



Energy Management System Review

Summary of current status

Highways and Public Works' Sustainable Infrastructure Branch

Government of Yukon



Purpose

The Sustainable Infrastructure Branch is looking to improve our energy management system to increase its accountability and effectiveness. Our team of analysts and experts is responsible for the Department of Highways and Public Works' strategy to achieve a greenhouse gas reduction target of 30% below 2010 levels by 2030. The branch provides data-based recommendations on energy conservation and renewable energy initiatives in Government of Yukon buildings.

In 2021, we performed a preliminary assessment of our energy management system to evaluate its alignment with ISO 50001 using the [U.S. Department of Energy's 50001 Ready program](#). We reviewed our process in the context of the 25 steps and 130 associated sub tasks required for ISO compliance.

This report summarizes the Government of Yukon's current progress toward these 25 steps. In our opinion, our energy management system partially or substantially meets 90 of the 130 subtasks outlined in the 50001 Ready program. Individual task status and comments are provided in this report to clearly outline our progress towards ISO 50001 compliance.

We will be seeking a third party review to verify our findings and identify opportunities for improvement in the next step in this process.

This report was written by Ben Passmore and Emile St-Pierre, energy and infrastructure analysts with Highways and Public Works' Sustainable Infrastructure Branch.



A closer look at the 25 steps

The tables in this report provide details on the ISO50001 subtasks in relation to Sustainable Infrastructure Branch's (SIB) current Energy Management System.

Tasks are marked as:

- Not started – no significant actions are currently in place corresponding to this subtask.
- Partially complete – processes, actions, or procedures are partially complete and align with the intent of the subtask.
- Needs review - the requirements for this subtask are substantially met or complete by existing actions, policies and procedures but a review is needed to ensure compliance.

Progress summary table

Progress Status	Count
Not started	28
Partially complete	62
Needs review	40
Total	130

Section: Context

Step 1: An EnMS and your organization		
Determine the strategic issues that affect our ability to improve energy performance and achieve the goals of our 50001 Ready energy management system.		
Subtasks	Status	Comments
i. Identify the external and internal strategic issues that affect your organization's ability to improve its energy performance and achieve the intended outcomes of the energy management system (EnMS).	Partially complete	The issues are known to affected personnel and management but a documented statement of strategic issues is not prepared.
ii. Record this information.	Not started	A full record of issues will need to be developed.

Step 2: People and legal requirements affecting the EnMS		
Determine the interested parties and energy-related legal and other requirements relevant to your energy performance and the energy management system. Define intervals and processes to review these requirements and evaluate your compliance with them.		
Subtasks	Status	Comments
i. Determine the interested parties relevant to your energy performance and EnMS.	Partially complete	There is a wide organizational (YG) and external set of parties interested in our work in improving GHG emission and energy performance. There is implicit interest in our EnMS as an extension of that work.
ii. Determine which interested parties' needs and expectations are requirements you will address in your EnMS.	Partially complete	Our EnMS addresses specific needs and expectations of internal stakeholders. These stakeholders then report to external stakeholders.
iii. Identify and assess other applicable energy-related requirements.	Partially complete	Mandates and organizational needs determine the energy-related requirements of our EnMS. This includes specific reporting requirements as part of OCF and other internal requirements such as historical energy data required for energy assessments and projects. These requirements are known and partially documented.
iv. Identify and assess applicable energy-related legal requirements.	Not started	Legal requirements are handled outside of our branch.
v. Establish a process for evaluating and updating requirements.	Not started	
vi. Conduct compliance evaluations.	Not started	
vii. Ensure records of results and actions taken are retained.	Not started	

Step 3: Scope and boundaries		
Document and approve the scope and boundaries of our 50001 Ready energy management system.		
Subtasks	Status	Comments
i. Scope: Identify the set of activities to be included in your EnMS.	Needs review	Activities to be included in our EnMS include energy purchased and consumed for all buildings owned by Government of Yukon's Property Management Division
ii. Boundary: Define the physical or organizational limits.	Needs review	The physical boundary is the address of buildings owned by PMD. The organizational limit is the Sustainable Infrastructure Branch.
iii. Scope and Boundary Statement.	Partially complete	This is known but needs to be documented.

