24 10:00:00	1329	39
14-Dec-24 17:00:00	1329	62
23-Jan-24 07:00:00	1329	50
21-Feb-24 16:00:00	1329	27
09-Mar-24 19:00:00	1329	71
05-Feb-24 17:00:00	1329	51
26-Feb-24 17:00:00	1328	56
18-Feb-24 12:00:00	1328	46
17-Feb-24 16:00:00	1328	44
01-Jan-24 19:00:00	1328	34
01-Mar-24 23:00:00	1328	71
18-Feb-24 10:00:00	1328	46
22-Jan-24 07:00:00	1328	52

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
11-Mar-24 13:00:00	1327	66
09-Mar-24 18:00:00	1327	71
16-Jan-24 07:00:00	1327	46
08-Feb-24 11:00:00	1327	48
15-Feb-24 19:00:00	1327	53
11-Mar-24 20:00:00	1327	66
18-Jan-24 23:00:00	1326	57
14-Jan-24 13:00:00	1326	44
14-Feb-24 08:00:00	1326	46
04-Feb-24 12:00:00	1325	34
27-Jan-24 10:00:00	1325	39
08-Mar-24 09:00:00	1325	73
28-Jan-24 17:00:00	1324	35
23-Jan-24 12:00:00	1324	50
31-Jan-24 16:00:00	1324	45
28-Jan-24 11:00:00	1324	36
22-Feb-24 21:00:00	1324	55
01-Feb-24 17:00:00	1324	39
02-Feb-24 11:00:00	1324	35
24-Dec-24 07:00:00	1324	62
10-Dec-24 16:00:00	1324	61
18-Feb-24 09:00:00	1324	46
01-Mar-24 10:00:00	1323	59
10-Feb-24 08:00:00	1323	57
03-Feb-24 12:00:00	1323	40
15-Mar-24 08:00:00	1323	82
25-Jan-24 01:00:00	1323	44
13-Jan-24 17:00:00	1323	59
19-Feb-24 13:00:00	1323	31
25-Dec-24 06:00:00	1323	50
14-Feb-24 20:00:00	1323	61
08-Feb-24 16:00:00	1322	54
16-Jan-24 19:00:00	1322	58
26-Feb-24 12:00:00	1322	60
02-Mar-24 12:00:00	1322	69
04-Dec-24 18:00:00	1322	58
22-Feb-24 03:00:00	1322	32
04-Feb-24 11:00:00	1321	34
14-Jan-24 11:00:00	1321	44
18-Mar-24 11:00:00	1321	75
08-Mar-24 20:00:00	1321	68

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
08-Mar-24 10:00:00	1321	72
20-Feb-24 15:00:00	1321	31
07-Feb-24 10:00:00	1321	52
23-Dec-24 10:00:00	1320	59
04-Dec-24 19:00:00	1320	57
22-Jan-24 09:00:00	1320	52
09-Feb-24 10:00:00	1320	48
19-Feb-24 15:00:00	1319	39
10-Feb-24 11:00:00	1319	54
19-Feb-24 21:00:00	1319	37
16-Feb-24 07:00:00	1319	44
20-Jan-24 19:00:00	1319	40
01-Mar-24 11:00:00	1319	61
11-Mar-24 14:00:00	1319	60
08-Feb-24 20:00:00	1319	55
01-Mar-24 15:00:00	1319	75
18-Mar-24 10:00:00	1318	75
23-Dec-24 09:00:00	1318	62
04-Mar-24 19:00:00	1318	71
20-Dec-24 17:00:00	1318	65
14-Jan-24 17:00:00	1318	44
11-Mar-24 07:00:00	1318	65
04-Feb-24 14:00:00	1317	34
05-Jan-24 15:00:00	1317	57
07-Mar-24 18:00:00	1317	78
02-Feb-24 16:00:00	1317	45
28-Jan-24 12:00:00	1317	36
10-Jan-24 12:00:00	1317	53
05-Jan-24 20:00:00	1317	52
02-Mar-24 05:00:00	1317	71
04-Feb-24 13:00:00	1317	34
04-Dec-24 08:00:00	1317	60
02-Mar-24 17:00:00	1316	70
18-Mar-24 12:00:00	1316	74
28-Jan-24 10:00:00	1316	36
28-Jan-24 18:00:00	1316	36
09-Dec-24 17:00:00	1316	64
05-Dec-24 16:00:00	1315	53
18-Feb-24 15:00:00	1315	39
08-Mar-24 08:00:00	1315	74
10-Dec-24 09:00:00	1314	63

