

ICF Marbek
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Demand-Side Management (DSM) Program Portfolio for the Yukon

FINAL **PROGRAM IMPLEMENTATION PLAN**

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Executive Summary

This report presents the program implementation plan (PIP) for the Yukon demand-side management (DSM) program portfolio. It represents the final step in the YEC and YECL's DSM planning process, which began with the completion of the study entitled *Conservation and Demand Management Potential for the Yukon*.

The PIP defines the full scope of operational and transactional infrastructure that is required to operate the DSM program portfolio. As such, the PIP presents the performance indicators, the targets, the deliverables, the human resource requirements, the roles and responsibilities, and the budgets required to operate the DSM Program Portfolio over a full five year cycle. Particular emphasis is given to the Program Portfolio's operational requirements in its first year of activity.

The Program Implementation Plan, which is an extension of the program design document, *Demand-Side Management Program Portfolio for the Yukon*, is accompanied by an evaluation, measurement and verification (EM&V) plan.

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1. Introduction

Yukon residents rely on electricity not only to live meaningful, healthy lives but also to support and strengthen the economy. Given the concerns over environmental implications including climate change, and the limited generating capacity in the Yukon, there is growing interest not only in how electricity is generated, transmitted and distributed but also how efficiently it is used at the customer's end. In the Yukon, as well as in a growing number of North American jurisdictions, how electricity is generated and used is being closely analyzed to find innovative ways of meeting individual and corporate energy service needs while minimizing pollution and the creation of greenhouse gases.

In response to these conditions, the Yukon Energy Corporation (YEC), Yukon Electrical Company Limited (YECL) and the Yukon Government collaboratively commissioned a comprehensive study of the opportunities for electricity demand-side management (DSM) within the Yukon. That study, entitled *Conservation and Demand Management Potential for the Yukon 2011*, was completed in January 2012 and revealed a significant cost-effective potential for electricity DSM in the Yukon. Based on those findings, the YEC and YECL developed a suite of residential and commercial sector program offerings that will enhance the Yukon's electricity DSM program portfolio and provide incremental annual electricity savings of 9.3 GWh/yr by the fifth year of the program. The results of the development work are presented in a report, entitled *Demand-Side Management Program Portfolio for the Yukon*, which was completed in September 2012.

This report, which is the final step in the DSM planning process, provides a program implementation plan (PIP) suitable for submission to the Yukon Utilities Board, together with an evaluation, monitoring and verification (EM&V) plan.

1.1 The Planning Process

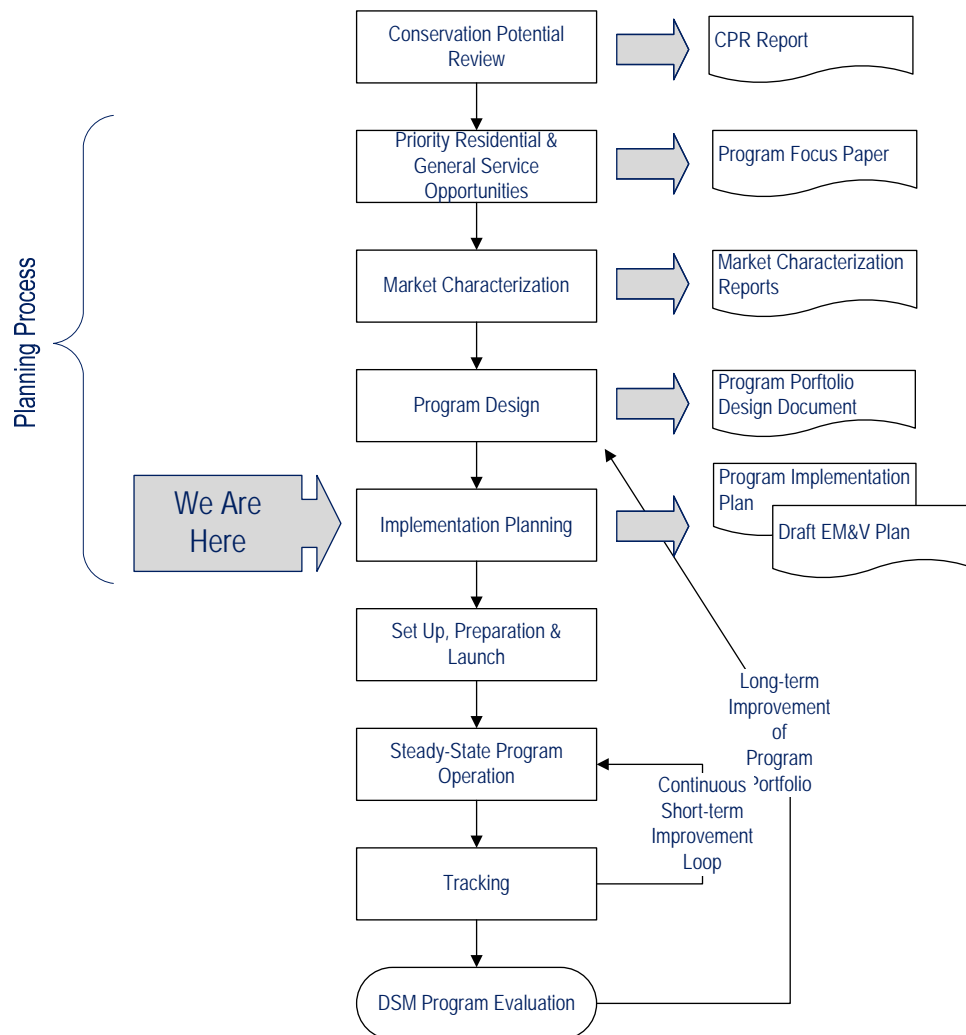
The DSM Program Implementation Plan presented in this report is the product of a multi-step process, which was designed to gather and analyze the data necessary to determine optimum program structure and cost-effective design.

The planning process was organized into 4 major steps:

- Step 1: Priority Residential and General Service Opportunities
- Step 2: Market Characterization
- Step 3: Program Design
- Step 4: Program Implementation Planning

Exhibit 1 provides a graphic of the steps involved in the planning process and its relationship to the Yukon Conservation Potential Review (CPR) results.

Exhibit 1: Program Planning Process



A brief description of the main steps shown in Exhibit 1 is provided below. More detailed information is provided in the appendices that accompany this report.

Step 1: Priority Residential and General Service Opportunities

This first step in the planning process was to determine which of the several hundred technologies and measures analyzed in the 2011 Yukon CPR should provide the initial program focus.

As a starting point the extensive listing of individual measures and technologies contained in the CPR results were screened. The priority opportunities were bundled into potential program elements and each was subjected to further detailed market research.

Step 2: Market Characterization

This market research step provided the program design team with a comprehensive understanding of the key factors influencing market penetration of the electricity efficiency technologies and measures; these findings informed the design of the specific programs and activities.

The detailed market research employed a variety of data collection methods and included a broad range of Yukon personnel involved in the supply, service, purchase and use of electricity efficiency technologies and measures. The research focused on developing clarity around four key areas, namely: market barriers, market structure, market actors, and baseline conditions.

Step 3: Program Design

The knowledge gained from the above market research provided key design inputs into the DSM program portfolio. For example, the understanding of market barriers was critical to the selection of appropriate activities or program offerings; similarly, a thorough knowledge of the market structure and major actors within the supply chain provided insight into potential partners and marketing strategies that will be most effective.

The collection of data on baseline conditions provided important inputs to the cost effectiveness testing that is critical to the program design process, and to the eventual program evaluation requirements.

Step 4: Program Implementation Planning

The last step in the planning process, which is the focus of this report, is to determine the full breadth of operational requirements to create the designed DSM portfolio's transactional and operational infrastructure, and to operate the portfolio in its first year.

This report also includes the performance indicators, the targets, the deliverables, the human resource requirements, the roles and responsibilities, and the budgets required to operate the DSM program over its full five year cycle.

1.2 Report Presentation

The remainder of this report is organized and presented in the following sections:

- Section 2 introduces the implementation approach, work package structure and schedule.
- Section 3 describes the resources required to operate the DSM portfolio.
- Section 4 defines the proposed management procedures.
- Section 5 provides an integrated communication plan for the General Service and Residential programs.
- Section 6 provides a summary of the operational budget, and a description of the main cash flows between the utilities and the ratepayers, and between utilities.

2. Work Plan

Section 2 presents an overview of the proposed four-phase approach to program implementation, an outline of the recommended work package structure (WPS), and a preliminary ‘high-level’ schedule.

2.1 General Approach

The goal is to launch most of the program elements concurrently during the first three quarters of program operation and to have the program elements reach steady-state operation before the end of the first year of operation.

A four-phase approach is envisioned for the launch of the program portfolio.

- Phase 1: Mobilization of the Implementation Team
- Phase 2: Preparation and Launch
- Phase 3: Training and Transition to Regular Operation
- Phase 4: Steady-State Program Operation

The YEC Energy Conservation (EC) Manager and the YECL DSM Supervisor will lead the launch of all of the program elements. The YEC Energy Conservation Manager will be responsible for finalizing the detailed work plan, and for updating the work plan on a sliding quarterly basis.

It is envisioned that during Phases 1 and 2, the Core Team (about four people) will be supplemented by external DSM experts (Launch Contractor), as required.

Further discussion of each step is provided below.

Phase 1: Mobilization of the Team

Highlights of Phase 1:

- The Utilities will select a Launch Contractor and mobilize the Core Team under the lead of the YEC Energy Conservation Manager (in collaboration with the YECL DSM Supervisor). The selected Launch Contractor will be responsible for supporting, engaging and training the local staff, and establishing many of the key program procedures and tools that will be essential to successful program operation in the four years that will follow. Further detail on team and member qualifications is provided in Section 3.1.
- The detailed short-term work plan that will be provided as part of this Implementation Plan will be the starting point for the Core Team and Launch Contractor; however, it is expected that the YEC Energy Conservation Manager will adapt the detailed work plan to his/her own management preferences and style.