Section: Leadership

Step 4: Management commitment		
Document and demonstrate that top management provides leadership and commitment to continual improvement of energy performance and the effectiveness of the energy management system.		
Subtasks	Status	Comments
i. Identify EnMS benefits and business drivers.	Needs review	Targets and business drivers for our EnMS are known.
ii. Brief top management on their EnMS leadership responsibilities.	Partially complete	Aspects of the current EnMS are top-down directives, such as GHG targets. Some aspects of the EnMS may still need communication upwards.
iii. Deliver briefing to top management.	Partially complete	After assessment of necessary EnMS improvements top management may be briefed on the changes.
iv. Secure management commitment.	Partially complete	Commitment and support for OCF action items are secured. Commitment to an enhanced EnMS is not yet secured.
v. Brief top management on their EnMS leadership responsibilities.	Partially complete	Alignment of current processes and 50001 requirements are required.
vi. Plan for how top management will meet their responsibilities.	Not started	Approvals and recommendations are requested and presented as required.

Step 5: Energy policy		
Develop an energy policy statement, which has been approved by top management and communicated across the organization.		
Subtasks	Status	Comments
i. Draft the energy policy.	Needs review	GY previously drafted an energy policy but not formally adopted. This will need to be updated.
ii. Approve the energy policy.	Not started	

Step 6: Energy team and resources		
Create an energy team authorized by top management to oversee the energy management system. Assign and communicate responsibilities and authorities and put in place processes to identify and provide resources.		
Subtasks	Status	Comments
i. Form and authorize an energy management team.	Needs review	Energy Management Unit oversees all aspects of building energy management for Highways & Public Works.
ii. Assign and document an energy team leader.	Needs review	See above.
iii. Schedule regular energy team meetings.	Needs review	Routine team meetings are held to discuss current initiatives and progress towards team goals.
iv. Assign and communicate EnMS responsibilities and authorities within the organization.	Needs review	A reporting structure is in place to continuously inform management about the status of climate change actions and goals.
v. Address and communicate responsibilities for other relevant roles.	Partially complete	Communication of responsibilities of roles in other branches continues to improve. GY and HPW has a wide horizontal structure. Some branches are unaware of our EnMS and how they can contribute to greater effectiveness of the system.
vi. Identify and allocate the resources needed for the EnMS and communicate to top management.	Needs review	Resources are allocated and additional resources requested as needed.

Section: Planning

Step 7: Risks to EnMS success		
Determine strategic risks and opportunities to ensure that our organization can achieve the intended outcomes of our energy management system and energy performance improvement. Plan and implement actions to address these risks and opportunities and evaluate the effectiveness of the actions taken.		
Subtasks	Status	Comments
i. Determine the risk and opportunities associated with the strategic issues identified in Task 1 - An EnMS and Your Organization - and the requirements identified in Task 2 - People and Legal Requirements Affecting the EnMS.	Not started	
ii. Plan actions to address these risks and opportunities and how those actions can be integrated into your EnMS.	Not started	
iii. Implement the actions and evaluate their effectiveness.	Not started	

Step 8: Energy data collection and analysis		
Identify our energy sources and energy uses, implement a data collection plan and collect related energy and relevant variable data. Ensure the accuracy and repeatability of measurements. Implement a system to analyze our energy use and consumption data.		
Subtasks	Status	Comments
i. Identify current energy sources.	Needs review	A list of building equipment is stored in Yukon Governments database. This includes systems such as HVAC and Lighting. Routine building condition and energy assessments are conducted to update this information.
ii. Identify energy uses.	Partially complete	Energy uses are identified in energy assessments and typically include lighting, heating, ventilation, and cooling. Exact energy uses for all buildings are not always known.
iii. Identify relevant variables.	Needs review	Relevant variables such as heating degree days, occupancy, square footage, and Annual Electrical Emission Factors are identified and documented.
iv. Identify data needs.	Partially complete	The data needs for our energy requirements are known but not documented. Additional data may be needed in the development of a 50001 Ready Canada EnMS.