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
01-Feb-24 18:00:00	1314	39
03-Feb-24 20:00:00	1314	46
22-Feb-24 00:00:00	1314	32
14-Jan-24 16:00:00	1314	46
04-Jan-24 19:00:00	1314	48
16-Jan-24 20:00:00	1314	58
20-Jan-24 08:00:00	1314	51
02-Jan-24 15:00:00	1314	39
07-Mar-24 17:00:00	1314	77
01-Feb-24 05:00:00	1313	40
06-Feb-24 19:00:00	1313	57
26-Feb-24 20:00:00	1313	60
16-Dec-24 07:00:00	1313	59
17-Feb-24 09:00:00	1313	50
23-Jan-24 13:00:00	1313	50
25-Jan-24 22:00:00	1313	48
03-Feb-24 09:00:00	1313	39
10-Jan-24 05:00:00	1312	34
07-Mar-24 19:00:00	1312	78
04-Dec-24 07:00:00	1312	59
08-Jan-24 21:00:00	1312	37
16-Feb-24 10:00:00	1311	45
19-Feb-24 14:00:00	1311	34
26-Feb-24 16:00:00	1311	57
04-Dec-24 20:00:00	1311	54
03-Feb-24 15:00:00	1311	47
07-Dec-24 18:00:00	1310	64
22-Feb-24 02:00:00	1310	31
07-Feb-24 21:00:00	1310	62
04-Mar-24 20:00:00	1310	71
20-Feb-24 12:00:00	1310	31
03-Jan-24 17:00:00	1310	41
07-Feb-24 16:00:00	1310	56
02-Feb-24 12:00:00	1310	34
01-Feb-24 19:00:00	1310	39
09-Feb-24 17:00:00	1309	62
07-Jan-24 23:00:00	1309	27
17-Jan-24 11:00:00	1309	54
08-Dec-24 20:00:00	1309	63
18-Mar-24 09:00:00	1309	76
31-Jan-24 04:00:00	1309	52

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
25-Dec-24 14:00:00	1309	49
31-Jan-24 13:00:00	1309	53
04-Feb-24 10:00:00	1309	37
25-Dec-24 16:00:00	1309	50
15-Dec-24 18:00:00	1309	60
04-Feb-24 20:00:00	1308	28
29-Jan-24 07:00:00	1308	35
06-Feb-24 11:00:00	1308	54
02-Mar-24 00:00:00	1308	71
22-Dec-24 19:00:00	1308	65
09-Jan-24 12:00:00	1307	38
17-Feb-24 08:00:00	1307	49
23-Jan-24 14:00:00	1307	51
23-Mar-24 11:00:00	1306	73
16-Feb-24 18:00:00	1306	44
03-Feb-24 13:00:00	1306	45
23-Mar-24 10:00:00	1306	73
08-Dec-24 08:00:00	1306	64
15-Dec-24 19:00:00	1306	60
18-Feb-24 14:00:00	1306	39
15-Dec-24 16:00:00	1306	61
21-Feb-24 13:00:00	1306	32
28-Jan-24 16:00:00	1305	35
03-Feb-24 14:00:00	1305	47
11-Jan-24 09:00:00	1305	44
02-Feb-24 18:00:00	1305	45
09-Mar-24 17:00:00	1305	70
09-Feb-24 18:00:00	1305	51
10-Dec-24 21:00:00	1305	62
08-Mar-24 07:00:00	1304	73
20-Dec-24 18:00:00	1304	64
09-Mar-24 20:00:00	1304	71
17-Feb-24 20:00:00	1304	34
01-Jan-24 20:00:00	1304	34
19-Feb-24 05:00:00	1304	40
20-Dec-24 19:00:00	1304	63
15-Feb-24 15:00:00	1304	56
25-Jan-24 02:00:00	1304	44
18-Feb-24 13:00:00	1303	45
06-Feb-24 10:00:00	1303	56
31-Jan-24 23:00:00	1303	39