Phase 2: Preparation and Launch

The team will execute the short-term work plan. This includes:

- Developing and initiating the operation of the DSM office, including:
 - The transactional infrastructure (e.g. front-end forms, agreements, notice & letter templates); and

- The operational infrastructure (e.g. back-end forms and reports, procedures and tracking system).¹
- Executing the engagement and communication strategy, including:
 - The launch tactics (e.g. new web page content, brochures, press release, and perhaps a press conference), and
 - The establishment of the engagement & communication coordination function(s) (e.g. monitoring and reacting to program uptake; planning, developing and delivering new communication and education tactics as needed; maintenance of the webpage and program documentation; and surveillance of public-relations opportunities).

The Utilities will go public with the program offerings during Phase 2. The launch tactics will be delivered in close collaboration.

Phase 3: Training and Transition to Regular Operation

As the first program transactions are processed, the team will undoubtedly identify less-than-optimal transactional materials and procedures. Necessary corrections and streamlining of the transactional and operational infrastructure will be applied, as applicable.

The Launch Contractor will provide training on DSM planning, operations and customer engagement through a mentor/protégé working relationship with the local staff and their involvement in the preparation and launch tasks. The Launch Contractor will use a wide array of training vehicles including: lectures, webinars, readings, quality assurance, and the development of job aids like operation manuals and decision support spreadsheets.

The Launch Contractor will ensure a smooth transition of all the tasks and responsibilities to the core team and then phase out of program operation.

Phase 4: Steady-State Program Operation

The Core Team will:

- Operate the DSM back-office.
- Plan and execute engagement, education and communication tactics.
- Conduct some site visits and verifications.
- Monitor program uptake and other key performance indicators.
- Review program results, adapt, plan and lay out the budget for next year.
- Seek continuous improvement by monitoring suggestions from the operation personnel and market actors, and by planning and implementing the applicable changes.
- Manage the evaluation, measurement and verification (EM&V) contractor; provide the program data as requested by the contractors; and provide feedback on the EM&V draft reports.
- Manage other contractors that may be involved in the operation of the program.

¹ Establishing clear procedures and standards with respect to permissions and privacy will be a critical element of this step.

2.2 Work Package Structure

The work package structure (WPS) will be used as the budget breakdown structure (BBS), which will also be used for time and expense tracking purposes and managerial accounting. It should be noted that the WPS/BBS is subject to change over the course of the 5-year DSM portfolio operation as program elements are likely to evolve over the period in response to changing market conditions. The proposed WPS for the Residential and General Service DSM programs is outlined below in Exhibit 2.

Exhibit 2: Proposed Work Package Structure for the Yukon DSM Programs

WP1 General Service Program

- WP1.1 Program Management
 - WP1.1.1 General Management Time & Materials (YEC)
 - WP1.1.2 Tracking System Development & Maintenance (YEC)
- WP1.2 Engagement, Training and Communication
 - WP1.2.1 Direct Customer Engagement (YECL)
 - WP1.2.2 Training and Indirect Communications (YEC)
- WP1.3 Lighting Redesign and Equipment Incentive
 - WP1.3.1 Time & Materials (YEC)
 - WP1.3.2 Incentive Disbursement (YEC)
- WP1.4 Energy Star Computer Incentive (*ibid*)
- WP1.5 High-Efficiency Refrigeration (*ibid*)
- WP1.6 New Construction Incentive (*ibid*)

WP2 Residential Program

- WP2.1 Program Management (*Same sub-WPS as for WP1.1*)
- WP2.2 Engagement, Education and Communication (*Same sub-WPS as for WP1.2*)
- WP2.3 LED Lighting and Automotive Heater Timer Rebates (*Same WPS as for WP1.3*)
- WP2.4 Promotion of Low-Cost Energy-Efficient Products (*ibid*)
- WP2.5 Cold-Climate Heat Pump and Ground-Source Heat Pump System Initiative (*ibid*)

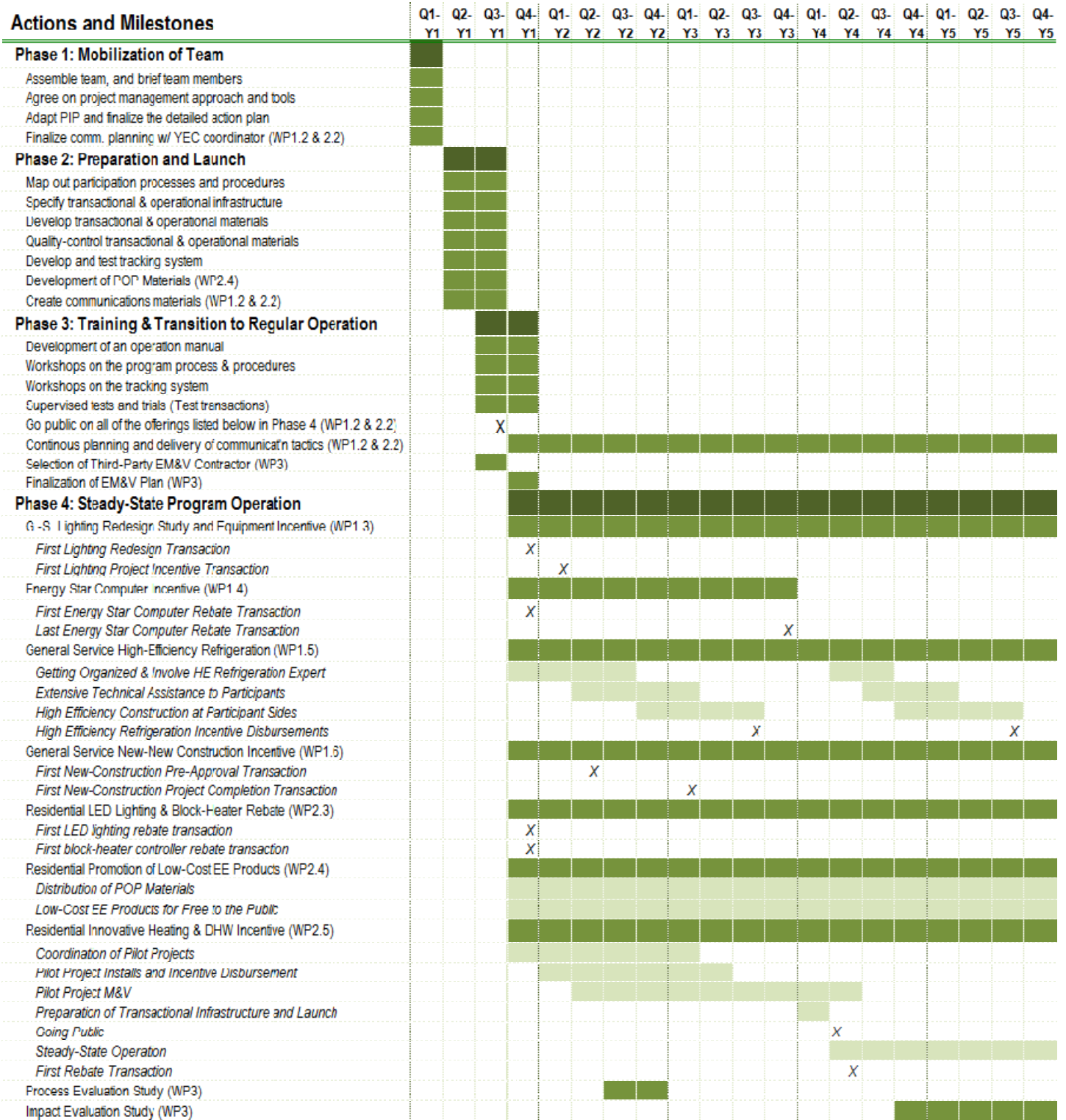
WP3 Evaluation, Measurement and Verification

(To be determined once the Evaluation, Measurement and Verification Plan is finalized with the EM&V Contractor)

2.3 High-Level 5-Year Schedule

Exhibit 3 shows the proposed schedule for implementing the program. A detailed action plan for Year 1 is presented in Appendix A.

Exhibit 3: High-Level Gantt Chart of the Program Portfolio Implementation



3. Resource Plan

Section 3 defines the resources required to operate the program (human resources, contractors and information technologies) and provides general procurement guidelines.

3.1 Human Resources Plan

Based on the approach described in Section 2, approximately four full-time equivalent workers (FTE) will be required for the management and operation of the General Service and Residential Programs. This core program operation team (Core Team) of four workers will be employed directly by the Utilities, jointly funded by the Utilities and under the brand inCharge (the joint utility brand for DSM). Contractors will be added and corporate staff will support the team on an as-needed basis.

The FTEs of the Core Team will likely be formed as follows:

- Two will be YEC employees. Their primary responsibility areas will be program management, in-direct communications, tracking, and evaluation, measurement and verification.²
- Two will be YECL employees³. Their primary responsibility area will be direct customer engagement and back office work.

The Core Team will be based in the Yukon in the Utilities' existing office space. Candidates for the Core Team include existing and new employees that will work on the General Service and/or the Residential Program. It is expected that core team staff will be added gradually over the first four quarters as activities ramp up.

The core program team will also need the assistance of external DSM experts (contractors). These external DSM experts will:

- Assist with the launch of the program portfolio until fully operational.
- Establish the processes and procedures and provide training to the Core Team, as needed.
- Have an exit strategy. Minimal involvement of external experts is expected beyond the third phase, aside from their involvement in EM&V, and in the High-Efficiency Refrigeration program element.

New hires, if required, do not need to be DSM program experts as they can be trained and assisted by DSM experts. They will be recruited through the standard human resource procedures of the Utilities based on standard job descriptions for similar work and experience-level requirements.

The expertise and external human resource requirements are bundled into work packages as presented in Section 3.2 – Procurement Plan.

² Further details on roles and responsibilities are to be laid out in Section 4.1.

³ The costs associated with the YECL DSM Supervisor (Coordinator) are accounted for in YECL costs outside of the Marbek Program Design

3.2 Procurement Plan

Exhibit 4 provides a preliminary draft of the procurement plan. Each entry in the table is to become a contract with a service supplier. These are service contracts only. No equipment will be purchased to deliver the program. The assumption was made that office space, office IT infrastructure and office stationery are to be provided by the suppliers. The role and responsibilities of inCharge personnel mentioned in Exhibit 4 are to be laid out in Section 4.1 and 4.2.