v. Identify data sources.	Partially complete	Utility bill data flow for existing energy sources is complete. Future data sources for non-purchased energy (renewable) are being developed.
vi. Collecting data.	Partially complete	All energy purchased for Government of Yukon buildings is uploaded to the Public Building Energy Tracker database (PBET). The process for collection and periodic upload is established and documented. This internally developed database also holds information such as the buildings location, asset number, historical energy use, and emissions. PBET also includes reporting functionalities used for analysis.
vii. Define and implement an energy data collection plan.	Partially complete	Energy data is collected following established procedures. Utility bills are emailed to a distribution email list, admins upload electrical and EMU does the rest. Written documentation exists for this process. New functions to the database are routinely added as required.
viii. Periodically review measurement needs.	Needs review	Data collection and measurement needs are regularly discussed and reviewed in meetings.
ix. Ensure accuracy and repeatability of measurements.	Needs review	Data is provided by utilities with their own measurement protocols. Utility data in PBET is continuously monitored and automated checks are performed to assure data accuracy.
x. Determine data analysis method(s) and assign responsibilities.	Needs review	Methods include trend, benchmarking, graphing, financial, and regression analysis. Data analysis responsibilities are assigned to Energy and Infrastructure Analysts within EMU.

Step 9: Significant energy uses (SEUs)		
Determine our SEUs, identify and monitor their relevant variables and energy performance, and identify the persons that affect the SEUs. Develop a process to review and update SEU data and related information, including our methods and criteria to determine that an energy use should be an SEU.		
Subtasks	Status	Comments
i. Determine and apply criteria for selecting SEUs.	Not started	SEUs such as heating and ventilation are known but a criteria for selection is not established.
ii. Determine relevant variables and current energy performance of SEUs and implement monitoring.	Partially complete	SEUs in buildings are not monitored directly. For example air handling units, hydronic system boilers and domestic hot water loops may all be SEUs, and use propane, but we only monitor overall propane use for the building. Heating systems are monitored generally through fuel delivery reports and heating plant personnel. FMRS monitoring practices are not well known to SIB. Variables such weather, footprint, and occupancy are known.
iii. Identify persons who affect the SEUs.	Partially complete	Building occupants and operators have greatest effect on building systems that represent SEUs. This information, beyond generalities, is not well documented.
iv. Plan for updating SEU selection.	Not started	
v. Documenting SEU information.	Not started	

Step 10: Improvement opportunities		
Identify and prioritize energy performance improvement opportunities and have processes in place to update them.		
Subtasks	Status	Comments
i. Identify energy performance improvement opportunities.	Needs review	Energy assessments, feasibility studies, branch partnerships, and internal research and analyses are performed to identify energy performance improvement opportunities.
ii. Establish criteria for prioritizing opportunities.	Needs review	Project prioritization occurs through scoring. All opportunities are score using the GIPs 5 pillars of success. Scores are given for the following categories: GHG reductions, value for taxpayer dollars, reliable operations, local economic benefit, and leadership.

iii. Apply criteria for prioritizing opportunities and develop tools or techniques for applying criteria.	Needs review	Our criteria is applied to all opportunities and automated scoring tools have been developed for prioritization.
iv. Implement processes to update the prioritized energy opportunities.	Not started	

Step 11: Energy performance indicators (EnPIs) and energy baselines (EnBs)

Identify energy performance indicators and energy baselines to measure and monitor our energy performance and to demonstrate energy performance improvement. Demonstrate a methodology for determining and updating them.		
Subtasks	Status	Comments
i. Establishing EnPIs and normalize if necessary.	Partially complete	Multiple EnPIs are currently used to report on annual performance. These include portfolio wide emissions, energy costs, and others.
ii. Establish EnBs.	Needs review	2010 data is used as the baseline for the EnMS. This aligns with GHG accounting processes for Our Clean Future reporting purposes.
iii. Communicate proposed EnPIs to top management to ensure that EnPIs and EnBs are appropriate for the organization.	Needs review	Annual energy performance reviews are used to communicate EnPIs to top management.
iv. Document the methodology for determining and updating EnPIs.	Partially complete	Methodologies for annual energy reviews are known and partially documented. Additional process creation and documentation is required for methods of determining EnPIs.
v. Determine when EnBs are adjusted and record and review the methods used to establish adjustment conditions.	Needs review	Portfolio wide baselines are established based on 2010. Adjusting project specific baselines for M&V follows the IPMVP guidelines.
vi. Compare EnPI values to their respective EnBs on a regular basis.	Needs review	Periodic energy performance reports compare EnPIs and EnBs annually.
vii. Implement a process for ongoing monitoring, measurement, and analysis of your EnPIs, EnBs, and energy performance improvements.	Needs review	Comprehensive monitoring, measurement, and analysis of EnPIs and EnBs occurs through monthly data accuracy checks, M&V of energy improvements, and annual report preparations.