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
20-Jan-24 13:00:00	1303	47
20-Jan-24 15:00:00	1303	47
01-Jan-24 15:00:00	1303	34
07-Dec-24 16:00:00	1303	64
25-Feb-24 17:00:00	1302	52
15-Feb-24 11:00:00	1302	54
23-Mar-24 09:00:00	1302	73
22-Jan-24 21:00:00	1302	54
05-Feb-24 08:00:00	1302	40
15-Feb-24 10:00:00	1302	54
28-Jan-24 09:00:00	1302	36
14-Jan-24 10:00:00	1301	44
13-Jan-24 11:00:00	1301	50
22-Feb-24 01:00:00	1301	31
14-Dec-24 18:00:00	1301	61
27-Jan-24 18:00:00	1301	50
01-Mar-24 12:00:00	1300	69
09-Mar-24 09:00:00	1300	71
31-Jan-24 00:00:00	1300	43
14-Jan-24 14:00:00	1300	45
10-Jan-24 22:00:00	1300	54
04-Dec-24 16:00:00	1300	57
23-Dec-24 07:00:00	1300	65
02-Mar-24 21:00:00	1300	70
01-Jan-24 12:00:00	1300	39
25-Dec-24 15:00:00	1300	46
04-Mar-24 08:00:00	1300	66
05-Feb-24 18:00:00	1299	51
06-Feb-24 09:00:00	1299	57
15-Feb-24 20:00:00	1299	51
22-Jan-24 16:00:00	1299	58
15-Dec-24 20:00:00	1298	60
18-Mar-24 08:00:00	1298	76
05-Dec-24 18:00:00	1298	53
18-Mar-24 16:00:00	1297	69
02-Mar-24 04:00:00	1297	72
14-Dec-24 16:00:00	1297	62
15-Feb-24 12:00:00	1297	55
22-Dec-24 11:00:00	1297	63
05-Feb-24 09:00:00	1297	42
25-Jan-24 05:00:00	1297	46

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Jan-24 14:00:00	1297	57
13-Jan-24 18:00:00	1297	59
03-Jan-24 18:00:00	1296	41
21-Dec-24 10:00:00	1296	57
22-Dec-24 12:00:00	1296	63
23-Dec-24 22:00:00	1296	61
20-Jan-24 20:00:00	1295	40
02-Jan-24 13:00:00	1295	39
07-Dec-24 19:00:00	1295	65
27-Jan-24 19:00:00	1295	50
16-Feb-24 17:00:00	1295	44
28-Jan-24 19:00:00	1295	43
25-Jan-24 04:00:00	1295	45
15-Feb-24 09:00:00	1294	55
18-Mar-24 13:00:00	1294	73
19-Jan-24 04:00:00	1294	52
31-Jan-24 03:00:00	1294	52
08-Jan-24 05:00:00	1294	27
11-Dec-24 16:00:00	1294	66
09-Mar-24 10:00:00	1294	71
05-Jan-24 21:00:00	1294	52
25-Dec-24 17:00:00	1294	50
01-Jan-24 11:00:00	1294	40
25-Jan-24 03:00:00	1294	45
09-Dec-24 16:00:00	1294	64
02-Feb-24 15:00:00	1294	41
22-Dec-24 20:00:00	1294	65
11-Dec-24 08:00:00	1293	62
14-Jan-24 15:00:00	1293	49
07-Mar-24 20:00:00	1293	78
04-Mar-24 18:00:00	1293	71
24-Dec-24 22:00:00	1293	54
15-Feb-24 13:00:00	1292	55
13-Jan-24 12:00:00	1292	52
05-Dec-24 19:00:00	1292	49
02-Jan-24 21:00:00	1292	61
22-Dec-24 10:00:00	1292	63
29-Jan-24 23:00:00	1292	41
27-Jan-24 17:00:00	1292	51
16-Jan-24 09:00:00	1292	46
20-Feb-24 13:00:00	1292	28