Exhibit 4: Preliminary Procurement Plan

#	Contract Title	Amount (Approx.)	Start/End	Contract Awarded	Notes on the Scope of Work	Comments on Prospective Suppliers
1	DSM Portfolio Preparation & Launch Support a.k.a. "Launch Contract"	Between \$230,000 and \$290,000	Start: Y1-Q1 End: Y2-Q1	Before Y1-Q1	<p>Support the YEC EC Manager and YECL DSM Supervisor with project management and coordination;</p> <p>Plan, design, and create transactional and operational infrastructure for all program elements.</p> <p>Finalize prescriptive incentive levels, eligible products and specifications, and customer incentive levels.</p> <p>Design and create DSM tracking system, set-up and start the operation of the tracking system.</p> <p>Support the YEC EC Manager, YECL DSM Supervisor and Communication Contractors with the finalization of the communication plan, finalization of the list of tactics and schedule, and with the production of communication content.</p> <p>Supervise the testing and tuning of the transactional infrastructure, operational infrastructure and tracking system based on the first DSM transactions.</p> <p>Training inCharge core staff in DSM launch and planning through multiple means: lectures, webinars, readings, ride alongs, job aids, development of operation manuals, mentoring, learning-by-doing, delegation of tasks, and quality control.</p> <p>Support and training of the YECL program Back-Office Coordinator on operational procedures and tracking, and YECL Customer Engagement Officer on engagement approaches and tracking, transfer responsibilities and send off.</p> <p>Support YEC with "special" program elements: General Service HE Refrigeration, Residential Innovative Heating System Program element, and Residential low-cost energy efficiency product element.</p>	Consulting firm with DSM expertise, and DSM program implementation experience. Some energy engineering qualifications required.
2	Multiple contracts / Expert	Between \$200,000 and \$250,000	Multiple contracts over the course of the	Depending on the contract	<p>Provide technical assistance to participants as part of the General Service HE Refrigeration program element.</p> <p>Deliver training course to Yukon equipment or service providers (if any, when</p>	<p>Highly qualified energy engineer(s); most likely freelancers.</p> <p>Consultant with specific expertise as</p>

#	Contract Title	Amount (Approx.)	Start/End	Contract Awarded	Notes on the Scope of Work	Comments on Prospective Suppliers
	consultants	in total	following period: Start: Y2-Q1 End: Y5-Q4		needed). Hands-on training to Yukon equipment or service providers (if any, when needed). If required, support EM&V contractor with updates to prescriptive incentive lists. Carry out project-level M&V on larger projects (like HE Refrigeration projects, or the residential innovative heating system projects).	needed.
3	Yukon DSM Portfolio Evaluation, Measurement and Verification a.k.a. EM&V Contract	Between \$360,000 and \$440,000	Start: Y2-Q1 End: Y5-Q4	Y1-Q4	Finalize the evaluation, measurement and verification plan. As part of the above, review the tracking system and procedures, and recommend changes to maximize the value of EM&V. As part of the above, establish key “deemed” values to be used in the tracking system such as deemed savings for certain prescriptive conservation measures, a deemed net-to-gross ratio, etc. As part of the above, collect some additional market baseline information if and as needed. Carry out a process evaluation study when the DSM portfolio will have had a few quarters of operation (2 to 6 quarters after the launch). As part of the above, do some quality control/quality assurance of the program impacts as computed by the tracking system. Carry out an impact evaluation study during the last year of operation of the DSM portfolio to validate the program impacts as computed by the tracking system.	Consulting firm with experience in DSM program evaluation, measurement and verification. Program-level evaluation experience is a minimal requirement. Project-level measurement and verification experience is beneficial but not essential.

3.3 Program Tracking Database

The central component of a tracking system is the database. The other key components are internal forms and procedures to input data, data quality control and assurance measures, and reports.

Exhibit 7 identifies three types of DSM program tracking databases, together with a summary of their strengths and weaknesses.

Exhibit 7: Three Types of DSM Program Tracking Databases

#	Type of Program Tracking Database	Strengths	Weaknesses
1	Database-like Spreadsheets	<p>Very inexpensive (a few thousand dollars).</p> <p>Easy to find people to change and adapt the database – people with qualifications in Excel are relatively easy to find.</p> <p>Can be shared on file-sharing sites.</p>	<p>Limited inputting and query/reporting features.</p> <p>Spreadsheets are not organized as a database by default – making the file a “database-like set of spreadsheets” requires special care.</p> <p>Technical limitations in terms of: number of sites the database will be accessible from, amount of data in the same file, tendency for MS-Excel to crash.</p> <p>Versioning and preventing multiple copies of the database to circulate will be a challenge.</p> <p>It is challenging to record changes of the entries (for example: program participation status), and report on the history of each entry later.</p>
2	Simple Database Built on a Database Platform (e.g. Access, MySQL) – from scratch or by modifying an existing program tracking database	<p>None of the disadvantages above.</p> <p>Less costly than the option below.</p> <p>The system remains relatively simple and thus can be modified more easily.</p> <p>Can be shared on file-sharing sites, such as Sharepoint.</p>	<p>More costly than Database-Like Spreadsheets (a few tens of thousand dollars).</p>
3	Sophisticated customized Customer Relationship Management software	<p>Multiple advanced features,</p> <p>Integration with other database used by the utility.</p>	<p>Very costly (millions of dollars).</p> <p>Difficult to service – requires doing business with the initial developer.</p>

The use of a database-like spreadsheet tracking system is recommended, as it best matches the Utilities’ needs. It is assumed that the team will lead the development of the tracking system with the support of the Launch Contractor, as required, during the startup phase. The team will likely use commercially-available spreadsheet software like Microsoft Excel. The Launch Contractor will provide support to the Utilities to create the blueprint of the database and the blueprints of the procedures surrounding the use of the database.

The workbook will be built like a relational database to ensure that: data are well organized; data quality control/quality assurance and clean-up are easy to perform; and, data analysis and reporting are fully supported.

To perform like a relational database the workbooks will include the following characteristics:

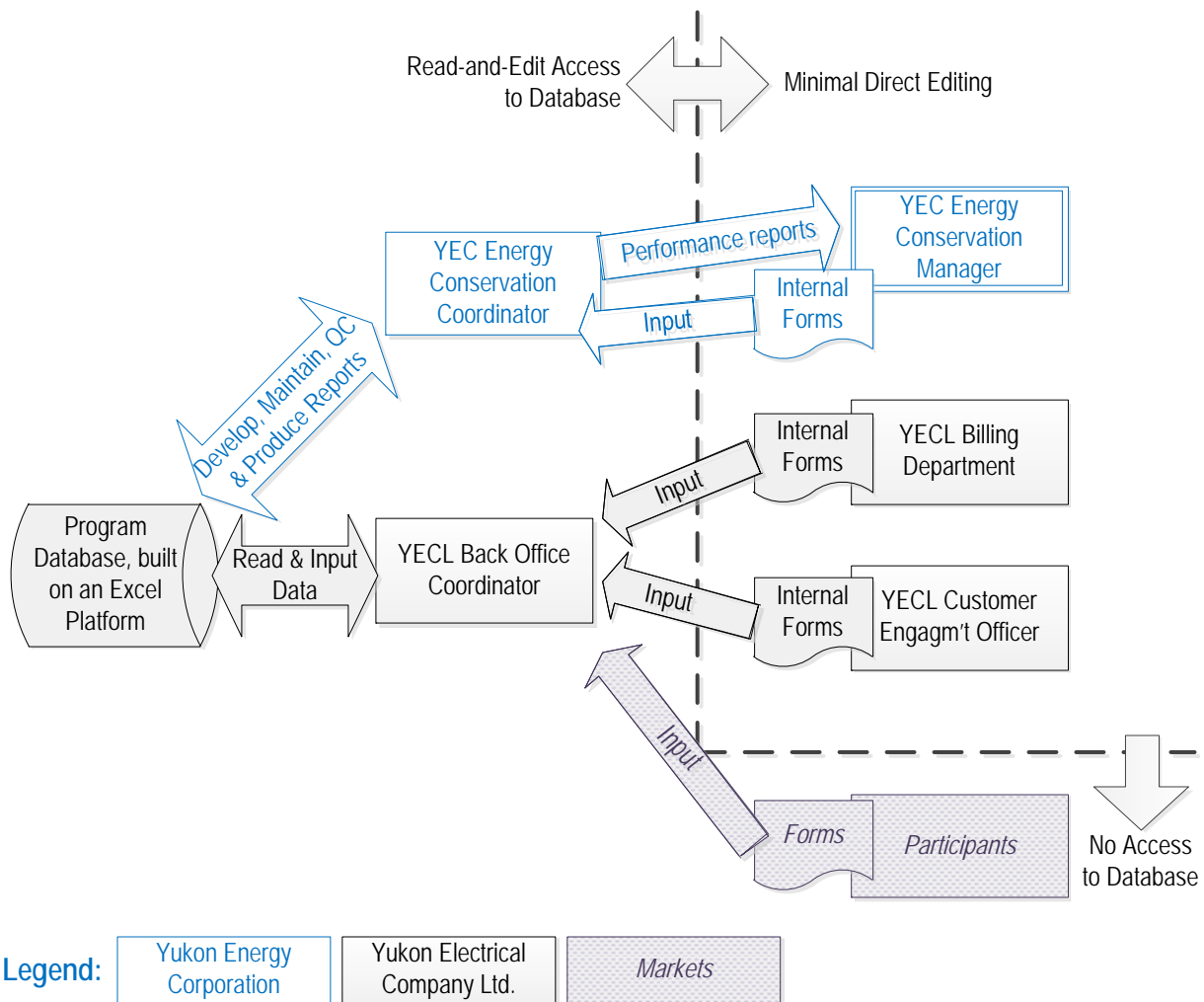
- Be made of a set interlocking “data storage” tables (worksheets).