Step 12: Objectives and targets		
Establish objectives and energy performance targets.		
Subtasks	Status	Comments
i. Gather and review appropriate inputs to establish objectives and energy targets.	Needs review	Performance targets are well established using EnBs derived from historical data and mandated goals. Our main target consists of a 30% reduction in emission compared to the 2010 baseline.
ii. Obtain management approval.	Needs review	Targets are management approved.
iii. Communicate the objectives and energy targets.	Partially complete	Our main target is communicated regularly publically and within the organization. Communication and training processes of the EnMS require further refinements.

Step 13: Actions plans for continual improvement		
Develop action plans and implement improvement projects to achieve our objectives and energy targets.		
Subtasks	Status	Comments
i. Select improvement opportunities (projects) for implementation using prioritization methods in Task 10 - Improvement Opportunities.	Needs review	Actions and opportunities are selected using prioritization though the GIP 5 Pillars of Success mentioned in task 10.
ii. Action plans - determine actions, time frames and responsible positions.	Partially complete	EMU recommends energy retrofit and renewable energy projects to project managers. EMU works closely with project managers during implementation to provide subject matter expertise. Projects are monitored post completion to evaluate performance.
iii. Develop action plans for meeting your organization's objectives and energy targets identified in Task 12 - Objectives and Targets.	Needs review	Portfolio level action plans are developed by the EMU and the Manager of the Projects and Partnerships Unit to ensure objectives and targets are met. Annual forecasting exercises ensure track progress towards our targets.
iv. Communicate expectations and review progress.	Partially complete	Project kick off meeting and periodic progress update meetings are held with the project team to ensure effective communications. Periodic meetings between the EMU and the Projects and Partnerships Unit helps keep the branch informed about project status.

Section: Support

Step 14: Competence and training		
Ensure the competence of personnel whose work affects our energy performance and energy management system. Evaluate the effectiveness of actions taken to acquire competencies. Retain appropriate records of competencies and training.		
Subtasks	Status	Comments
i. Identify personnel who affect your energy performance and the EnMS.	Partially complete	The personnel and associated units are known to the energy team. A complete list needs to be developed and documented.
ii. Determine the necessary competencies and evaluate the current competencies for these personnel.	Needs review	HR practices and internal training ensure the competence of employees. Personnel must meet the essential qualifications in the job posting for their respective positions. Minimum requirements for contractors are enforced through our procurement processes.
iii. When there are competency gaps take appropriate action.	Needs review	Training, professional development programs, and funding are in place within the organization to address competency gaps. HR practices such as under fill training programs are in place for when essential qualifications are not entirely met. Personal development plans are periodically created and review by all employees and their respective supervisors.
iv. Evaluate the effectiveness of the actions taken.	Needs review	YG staff undergo performance evaluation at least twice a year. Training opportunities are explored with supervisor support.
v. Retain appropriate records of competency.	Partially complete	CVs and records of internal training are kept to track competencies.