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
26-Feb-24 13:00:00	1292	60
08-Feb-24 12:00:00	1292	48
18-Feb-24 23:00:00	1292	41
10-Mar-24 10:00:00	1291	70
10-Mar-24 09:00:00	1291	70
05-Jan-24 11:00:00	1291	58
07-Feb-24 11:00:00	1291	52
04-Mar-24 21:00:00	1291	71
15-Feb-24 14:00:00	1291	52
09-Feb-24 19:00:00	1291	56
28-Jan-24 13:00:00	1291	36
06-Feb-24 08:00:00	1291	57
16-Jan-24 21:00:00	1290	58
02-Feb-24 13:00:00	1290	37
26-Jan-24 12:00:00	1290	44
09-Jan-24 23:00:00	1290	37
05-Jan-24 12:00:00	1290	58
27-Jan-24 11:00:00	1290	39
18-Mar-24 17:00:00	1290	67
15-Mar-24 07:00:00	1289	82
05-Feb-24 16:00:00	1289	51
20-Jan-24 14:00:00	1289	50
21-Dec-24 09:00:00	1289	59
31-Jan-24 01:00:00	1289	49
16-Feb-24 19:00:00	1289	44
23-Feb-24 08:00:00	1289	25
01-Feb-24 20:00:00	1289	44
17-Feb-24 10:00:00	1289	50
20-Dec-24 20:00:00	1289	64
05-Jan-24 13:00:00	1288	57
16-Dec-24 17:00:00	1288	60
09-Feb-24 16:00:00	1288	59
27-Mar-24 07:00:00	1288	76
31-Jan-24 02:00:00	1288	52
05-Feb-24 10:00:00	1288	44
09-Mar-24 08:00:00	1288	69
15-Mar-24 09:00:00	1287	82
16-Dec-24 09:00:00	1287	56
01-Jan-24 14:00:00	1287	34
09-Feb-24 11:00:00	1287	48
04-Jan-24 20:00:00	1287	47

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
09-Mar-24 11:00:00	1287	72
21-Dec-24 11:00:00	1287	57
02-Mar-24 03:00:00	1287	72
20-Dec-24 16:00:00	1287	65
19-Jan-24 00:00:00	1287	57
08-Feb-24 06:00:00	1286	51
16-Jan-24 16:00:00	1286	59
02-Mar-24 01:00:00	1286	71
09-Dec-24 18:00:00	1286	64
05-Jan-24 10:00:00	1286	55
18-Mar-24 14:00:00	1285	72
13-Jan-24 10:00:00	1285	50
05-Dec-24 10:00:00	1285	61
13-Jan-24 16:00:00	1285	55
05-Jan-24 09:00:00	1285	53
27-Feb-24 10:00:00	1285	54
08-Dec-24 09:00:00	1285	64
06-Feb-24 20:00:00	1285	57
11-Mar-24 21:00:00	1285	66
22-Dec-24 09:00:00	1284	59
17-Dec-24 08:00:00	1284	58
22-Dec-24 13:00:00	1284	63
01-Feb-24 11:00:00	1284	37
06-Jan-24 07:00:00	1284	42
21-Jan-24 17:00:00	1284	45
02-Mar-24 02:00:00	1284	71
02-Jan-24 14:00:00	1283	38
02-Feb-24 19:00:00	1283	45
20-Feb-24 14:00:00	1283	25
07-Mar-24 16:00:00	1283	77
10-Jan-24 15:00:00	1283	51
02-Feb-24 14:00:00	1283	43
18-Mar-24 15:00:00	1283	69
30-Jan-24 04:00:00	1283	36
08-Feb-24 21:00:00	1282	55
27-Jan-24 20:00:00	1282	52
23-Feb-24 07:00:00	1282	30
01-Jan-24 13:00:00	1282	35
26-Jan-24 04:00:00	1282	41
11-Dec-24 09:00:00	1282	64
27-Feb-24 06:00:00	1282	52