- Keep the output sheets, charts and reports, and data storage tables in separated tabs.
- Present each entry in its own row in the data-storage tables.
- Identify each entry with its own unique identification number.

The proposed data flow through the program tracking database is presented in Exhibit 8. As illustrated, the YECL Back-Office Coordinator and the YEC Energy Conservation Coordinator will be the database custodians. It is recommended that all other YEC and YECL personnel perform minimal direct editing in the database, as illustrated in Exhibit 5.

Options for other utility staff to feed information into the database include: sending an email to YECL Back-Office Coordinator; populating and sending an internal form; or directly forwarding the paperwork sent in by participants. The YECL Back-Office Coordinator will receive the data, validate the data, and then enter it into the data tables. The YEC Energy Conservation Coordinator will be responsible for reporting, directing traffic, and quality controls.

Exhibit 5: Data Flow through the Program Tracking Database



The program tracking database will be the responsibility of the YEC Energy Conservation Manager with access granted to employees from both companies.

At the end of the program implementation stage, there are two documents that, when combined, will be used for the development of the tracking database:

- The PIP: This section and Section 4.7.
- The list of researchable issues as part of the EM&V Plan.

During startup, the team will initiate the database development with the drafting of the following charts, later to be used as blueprints for the system.

- The detailed program participation process diagram.
- The tracking database architecture chart.

4. Management Plan

The management plan presents the recommended procedures required to balance the requirement to operate and adapt the DSM portfolio to changing market conditions and the requirement for the oversight entity (either or both the YUB and the YEC/YECL Management Committee) to review how ratepayer monies are spent.

The management plan is organized and presented in the following sections:

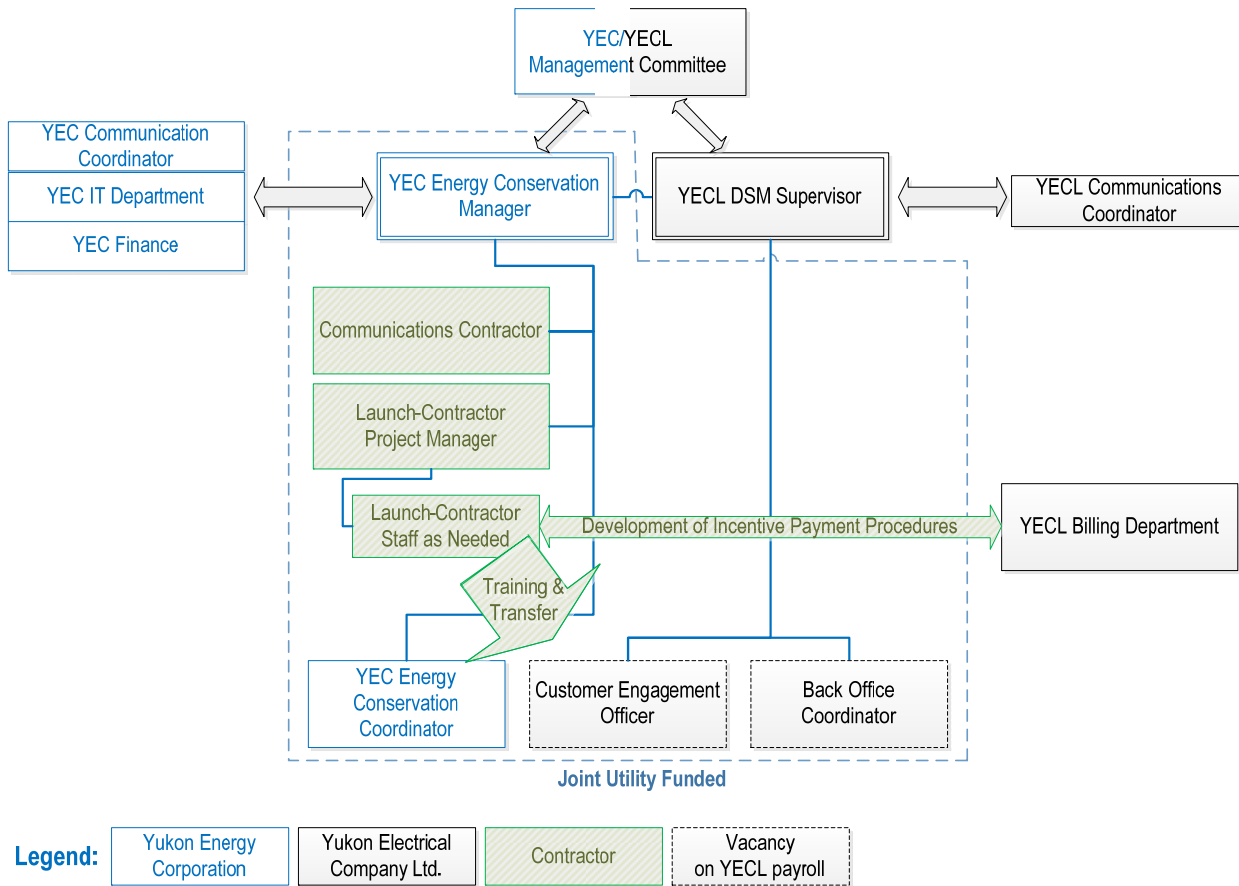
- Roles and responsibilities during program start up⁴
- Roles and responsibilities during full program operation
- Goals and performance tracking
- Operational reporting and planning
- Contingency plan
- Standards, policies and guidelines
- Information flow mapping

⁴ Given the shift in roles and activities that occurs between program startup and full operation, this PIP presents the roles and responsibilities separately.

4.1 Roles and Responsibilities during Program Startup

Exhibit 6 presents the organization chart for Phases 1, 2 and 3 of the DSM portfolio delivery (mobilization of the team, preparation, launch, and transition to regular operation). The preliminary roles and responsibilities of each party are subject to change based on YEC or YECL internal organization, changing market conditions, and early program results. An explanatory note is presented in tabular format following the chart.

Exhibit 6: Organization Chart for the Launch of the DSM Portfolio



Position	Payroll	Role/Responsibility during DSM Portfolio Launch
YEC Energy Conservation Manager	YEC	<ul style="list-style-type: none"> Jointly accountable with the YECL DSM Supervisor for deliverables (e.g. schedule, scope, budget, resources) as outlined in the Demand Side Management Program Portfolio. Jointly report to YEC/YECL Management Committee in coordination with YECL DSM Supervisor. Coordinate with YECL DSM Supervisor to ensure business needs are met. Procurement of the services of a Launch Contractor and Communications Contractor. Coordination between the positions or resources shown in Exhibit 6. Update/finalization of the detailed work plan, project activity monitoring, and then of the update of the detailed work plan on a sliding quarterly basis. Quality control/quality assurance of the contractors' deliverables. Update/finalization of the communication plan.

Position	Payroll	Role/Responsibility during DSM Portfolio Launch
Launch Contractor	Contractor for YEC	<ul style="list-style-type: none"> • Control and approval of the engagement plan developed by the direct Customer Engagement Officer. • Jointly responsible for the public relations activities on behalf of inCharge with YECL DSM Supervisor. • Jointly responsible for development of communications content (examples: website content, print-media content and social media if any) with YECL DSM Supervisor and supported by the YEC and YECL communications coordinators. • Support YEC Energy Conservation Manager and YECL DSM Supervisor on project management. • Support YEC Energy Conservation Manager, YECL DSM Supervisor and communication contractors in laying out the program offerings, incentive levels and eligibility criteria to target markets in communication materials. • Finalize the prescriptive and custom incentive levels and eligibility criteria. • Update of the DSM cost-effectiveness modeling. • Finalize or develop the detailed blueprints and specs of the program element processes. • Development of materials that form the transactional and operational infrastructure. • Create the blueprint for the database and the blueprints of the procedures surrounding the use of the database. • Train core utility staff in DSM launch and planning through multiple means: lectures, webinars, readings, ride alongs, job aids, development of operation manuals, mentoring, learning-by-doing, delegation of tasks, and quality control. • Train core utility staff in application processing, and use of the tracking system. • Testing/Processing the first transactions. • Identification of the low-cost products that are to be promoted under the inCharge brand, and support to the YEC Energy Conservation Manager, YECL DSM Supervisor and communications coordinator in the creation of POP material (wrt: Residential Promotion of Low-Cost Energy-Efficient Products program element). • Advisory for the Customer Engagement Officer, the YEC Energy Conservation Manager and the YECL DSM Supervisor to find heating pilot-project sites, and recruit trusted HVAC contractors (wrt: residential innovative heating program element). • Advisory for the YEC Energy Conservation Manager to find a trusted high-efficiency refrigeration contractor and for the engagement officer to start engaging with the prospective High-Efficiency Refrigeration program participants (wrt the General Service HE Refrigeration program element). • Advise the YEC Energy Conservation Manager and YECL DSM Supervisor in the selection of an EM&V contractor.