Step 15: Awareness and communication		
Ensure our personnel and on-site contractors are aware of our energy policy and their energy-related roles and responsibilities. Have processes in place for internal and any applicable external EnMS communications.		
Subtasks	Status	Comments
i. Develop and deliver an initial EnMS communication from top management that includes the importance of energy management and the organization's energy policy.	Partially complete	Communication of energy and GHG goals is widely communicated but our energy policy and the importance of our EnMS is not.
ii. Develop the details for EnMS awareness training for specific personnel or departments.	Partially complete	Communication with maintenance (FMRS) and other HPW branches and personnel is in progress. Awareness training is not established.
iii. Plan and implement awareness training and retain records.	Partially complete	Preliminary awareness program work is underway.
iv. Conduct awareness training and retain records.	Partially complete	The EMU has presented parts of our EnMS to other departments and slide decks are documented.
v. Plan and implement internal communication processes of the EnMS, including a suggestion system.	Not started	
vi. Plan and implement external EnMS communication processes.	Not started	

Step 16: Documenting the EnMS		
Document information we determine is needed to ensure energy management system effectiveness and demonstrate energy performance improvement, as well as that suggested by the guidance of the 50001 Ready Navigator. Have processes in place for creating, updating, and controlling our documented information.		
Subtasks	Status	Comments
i. Determine necessary EnMS documents.	Partially complete	Some documents are developed which demonstrate various aspects of EnMS function and progress. Annual reports, Training plans, OCF, energy assessments etc.
ii. Determine the additional documented information needed by your organization to ensure EnMS effectiveness and to demonstrate energy performance improvement.	Not started	
iii. List EnMS documents and assign document owners, approvers and define document controls.	Partially complete	Formalized lists and assignment is not completed but owners, approvers and controls are informally in place.
iv. List EnMS records, assign record owners and define record controls.	Partially complete	Records are managed for our EnMS through internal YG network drives. Records owners and controls are loosely defined.
iv. Define and implement controls for creating, updating, and managing documented information for the EnMS.	Partially complete	Controls are loosely defined and often determined on a case-by-case basis.

Section: Operation

Step 17: Operational controls		
Plan and control the processes related to our significant energy uses (SEUs) and action plans, and set operation and maintenance criteria where there are risks of significant deviations in energy performance. Operate the SEU and action-plan related processes in accordance with the criteria and communicate the criteria to relevant personnel. Control planned changes, along with outsourced processes related to SEUs.		
Subtasks	Status	Comments
i. Create a significant energy use (SEU) operating criteria worksheet and operational controls checklist to determine and set the required criteria and controls for each significant energy use.	Partially complete	Operation and maintenance manuals for building systems and equipment are managed by building maintenance staff. Individual criteria and controls for each SEU will need to be documented.
ii. Ensure critical factors affecting energy performance are known and communicated to responsible personnel.	Partially complete	Critical factors are known. Methods of communication for these factors are not well established.
ii. Ensure major equipment, systems, processes, and sites are operated and maintained in accordance with criteria and action plans.	Partially complete	FMRS has its own maintenance and operations guidelines and procedures.
iii. Operate and maintain sites, equipment, systems, or processes associated with your SEUs to meet the determined criteria.	Partially complete	FMRS has its own maintenance and operations guidelines and procedures. Conformity with the criteria is unknown to the energy team.
iv. Establish processes to control planned changes affecting operational and maintenance criteria or controls.	Not started	
v. Control outsourced processes related to SEUs.	Not started	

Step 18: Energy considerations in design		
Consider energy performance improvement opportunities and operational controls when designing new, modified, or renovated sites, equipment, systems, and processes.		
Subtasks	Status	Comments
i. Identify the sites, equipment, systems and processes that have significant impact on energy performance.	Needs review	Periodic energy assessments are done to our buildings to identify this.
ii. Incorporate consideration of energy opportunities and operational control in design projects.	Needs review	Energy considerations are incorporated through the use of energy modeling for different conservation measures in the project design stages.

iii. Include energy considerations in specifications, design and procurement.	Needs review	Energy consideration is included through the Design Requirements and Technical Standards Manual. All procurement must meet this standard.
iv. Record result of design activity related to energy performance.	Needs review	The overall design process is well documented by YG. Energy performance is recorded in the energy modeling reports.