Time	IIS Demand (MW)	NP Hydraulic Generation (MW)
05-Feb-24 19:00:00	1281	51
03-Feb-24 21:00:00	1281	44
06-Feb-24 12:00:00	1281	55
13-Feb-24 17:00:00	1280	41
04-Dec-24 21:00:00	1280	51
03-Jan-24 16:00:00	1280	41
09-Jan-24 15:00:00	1280	39
01-Feb-24 04:00:00	1280	40
14-Jan-24 18:00:00	1280	44
11-Dec-24 07:00:00	1280	61
19-Jan-24 03:00:00	1279	54
17-Feb-24 11:00:00	1279	50
14-Dec-24 19:00:00	1279	60
26-Feb-24 21:00:00	1279	58
03-Jan-24 19:00:00	1278	41
21-Jan-24 19:00:00	1278	46
26-Jan-24 23:00:00	1278	46
Average (MW)	**1367**	**51**

Attachment 5

Treatment of Holyrood Generating Station Costs

newfoundland labrador hydro

Christensen ASSOCIATES

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Madison, WI 53705-2299

608.231.2266
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MEMORANDUM

TO: Newfoundland and Labrador Hydro

FROM: Bruce Chapman

DATE: July 30, 2025

SUBJECT: Treatment of Holyrood Generating Station Costs

NL Hydro (Hydro) anticipates that the role of the Holyrood Generating Station in supporting provision of generation services to the utility's customers will be changing in the near future.[1] Having provided base load generation until the commissioning of Muskrat Falls and the Labrador Island Link, the three units of the station are now to serve new roles. Two units will be active throughout the peak winter months, providing base load generation, as dictated by the time required to bring them on line. The third unit will be brought on in anticipation of extremely cold weather and its associated high levels of demand, then shut down with the return of normal winter conditions. All three units will be inactive in the non-winter months.

This state of affairs is expected to last through at least 2029. At that time, a new combustion turbine may be ready for service, which may permit shutting down one Holyrood unit. The arrival of another new hydraulic unit, possibly in 2031, may permit retirement of a second Holyrood generator. The remaining generator would then convert to the role of synchronous condenser, under which role it would be in operation in all hours of the year, providing no net generation but offering reactive power. The exact timing of the retirement of the Holyrood TGS units and the integration of new assets is subject to change. The Holyrood TGS unit(s) will not retire prior to the successful integration of new generation that is deemed reliable.

With the changing roles of these units, the question arises as to whether their treatment in cost allocation should change. In the past, the costs of Holyrood generation plant were classified by basing the energy share on capacity factor, with the residual being demand-related. (This approach deems the share of load as a percentage of capacity as base load and thus energy-related. As the level of utilization has come down, the share of Holyrood costs classified as energy-related has fallen.) The three units were treated as one for cost allocation purposes.

In the future, if the third unit is to be run in a manner different from the others, it might be sensible to separate the third unit for costing purposes. If the capacity factor approach to cost classification is retained, then one might expect a separate capacity factor for the third

[1] NL Hydro, *Reliability and Resource Adequacy Study, 2022 Update*, October 3, 2022, *Volume III: Long-Term Resource Plan*, see Sec. 5.3.1.

unit. Given that these units are to run in the winter period only, the two units serving as base load would have higher capacity factors than recently and their costs would shift in the direction of energy-related causation. The third unit, in its role as a peaking unit reserved for the few days of extreme cold, would presumably continue to be deemed mostly demand-related due to its relatively low capacity factor. (Treating that unit as 100% demand-related would likely be an accurate representation, although it would be a departure from the capacity factor methodology.)