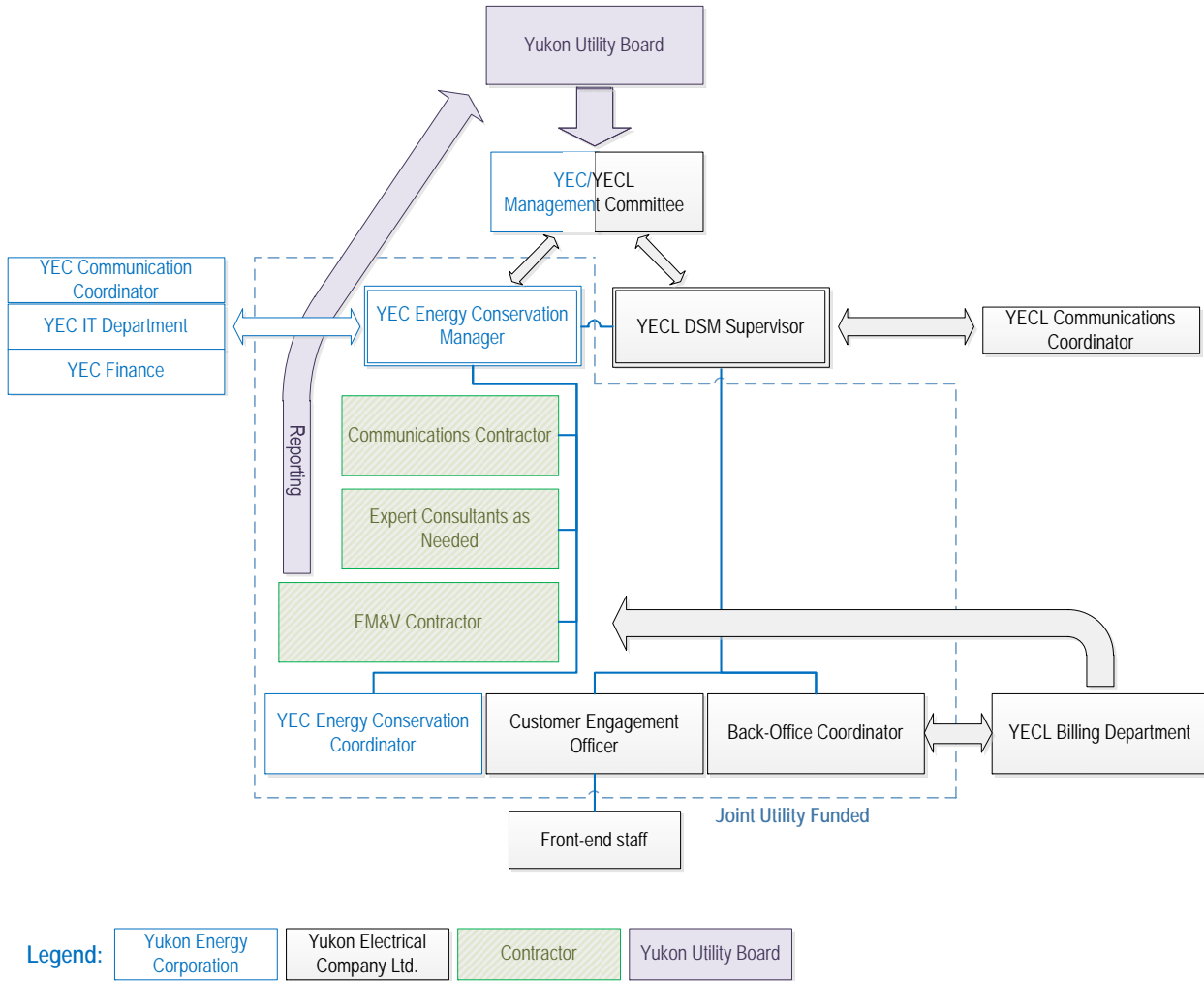
Position	Payroll	Role/Responsibility during DSM Portfolio Launch
YEC Energy Conservation Coordinator	YEC	<ul style="list-style-type: none"> Is integrated in the launch team and works on the tasks laid out by the Launch Contractor. Work closely with the Launch Contractor to: <ul style="list-style-type: none"> Develop the tracking system/program database. Build the technical reference manuals (deemed savings and stipulated net-to-gross ratio) and connect it to the tracking system. Finalize the KPIs and targets. Prepare templates for the quarterly and yearly performance reports. Draft the operations manual. Support the YEC Energy Conservation Manager with the drafting of the first quarterly and yearly program reports.
YECL Billing Department	YECL	<ul style="list-style-type: none"> Collaborates with the Launch Contractor to establish the YECL on-bill incentive payment procedures for when the recipient of the incentive is direct YECL customer.
YEC Finance	YEC	<ul style="list-style-type: none"> Supports the YEC Energy Conservation Manager with program time and expense tracking based on the work package structure/budget breakdown structure (WPS/BBS). Collaborates with the Launch Contractor to establish the YEC incentive payment procedures for when the participants are eligible direct YEC customers.
YEC Information Technology (IT) Department	YEC	<ul style="list-style-type: none"> Support the YEC Energy Conservation Coordinator and the Launch Contractor during the development of the tracking system. Collaborate with the Launch Contractor and YECL IT department to store the tracking database, share it, protect it, and manage levels of access. Collaborate with the Communication Contractors and the Launch Contractors to develop the inCharge website, and determine where the inCharge website will be hosted (on YEC service, YECL server or a third-party server – to be determined).
Communications Contractor	Contractor for YEC	<ul style="list-style-type: none"> Develop the inCharge website, managed by the YEC Energy Conservation Manager and with the support of YEC IT department as needed. During the preparation and launch (phase 1 to 3): work on the branding, templates and graphic materials, and anything requiring significant graphic design. Support YEC Energy Conservation Manager and YECL DSM Supervisor in the review and finalization the communication plan. Design POP and other educational materials as part of the Residential Promotion of Low-Cost Energy-Efficient Products.
YEC Communications Coordinator	YEC	<ul style="list-style-type: none"> Support development of communications material (examples: website content, print-media content and social media if any) with YEC Energy Conservation Manager.
YECL Corporate Communications & Customer Relations	YECL	<ul style="list-style-type: none"> Support development of communications material (examples: website content, print-media content and social media if any) with YECL DSM Supervisor. Recruit and hire a DSM supervisor sometime between Y1-Q1 and Y1-Q3.

Position	Payroll	Role/Responsibility during DSM Portfolio Launch
YECL DSM Supervisor (New hire)	YECL	<ul style="list-style-type: none"> • Jointly accountable with the YEC Energy Conservation Manager for deliverables (eg schedule, scope, budget, resources) as outlined in the Demand Side Management Program Portfolio. • Jointly report to YEC/YECL Management Committee in coordination with YEC Energy Conservation Manager. • Coordinate with YEC Energy Conservation Manager to ensure business needs are met. • Jointly responsible for the public relations activities on behalf of inCharge with YEC Energy Conservation Manager. • Jointly responsible for development of communications content (examples: website content, print-media content and social media if any) with YEC Energy Conservation Manager and supported by the YEC and YECL communications coordinators. • Review and approve the final detailed work plan to be created by the Launch Team. • Review and approve the final communication plan. • Quality control/quality assurance of all of the communication materials being generated by the Launch Team and the Communications Contractor. • Recruit and hire a Customer Engagement Officer and a Back-Office Coordinator sometime between Y1-Q2 and Y2-Q1. • Work on the first direct engagement plan with the Customer Engagement Officer, develop direct-engagement key performance indicators (KPIs) and goals, and monitor KPIs.
Customer Engagement Officer (New hire)	YECL	<ul style="list-style-type: none"> • Work on the first direct engagement plan. • Test-drive the direct engagement communications resources (brochures, website content, etc.) with early actual customers, and provide feedback (quality, effectiveness, how easy to understand, etc.). • Gather data on direct program time and expenses on YECL side and provide to YEC as part of quarterly reporting, present the time and expenses based on the WPS/BBS as presented in Section 2.2. • Collaborate with YECL billing department and the Launch Contractor to establish the YECL on-bill incentive payment procedures for when the recipient of the incentive is a direct YECL customer.
Back-Office Coordinator (New hire)	YECL	<ul style="list-style-type: none"> • Process the very first transactions, and work with the Energy Conservation Coordinator and Launch Contractor to resolve the issues that arise.

4.2 Roles and Responsibilities during Full Program Operation

Exhibit 7 outlines the anticipated organization of key roles once the program is fully launched and is in full operation. An explanatory note is presented in tabular format following the chart.

Exhibit 7: Organization Chart during Full Program Operation



Position	Payroll	Role/Responsibility during Full Operation
YEC Energy Conservation Manager	YEC	<ul style="list-style-type: none"> Jointly accountable with the YECL DSM Supervisor for deliverables (e.g. schedule, scope, budget, resources) as outlined in the Demand Side Management Program Portfolio. Jointly report to YEC/YECL Management Committee in coordination with YECL DSM Supervisor. Coordinate with YECL DSM Supervisor to ensure business needs are met. Jointly develop the budget and the plan for next year and defend it in front of the YEC/YECL Management Committee with YECL DSM Supervisor. Prepare reports and documents to be filed with the YUB under the supervision of YEC/YECL Management Committee (most likely made of extracts from the aforementioned reports,

Position	Payroll	Role/Responsibility during Full Operation
		<p>budgets and plans).</p> <ul style="list-style-type: none"> • Procurement of the services of the EM&V contractors, Communications Contractor, and expert consultants when needed. • Coordination between the positions or resources shown in Exhibit 7. • Update the detailed work plan on a sliding quarterly basis. • Quality control/quality assurance of the contractors' deliverables. • Update the communication tactic calendar on a sliding quarterly basis. • Monitor the customer engagement KPIs. • Work jointly with the YECL DSM Supervisor to update and approve the engagement plan updates by the YECL Customer Engagement Officer. • Public relations activities on behalf of inCharge brand. • Continuous development of new communications content, or update of existing contents (as needed): website, print-media, social media if any, etc.
YEC/YECL Management Committee	YEC or YECL	<ul style="list-style-type: none"> • Review and comment on the reports, budgets and planning drafted by the YEC Energy Conservation Manager and the YECL DSM Supervisor. • Provide directions to the YEC Energy Conservation Manager and YECL DSM Supervisor on the reports and documents to be filed with the YUB, review and approve these documents and file them. • Work with the YEC Energy Conservation Manager and YECL DSM Supervisor to address comments from the YUB and interveners.
YEC Energy Conservation Coordinator	YEC	<ul style="list-style-type: none"> • Maintain the tracking system, control the quality of the data inputted into the system. • Extract reports from the accounting system and the tracking system for the YEC Energy Conservation Manager (KPIs, charts, etc.). • Supports the YEC Energy Conservation Manager with the development of quarterly or annual reports. • Coordinate with YEC Finance to pay incentive to YEC direct customers. • Support the YEC Energy Conservation Manager with EM&V, with selecting the EM&V contractor, and with the coordination with the EM&V contractor. • Support the YEC Energy Conservation Manager with selecting technical experts as needed, and with the coordination with these experts. • Provide technical assistance to all inCharge personnel as needed.
YEC Communications Coordinator		<ul style="list-style-type: none"> • Support public relations and communications needs of inCharge brand. • Support YEC DSM Supervisor as needed.
YECL Back-Office Coordinator	YECL	<ul style="list-style-type: none"> • Handles applications and completion forms. • Feeds the tracking system with transactional information as required in the operation manual. • Proceeds with in-situ verification of a few transactions (spot-check verifications that are going to be selected randomly). • Coordinate with YECL Billing department and provide support, as needed, for YECL on-bill incentive payments.