Step 19: Energy considerations in procurement

Establish energy performance criteria spanning the operating life for purchases affecting energy performance, inform suppliers that this is a factor in procurement, and define and use specifications for energy supply purchases.		
Subtasks	Status	Comments
i. For purchases related to significant energy uses (SEUs), clearly identify any energy performance-related requirements. Communicate these requirements to suppliers and/or service providers and inform them that energy performance is part of the evaluation criteria.	Needs review	The Design Requirements and Technical Standards (DRTS) and Yukon Green Infrastructure Standards (YGIS) represents and expresses energy-performance related requirements.
ii. Evaluate your organization's current procurement processes for items that can significantly impact energy performance and adjust to meet EnMS requirements.	Needs review	Design requirements for energy systems in buildings are aligned with our EnMS. The DRTS is periodically reviewed and modified to ensure it meets current EnMS requirements.
iii. Establish operating lifetime energy performance criteria for purchases expected to significantly affect energy performance.	Partially complete	The Design Requirements and Technical Standards (DRTS) and Yukon Green Infrastructure Standards (YGIS) represents and expresses energy-performance related requirements.
Determine if any specifications for the purchase of energy supplies are applicable to ensure the energy performance of equipment and services purchased.	Needs review	Specifications related to Energy are part of procurement practices.
iv. Define and communicate procurement specifications for purchases of energy supply and for ensuring the energy performance of procured products and services.	Needs review	Requirements and specifications are delineated for all fuels and performance of goods including warranties. Contracts stipulate system performance specifications for tendered projects.
v. Document procurement for purchases related to SEUs.	Partially complete	All YG purchases are documented. All projects are documented. Not all of these records are available to EMU.

Section: Performance evaluation

Step 20: Monitoring and measurement of the EnMS		
Monitor trends in EnMS performance and evaluate the effectiveness of the EnMS in achieving intended outcomes and planned results. Evaluate the methods used, the frequency of the monitoring, and when the results are analyzed and evaluated.		
Subtasks	Status	Comments
i. Determine what data or information is needed to establish trends in EnMS performance, including trends in nonconformities, corrective actions, and results in monitoring and measurement, internal and external audits, and evaluations of compliance with applicable energy-related legal and other requirements.	Partially complete	Analysis of the EnMS is conducted and tracked through annual reporting. Deficiencies and non-conformities are addressed as they arise.
ii. Determine what data or information is needed to monitor, measure, analyze and evaluate the results of the EnMS and its effectiveness as related to the intended outcomes of your EnMS and the strategic goals and priorities of your organization.	Partially complete	Data related specifically to our EnMS performance is partially established.
iii. Determine methods used and when monitoring and measurement of the EnMS will be done. Establish when results will be analyzed and evaluated.	Not started	
iv. Implement the monitoring, measurement, analysis, and evaluation of the EnMS.	Not started	

Step 21: Monitoring and measurement of energy performance improvement		
Monitor and measure the key characteristics of processes that affect our energy performance. Define the methods used, the frequency of the monitoring and measurement, and when the results are analyzed and evaluated. Evaluate energy performance improvement and investigate and respond to significant deviations in energy performance.		
Subtasks	Status	Comments
i. Determine and implement what needs to be monitored and measured for energy performance.	Needs review	EMU has well established methods for monitoring energy performance. YG has schedules and deadlines for the targets our EnMS works to achieve.
ii. For each datum/metric, define the method used for monitoring, measuring, analysis, and evaluation. Define how often and when the results are to be analyzed and evaluated.	Partially complete	Data analysis and minimum schedules are well defined. Methods are known but not documented.
iii. Implement all needed monitoring, measurement, and analysis if not already in place from prior Navigator tasks.	Partially complete	Current methods of monitoring, measurement and analysis are implemented. Documentation of new methods will be required.
iv. Evaluate your organization's energy performance by comparing EnPI values to the corresponding EnB.	Partially complete	Routine comparison are made as part of reports and as required.
v. For each performance metric in the energy measurement plan (optional), define the criteria or parameters for a significant deviation in energy performance.	Partially complete	An energy management plan is not captured as a single document. Deviation parameters are established.
vi. Establish a process for investigating and responding to such deviations and for retaining records of the results.	Partially complete	Procedures for responding to deviations are in place informally. Further collaboration is required to develop a process.
vii. Train the appropriate personnel on how to identify and respond to significant deviations in energy performance.	Partially complete	Collaboration with building staff is underway to identify and respond to significant deviations in energy performance.
viii. Record results from monitoring and measurement.	Needs review	M&V results, utility data, EnPI data and EnPI and EnB comparison analysis is recorded in our central network drive.