One potential complication is that the units are likely to rotate roles, with units 1 and 2 running throughout the winter and unit 3 serving as the peaking unit in one year, while the next year might see unit 1 playing the peaking role. Since the units are not identified individually in the COS study, it seems feasible to follow the proposed methodology using the accounting fiction that one unit always plays the peaking role. The alternative would be to identify each unit in the COS study individually and rotate their treatment in each year. This does not appear particularly satisfactory, since the COS study is not updated annually, and it would be easy to overlook the need to work the rotation into the costing. If the accounting fiction proposed is acceptable, it appears that there would be no loss of cost allocation accuracy.

Beyond 2029-31, when the third and only surviving Holyrood unit is converted to a synchronous condenser, the capacity factor methodology would likely result in all costs being treated as demand-related due to its lack of net generation.[2] This is in line with the role of synchronous condensers, as they function like capacitors, which are deemed to be capacity-related in standard cost allocation methodology. The NARUC Cost Allocation Manual discusses reclassification of synchronous condensers located in the distribution system as being under the transmission function.[3] This argument might be applied to Hydro's future Holyrood synchronous condenser located in a facility that was once a generation station. If reclassified as transmission, a demand-related share of 100% is in line with traditional classification of transmission costs.[4]

Aside from the consideration of net plant cost allocation is the question of how to treat the cost of fuel. In the past, Holyrood fuel was classified as energy-related, a position supported not only by industry practice but matching the role of Holyrood as a base load generator. In the medium term, the continuation of two of Holyrood's units as base load, and industry practice regarding the treatment of fuel, suggest that this classification should continue. Given the small amount of fuel that the third unit is likely to consume, it seems sensible to classify all Holyrood fuel as energy-related rather than to estimate the small share associated with the third unit that might be classified as demand-related.

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[2] The formula divides net production by the product of capacity and hours in service. With net production at or near zero, capacity factor would be at or near zero.
[3] NARUC, *Electric Utility Cost Allocation Manual*, January 1992, p. 74.
[4] Our COS Methodology Review for Hydro recommended that Holyrood equipment functioning as a synchronous condenser should be functionalized as transmission and classified in the same manner as general-purpose transport facilities. See Christensen Associates Energy Consulting, *Cost-of-Service Methodology Review*, Revised Version, November 15, 2018, p. 30. The report is Appendix A of NL Hydro, *2018 Cost of Service Methodology Review Report*, Nov. 15, 2018.

In the longer term, after 2031, when the single remaining unit will be acting as a synchronous condenser, small amounts of electricity will be used to maintain active status but there will be no fuel costs, relieving Hydro of a cost classification issue.

In summary, Hydro's method of classifying generation costs between demand- and energy-related causation via capacity factor appears suitable for the medium term when two Holyrood units are expected to function as base load for winter months, and the third as peaking load during those months. The first two units might be expected to have a significant share of costs classified as energy-related, while the third would be expected to be classified as predominantly demand-related. Fuel costs can remain energy-related.

For the long term, the remaining unit, serving as a synchronous condenser, can continue to be classified in the same manner as Hydro's transmission costs are at present, as demand-related. Hydro can classify Holyrood's fuel consumption (while functioning as base load generator units in winter as entirely energy-related.

Affidavit

IN THE MATTER OF the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 ("*EPCA*") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 ("*Act*"), and regulations thereunder; and

IN THE MATTER OF an application by Newfoundland and Labrador Hydro ("Hydro") for the approval of modifications to Hydro's Cost of Service Methodology.

AFFIDAVIT

I, Dana Pope, of St. John's in the province of Newfoundland and Labrador, make oath and say as follows:

1) I am Vice President, Regulatory Affairs and Stakeholder Relations, Newfoundland and Labrador Hydro, the applicant named in the attached application.

2) I have read and understand the foregoing application.

3) To the best of my knowledge, information, and belief, all of the matters, facts, and things set out in this application are true.

SWORN at St. John's in the province of Newfoundland and Labrador this 22nd day of August 2025, before me:

Barrister, Newfoundland and Labrador
Witnessed through the use of audio-visual technology in accordance with the *Commissioners for Oaths Act* and *Commissioners for Oaths Regulations*

Dana Pope, CPA (CA), MBA