Position	Payroll	Role/Responsibility during Full Operation
YECL Billing Department	YECL	<ul style="list-style-type: none"> Proceed with incentive payment (on-bill or otherwise) for when the recipient of the incentive is direct YECL customer based on procedures established during startup. Send utility billing data to EM&V Contractor as needed and when needed, directly to the contractor, and under a confidentiality agreement with the contractor.
YEC Finance	YEC	<ul style="list-style-type: none"> Support the YEC Energy Conservation Manager with program time and expense tracking based on the work package structure/budget breakdown structure (WPS/BBS). Proceed with incentive payment (on-bill or otherwise) for when the recipient of the incentive is direct YEC customer based on procedures established during startup.
YEC Information Technology (IT) Department	YEC	<ul style="list-style-type: none"> Support the Energy Conservation Coordinator with tracking system maintenance. Collaborate with the Communication Contractor to maintain the inCharge website.
Communications Contractor	Contractor for YEC	<ul style="list-style-type: none"> Support YEC Energy Conservation Coordinator in the update of the list of communication tactics and production schedule. Design communications materials as required by the YEC Energy Conservation Coordinator – anything requiring substantial graphic design.
YECL DSM Supervisor	YECL	<ul style="list-style-type: none"> Jointly accountable with the YEC Energy Conservation Manager for deliverables (e.g. schedule, scope, budget, resources) as outlined in the Demand Side Management Program Portfolio. Jointly report to YEC/YECL Management Committee in coordination with YEC Energy Conservation Manager. Coordinate with YEC Energy Conservation Manager to ensure business needs are met. Jointly develop the budget and the plan for next year and defend it in front of the YEC/YECL Management Committee with YECL DSM Supervisor. Review and approve of the detailed work plan when updated by the YEC Energy Conservation Manager. Work jointly with the YEC Energy Conservation Manager to update and approve the engagement plan updates by the YECL Customer Engagement Officer. QC/QA of all of the communication materials being generated by the YEC Energy Conservation Manager and the Communications Contractor. Supervise the update of the engagement plan with the Customer Engagement Officer, monitor key performance indicators (KPIs) and update the goals. Support corporate social responsibilities and inCharge brand.
YECL Communications Coordinator	YECL	<ul style="list-style-type: none"> Support public relations and communications needs of inCharge brand. Support YECL DSM Supervisor as needed.

Position	Payroll	Role/Responsibility during Full Operation
Customer Engagement Officer	YECL	<ul style="list-style-type: none"> • Carry out direct customer engagement according to the plan. • Supports participants with their transaction face to face, on the phone or through emails. • Log the events or actions in order to compute the engagement KPIs. • Log program transactions (for example: program applications) that YECL channels to YECL Back-Office Coordinator with time stamps. • Track incentive reimbursements coming from YEC; and make sure there are no discrepancies between the tracking information of YECL and that of YEC. • Regarding the above, investigate any discrepancy as soon as possible. • Gathers data on direct program time and expenses on YECL side and provide to YEC as part of quarterly reporting, present the time and expenses based on the WPS/BBS as presented in Section 2.2.
Yukon Utility Board (YUB)	YUB	<ul style="list-style-type: none"> • Look out for the interests of the rate payers and authorize the use of rate payers' monies on DSM. • As such, the YUB requires DSM to be implemented in a rigorous, cost-effective and optimal manner. All documents filed with them should demonstrate these attributes. • They achieve the above by asking questions and making comments on the reporting and planning documents filed with them.
Evaluation, Measurement and Verification (EM&V) Contractor	Contractor for YEC	<ul style="list-style-type: none"> • Finalize the evaluation, measurement and verification plan. • As part of the above, review the tracking system and procedures, and recommend changes to maximize the value of EM&V. • As part of the above, establish key "deemed" values to be used in the tracking system such as deemed savings for certain prescriptive conservation measures, a deemed net-to-gross ratio, and so on. • As part of the above, collect some additional market baseline information if and as needed. • Carry out a process evaluation study when the DSM portfolio will have had a few quarters of operation (2 to 6). • As part of the above, do some quality control/quality assurance of the program impacts as computed by the tracking system. • Carry out an impact evaluation study during the last year of operation of the DSM portfolio to validate the program impacts as computed by the tracking system.
Expert Consultants	Contractors for YEC	<ul style="list-style-type: none"> • Provide technical assistance to participants as part of the General Service HE Refrigeration program element. • Deliver training course to Yukon equipment or service providers (if any, when needed). • Hands-on training to Yukon equipment or service providers (if any, when needed). • Support inCharge staff as required, to update the prescriptive incentive lists (both the incentive level and the eligible products). • Carry out project-level M&V on larger projects (like HE Refrigeration projects, or the residential innovative heating system projects).

4.3 Goals and Performance Tracking

Program performance will be monitored by comparing key performance indicators (KPIs) with pre-established targets.

The program accounting system and tracking systems should report on the following KPIs for each program element:

1. Number of transactions and number of business days of average processing time
2. Incentive disbursement cost
3. Program cost and administration cost
4. kWh and kW savings (gross)⁵
5. Number of transactions being verified on site (to be determined with the YEC Energy Conservation Coordinator, triggered and coordinated with the YECL Back-Office Coordinator, and then validated by the EM&V Contractor)
6. Direct-engagement indicators (to be determined with the YECL engagement officer)
7. Indirect communications indicators (to be determined with YEC Energy Conservation Manager and the communications contractor)

The targets for KPIs (1) to (4) above were set out in the projection tables presented in the Program Design Document. KPIs (5) to (7) will be established during program set up in collaboration with the core program staff.

The utilities will aim at achieving a total net electricity savings that is equal to, or above, the totals presented in the DSM portfolio projections at a total cost that is equal to, or below, the totals presented in the DSM budget (See the Program Design document). However, the utilities will have the flexibility to move targets and budgets between the DSM program elements to adapt to changing market conditions and early program results. Quarterly budgets will also be flexible as long as annual budgets are complied with.

In addition to information for tracking the KPIs above, the team will designate a limited number of information items to be collected for administrative and technical verification, as well as planning and strategic decision purposes (e.g. participant information, house/building type, etc.).

All KPIs computed by the DSM accounting system and the tracking system(s) will be verified by a third-party evaluation, measurement and verification (EM&V) contractor. The EM&V contractor will also validate the approach to on-site verification, the information items being collected through the applications and forms for verification purposes, and the market indicators to be monitored.

In addition to the KPIs stated above, a few market indicators will be established and documented through EM&V to test the effectiveness of the delivery mechanisms and to seek evidence of market effects of the DSM portfolio.

The program activities will be tracked and performance will be reviewed according to the reporting and planning schedule presented in Section 4.4.

⁵ The tracking system will report on net impact if a deemed net-to-gross ratio is used.

4.4 Operational Reporting and Planning

The DSM portfolio activities will be coordinated through an annual performance reporting and work planning process, supported by quarterly updates to the annual planning.

The YEC Energy Conservation Manager and YECL DSM Supervisor will draft the reports and plans, present them, discuss them and request approval by the YEC/YECL Management Committee. Together, the YEC Energy Conservation Manager, YECL DSM Supervisor and the YEC/YECL Management Committee will prepare summaries of the reports and plans to be filed with the YUB.

There are five components to the DSM operation management and accountability mechanisms:

- **Performance report(s) to the YEC/YECL Management Committee:** Lays out KPIs against targets, explanations and justification for these results, and other strategic information gathered.
- **Work plan(s) to the YEC/YECL Management Committee:** Presents the tasks that need to be accomplished in the next quarter and in the next year. Also, it will present an updated strategic orientation and the corrective actions that need to be taken in light of the performance of the DSM portfolio and its different program elements.
- **Budget(s) to the YEC/YECL Management Committee:** Presents the resources that are needed to accomplish the tasks stated in the work plans, highlights discrepancies from the initial budget, and provides a justification for the changes if any (including but not limited to DSM cost-effectiveness).
- **DSM summaries to the YUB:** Composed of relevant extracts from the aforementioned reports, plans and budgets.
- **Third-party EM&V reports to the YUB:** The three reports are the final EM&V plan (during Q1 of Y2), the process evaluation study (sometime between Q4 of Y2 and Q2 of Y4), and the impact evaluation study (Q4 of Y5). The EM&V reports will present a rigorous estimation of the impacts in terms of kWh and kW and constructive criticism of utility-based DSM operation in the Yukon.

Exhibit 8 summarizes the reports, plans and budgets, together with a preliminary schedule and preview of the content of each. EM&V reports have been included to show the differences in content between the internal performance reports and those developed by the third-party EM&V contractor.

Exhibit 8: Summary of Operational Reports, Plans, and Budgets

Document	Schedule	KPIs against targets, including tracked impact estimates	Update on detailed action plan, incoming communication tactics, & engagement plan	Qualitative on strategic DSM development (outside the KPIs)	Updated strategic orientations	Update of detailed program - element targets	Updated contingency plan	Financial report against budget (time, expenses, incentives)	Budget re-allocation between quarters and program elements	Next-year total DSM portfolio budget estimate	Next-year detailed budget for all of the program elements	Combined ex-post & ex-ante DSM cost-effectiveness modeling	KPIs and market indicators in full MBO framework	Forward-looking improvement recommendations	Verified program impact estimates
Internal Performance Reporting & Planning															
Annual Progress Report	January 31 st for the next fiscal year	X		X				X				X			
Annual Work Plan	January 31 st for the next fiscal year		X		X	X	X								
Preliminary Annual Budget	September									X					
Annual Detailed Budget	January 31 st for the next fiscal year										X				
Quarterly Report	30 days following end of the quarter	X	X					X	X						
YUB Annual Summary	30 days following end of the quarter	X	X	X	X	X	X	X			X	X			
Third-Party Evaluation, Measurement and Verification															
Final EM&V Plan	Q1 of Y2												X		
Process Evaluation Rep.	Mid-course. Btw Y2-Q4 & Y4-Q2											X	X	X	
Impact Evaluation Rep.	Q4 of Y5											X	X	X	X

It is expected that the YUB Annual Summary will be a concise document made of extracts from the annual progress report, the annual work plan, and the annual detailed budget.