Step 22: Internal audit

Conduct internal audits of the 50001 Ready energy management system at specified intervals and report the results to relevant management. Identify trends in internal audit results for consideration in management review.

Subtasks	Status	Comments
i. Develop a documented internal audit procedure and appoint an EnMS internal audit program manager.	Not started	Internal auditing of our EnMS is performed on deficient areas as deficiencies become apparent. An organized system wide audit process is not developed.
ii. Develop the audit schedule.	Not started	
iii. Develop the audit plan.	Not started	
iv. Select and train internal auditors.	Not started	
v. Conduct internal audits and identify areas of improvement and successes.	Not started	
vi. Report internal audit results to relevant management,	Not started	
vii. Retain audit records,	Not started	

Step 23: Management review		
Top management periodically reviews the 50001 Ready EnMS and our organization's energy performance to ensure its continuing suitability, adequacy, and effectiveness.		
Subtasks	Status	Comments
i. Define the intervals at which top management will review the EnMS and energy performance and identify participants.	Partially complete	Intervals for review of energy and GHG performance are established and participants identified. This does not include the EnMS. Our EnMS is not yet subject to top management review. Current management reviews do not include our EnMS. Management reviews do cover energy performance and progress towards branch goals.
ii. Plan the management review.	Partially complete	
iii. Collect information relevant to the review.	Partially complete	
iv. Prepare information for presentation.	Partially complete	
v. Conduct the management reviews which address all required inputs and outputs.	Partially complete	
vi. Implement the decisions and actions of management reviews.	Partially complete	
vii. Determine if the EnMS continues to be suitable and aligned with organizational strategic directives.	Partially complete	
viii. Retain records.	Partially complete	

Section: Improvement

Step 24: Corrective actions		
Identify nonconformities and other problems in the 50001 Ready EnMS and take appropriate corrective action.		
Subtasks	Status	Comments
i. Develop the process for corrective action.	Partially complete	This is part of the annual energy performance report
ii. Define roles, authorities and responsibilities for various steps in the corrective action process.	Partially complete	Corrective action occurs collaboratively. Defined roles and responsibilities are not explicitly established.
iii. Implement the process for corrective action and train employees on the types of problems and non-conformities to be addressed through corrective action if required.	Partially complete	Process is currently informal.

Step 25: Continual improvement

Employ a 50001 Ready EnMS and continually improve its processes and interactions. Continually improve the suitability, adequacy and effectiveness of the EnMS. Achieve and demonstrate continual energy performance improvement.

Subtasks	Status	Comments
i. Ensure you can update and maintain your 50001 Ready energy management system.	Partially complete	Periodic reviews and updates are performed annually. Additional processes are required for 50001 Ready EnMS.
ii. Ensure the EnMS and the organization's change management processes are connected.	Partially complete	Change management processes are informal. Changes are typically presented or discussed to ensure that downstream or connected processes are also updated.
iii. Ensure ongoing integration of the EnMS into your organization's business processes and practices.	Partially complete	There is ongoing action to enhance the integration of our EnMS with processes and practices. An expansion of our role in the capital planning process provides a point of further integration.
iv. Ensure that top management promotes continual improvement.	Partially complete	Top management has expanded the presence of our EnMS in wider HPW decision making processes including in the 5 year capital planning process. Top management has public plans and commitments to promote energy performance and GHG emission improvement over the next 30 years.
v. Ensure continual improvement of the energy management system.	Partially complete	Seeking 50001 Ready Canada readiness is one example of the continual improvement of our EnMS. This is also done by addressing non-conformities and corrective actions in our annual report.
vi. Ensure you can demonstrate continual energy performance improvement.	Needs review	Demonstration of continual energy performance can be demonstrated by a number of reporting procedures. Improvement can be demonstrated by utilizing various data flows and metrics defined by our EnMS.