The Launch Contractor can support with reporting during the first year of operation in the following way: the Launch Contractor will draft and deliver their own quarterly and annual reports and plans to the YEC Energy Conservation Manager and YECL DSM Supervisor; who will then build on these drafts to generate the reports and plans for the YEC/YECL Management Committee.

The accounting system will be adapted and the tracking system will be built to generate tables and charts that will be integrated in the reports⁶, plans and summaries in a seamless fashion. The accounting system and tracking system should make the reporting and planning less effort intensive. Besides, the quarterly report should be relatively lean and require a low level of effort.

The three last reports presented in Exhibit 8 are to be drafted by the EM&V Contractor, not the utilities, and will be filed directly with the YUB. However, the YEC Energy Conservation Manager, YECL DSM Supervisor and YEC/YECL Management Committee will be able to read early drafts of these reports, ask questions, highlight potential errors or omissions, and make comments on the reports before it is sent to the YUB.

All of the internal reports and plans (that is: the first four types of reports in Exhibit 8) should be made accessible to the EM&V Contractor under the confidentiality terms of the EM&V contract.

4.5 Contingency Plan

Exhibit 9 shows the project risks that have been identified by the team. These are the risks that will be monitored and reported on throughout the project in the contingency plan. Project risks are events that could affect the outcome of the DSM portfolio. These could include time, cost, quality, operational, cultural, communications, governance, stakeholders, resources, technology, etc. Severity and probability ratings will be reassessed by the team as necessary.

The risks were ranked from the most important to the least by using a ranking system that is presented in Exhibit 9.

Exhibit 9: Risk Analysis

Risk Area	Risk	Severity	Probability	Rating ⁷	Contingency
Communication	Wrong messages are sent to the market during program operation	M	H	6	Communication work will involve the YEC & YECL Communication Coordinators. Direct engagement will be done by the YECL Customer Engagement Officer under the supervision of YECL DSM Supervisor with support from YECL Corporate Communications.
Communication	Target audience not buying in to the key messages of the program	M	H	6	Early and extensive engagement with end-users, with market actors, and with stakeholders. We will listen, screen out outlying opinions, analyze and react. Sufficient program budget allocations to communications and engagement. Continuity of the communication activities ensured by cross-cutting communication coordinator.

⁶ The combined ex-post & ex-ante DSM cost-effectiveness modeling can be done using the cost-effectiveness model used at the program design stage. It is not worth investing in building cost-effectiveness modeling capabilities inside the tracking system.

⁷ High (H), Medium (M) and Low (L) are respectively worth 3, 2 and 1.
 The Risk Rating is the result of: Severity x Probability

Risk Area	Risk	Severity	Probability	Rating ⁷	Contingency
Communication	YEC Energy Conservation Manager stops actively managing external communications because his/her attention is focused on extinguishing fires (examples: fixing issues with the transactional materials, the tracking system, or dealing with specific large transactions)	M	H	6	Work closely with the YEC and YECL Communications Coordinators; if possible have the communications coordinators play a larger role. Delegate to the YEC or YECL Communications Coordinator his/her functions of surveillance and communication planning whenever he/she has to focus elsewhere. Rely on the YEC Energy Conservation Coordinator and core utility staff to fix issues with the transactional and operational infrastructure and tracking system, address issues with incentive payment and cash flow, and have the Back-Office Coordinator deal with the EM&V Contractor. Delegate as many reporting tasks as possible to the core utility staff.
Communication	Company branded initiatives leverage inCharge branding and create customer confusion	L	M		Avoid similar or overlapping activities between companies and inCharge.
Technical	Residential innovative heating systems fail to perform in the Yukon and backfire	H	M	6	The implementation approach of the Residential Innovative Heating program element includes a 3-year pilot phase before we anticipate being able to turn it into a full-scale incentive program. It is a prudent implementation approach. We believe that inCharge can achieve and document a few successful installs, identify capable installers and, then build communication materials based on these.
Operational	Delays happen with certain program elements during start up and hold back the entire program portfolio	M	H	6	In principle, the Utilities will be using a comprehensive implementation approach with all program elements being taken to market within the same 4-phase timetable. In reality, a few program elements will cause delays because the launch team will be confronted to unforeseeable issues. As long as these delays are only a few days, the program elements can remain in sync. However, if the delays start becoming problematic then the YEC Energy Conservation Manager will be allowed to let the schedule for some problematic program element slip compared to that of other program elements. The overall schedule might become out of synch but this could be preferable than delaying the launch of the entire DSM portfolio.
Operational	Misunderstandings arise between YEC & YECL on role, responsibilities and/or on who is to blame for disappointing KPIs (this tends to happen when targets are not met)	H	M	6	Clear assignation of roles and responsibilities as per section 4.1 and 4.2 of the PIP. These sections should be revisited and refreshed on an annual basis as part of the annual performance reporting and planning cycle so they remain fresh in the mind of everyone in the core team. YECL Customer Engagement Officer is to produce an engagement plan, and agree on it with YEC.
Operational	The resulting DSM program design fails to deliver expected results	M	M	4	The Utilities used evidence-based program design, and established realistic targets based on conservation potential review and a bottom up reality check. The Utilities claim the right to adjust program offerings mid-stream, after determining the root causes of low participation.

Risk Area	Risk	Severity	Probability	Rating ⁷	Contingency
Operational	Program participation uptake not picking up as planned	M	M	4	<p>Sufficient budgets allocated to marketing and communications.</p> <p>Continuity of communication and marketing activities, and continuous tracking of uptake – See above how we will manage to ensure that communications is managed on a continuous basis.</p> <p>Flexibility to use other budgets and allocate them to marketing and communication in order to intensify the communication activities if and when needed.</p>
Operational	Inaccuracy of the impact estimates (kWh and kW)	M	M	4	<p>Support of the Launch Contractor's energy engineers to re-visit the deemed savings for the prescriptive conservation measures.</p> <p>Carefully plan, design and develop the tracking system and procedures; diligent and timely inputting of program data in the tracking system.</p> <p>Support from seasoned expert consultants to validate the engineering calculation of custom conservation measures and projects, and/or to carry out project-level measurement and verification.</p> <p>Third-party EM&V including validation of the deemed savings of the prescriptive measures early in the operation of the program (Y2-Q1) and final validation of the estimates generated by the tracking system during the impact evaluation study (Y5-Q3).</p>
Planning	Approved plan, targets and schedule may not be achievable	M	M	4	<p>Monitor milestones, monitor KPIs and execute project plan.</p> <p>Raise issues with the YEC/YECL management committee when presenting the quarterly or annual report.</p> <p>The reporting and planning procedures presented in Section 4.3 and 4.4 are flexible. Use this flexibility to change the strategy and change the approach to reach the total targets for the DSM portfolio.</p>
Communication	Bad press	L	H	3	<p>Communication work will jointly involve the YEC and YECL communication coordinators.</p> <p>Continuous monitoring of public relations activities handled by YEC Energy Conservation Manager, in coordination with YECL DSM Supervisor, YEC communication coordinator and YECL Corporate Communications & Customer Relations.</p> <p>Direct engagement of largest end-users by YECL DSM Customer Engagement Officer, direct engagement of key suppliers and retailers by YEC Energy Conservation Manager.</p>
Operational	Understanding of needs/expectations of the Utilities by the Launch Contractor and/or the EM&V contractor	L	H	3	<p>Carry out brief weekly or bi-weekly progress report (phone call or otherwise). Generate meeting minutes.</p> <p>The market characterization reports, the program design document, the PIP and the draft EM&V plan should be provided to the contractors.</p> <p>The KPIs and the market indicators are clearly laid out in the draft MBO framework presented in the draft EM&V plan. The MBO framework will be updated with the launch contractor, and then with the EM&V contractor.</p>

Risk Area	Risk	Severity	Probability	Rating ⁷	Contingency
Operational	Non-eligibility of participants	L	M	2	<p>The Launch Team will create simple and clear eligibility criteria.</p> <p>The Launch Team will develop clear program internal procedures to validate eligibility.</p> <p>The core program team will lay out the eligibility criteria in an accessible fashion in the communications materials.</p> <p>The Customer Engagement Officer and/or the YECL front-end staff will be accessible to answer questions on the program.</p> <p>The YEC Energy Conservation Manager, YECL DSM Supervisor and engagement coordinator will provide clear information and training to YECL front-end staff so that they can provide the most up to date and accurate information to customers. This should be built in the communication plan and list of communication tactics and documented.</p> <p>The Customer Engagement Officer will be accessible for the prospective participants to ask questions.</p>
Operational	Fraud from participants or lack of diligence from the program team to prevent fraud or errors	M	L	2	<p>We seek to minimize fraud, not prevent it entirely.</p> <p>The mitigation measure must commensurate with the size of the rebate or incentive.</p> <p>We included site verification in some cases; on a spot-check basis and selected randomly.</p> <p>The Launch Team will lay out clear internal procedures to validate the information provided by the participants (when practical); the back office will have to comply with these and document his/her work.</p> <p>Compliance with the program internal validation procedures will be checked by the EM&V Contractor through the documentation left behind.</p>
Operational	Operational areas outside of DSM (finance, IT, communications) may not have the resources to do their part	L	M	2	<p>Ensure that the YEC/YECL Management Committee is involved to mediate issues and facilitate transition.</p>
Planning	The appropriate resources won't be available to complete the project on time	L	L	1	<p>Identify and secure appropriate resources with sufficient lead time.</p> <p>Update work plan at least quarterly (more often if possible) and validate availability of resources then raise resource constraint issues with the YEC/YECL Management Committee.</p>

4.7 Information Flow Mapping

This section lays out three “maps” of the information flows between involved actors: YEC, YECL, the markets, the EM&V contractors, and the YUB. These three maps, without being completely exhaustive, should cover a large and representative portion of DSM portfolio activities, and include:

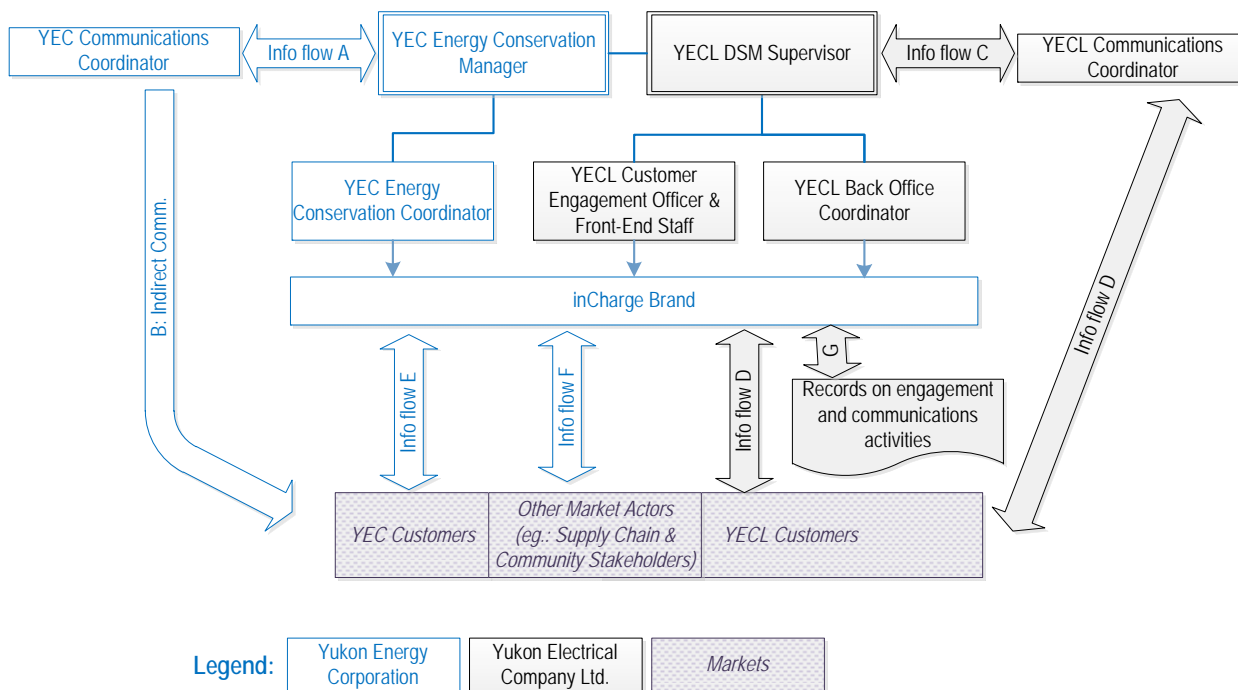
- Communications and direct engagement information-flow diagram
- Application processing and incentive payment information-flow diagram, and
- Performance reporting and EM&V information-flow diagram.

These three maps are provided below.

Communications and Direct Engagement Information Flow

The proposed information flow for communications and direct engagement activities is presented in Exhibit 10. An explanatory note is presented in tabular format following the chart.

Exhibit 10: Communications and Direct Engagement Information Flow Diagram



Explanation of the Information Flows – Communications and Direct Engagement

Marketing and Communications

A The marketing and communications plan, implementation of communications tactics, the inCharge website and print-media content will be developed jointly by YEC and YECL.

The marketing and communications work will be carried out according to a number of communication KPIs; e.g. number of clicks on the inCharge website, number of participants at inCharge branded public events (public relations opportunities, etc.), number of brochures distributed, etc.

Later, the YEC Energy Conservation Manager and the YEC Communication Coordinator will report on

Explanation of the Information Flows – Communications and Direct Engagement

their performance based on the plan. The Manager will need to log some statistics and events to compute the KPIs throughout the year. It is more practical to keep this log separated from the main program tracking system. The communication KPIs will be determined by the YEC Energy Conservation Manager during the program setup.

- B YEC and YECL will jointly deliver messages to both YECL customers, YEC customers and other market actors indirectly through marketing and communication tactics.
The YEC Energy Conservation Manager and the YEC Communication Coordinator will work with YECL to plan and develop bill inserts.
-

Direct Customer Engagement

- C The YECL DSM Supervisor, YECL Communications and the YECL Customer Engagement Officer will plan customer engagement events together with YEC Energy Conservation Manager.

- D The YECL Customer Engagement Officer will engage directly with YECL customers through the inCharge brand to educate them about electricity conservation, inform them about the DSM offerings and ease them into one or many of the program elements. YECL customers represent a large portion of the electricity end-user in the Yukon; hence YECL is responsible for most of the direct-engagement work. The YECL Communications Coordinator and YECL DSM Supervisor will support as needed.

The YECL Customer Engagement Officer will create an Engagement Plan that – for the most part – will consist of direct engagement KPIs and targets. The YECL Customer Engagement Officer will share the engagement plan document and discuss it with the YECL DSM Supervisor to make sure that the level of activity matches expectations and will deliver sufficient uptake. The engagement plan will not include any confidential information on YECL customers. The YEC Energy Conservation Manager and YECL DSM Supervisor will jointly finalize the engagement plan

The YECL Customer Engagement Officer will need to log some statistics and events to compute the KPIs through the year. It is more practical for YECL to keep this log separate from the main program tracking system.

- E The YEC Energy Conservation Coordinator and/or the YEC Energy Conservation Manager will engage directly with YEC customers through the inCharge brand to educate them about electricity conservation, to inform them about the DSM offerings and ease them into one or many of the program elements.

It is assumed that very little engagement planning will be needed on the YEC side because much fewer electricity end-users are customers of YEC than of YECL.

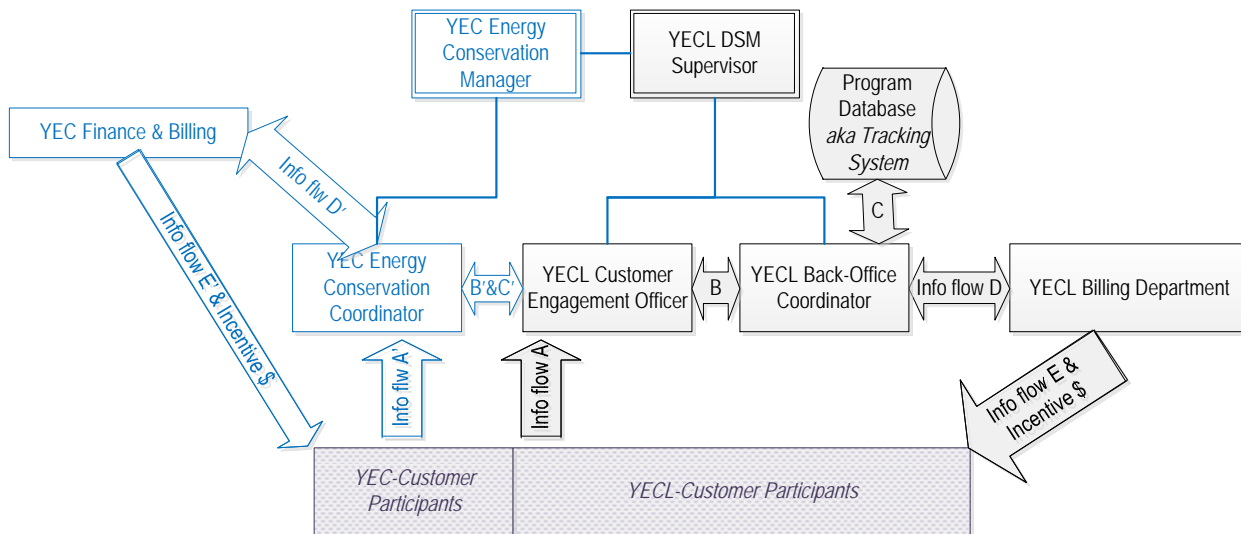
- F The utilities will engage directly with other market actors through the inCharge brand to educate them on electricity conservation, to plan and execute indirect communication and education tactics, and to support them with the participation processes. It is expected that many market actors will be useful trade allies and will help promote the program.

- G There is a need for keeping records on engagement and communication activities in order to generate the KPIs that will be used to manage the program. Core utility staff will be asked to log most of engagement and communication activities, consistent with the planning and the KPIs that will be decided on.
-

Application Processing and Incentive Payment Information Flow

The proposed information flow for processing and incentive payment activities is presented in Exhibit 11. An explanatory note is presented in tabular format following the chart.

Exhibit 11: Application Processing and Incentive Payment Information-Flow Block Diagram



Explanation of the Information Flows – Application Processing and Incentive Payment

- A The YECL Customer Engagement Officer will engage directly with YECL customers, inform them about the offerings, ease them into one or many program elements, help them with the program applications, forms and documentation, and retrieve the paperwork from the participant.
YECL customers will send in their DSM applications and forms either through YECL Customer Engagement Officer, the front-end staff or directly to the inCharge website.
- B The program applications will be passed on to the YECL Back-Office Coordinator who will process them.
Processing involves⁸: checking completeness of the paperwork, checking participant and technical eligibility, checking that the forms contain the necessary signatures, in certain cases verifying the engineering calculations backing the energy savings claim, establishing the incentive amount, getting the authorization to proceed with the payment of the incentive, issuing notices to inform the participants about the status of their application, retrieving the information contained in the paperwork and input it into the tracking system, documenting the processing work into the tracking system.

⁸ The process described above is scalable. For example, a small incentive application will be streamlined and involve far less steps.

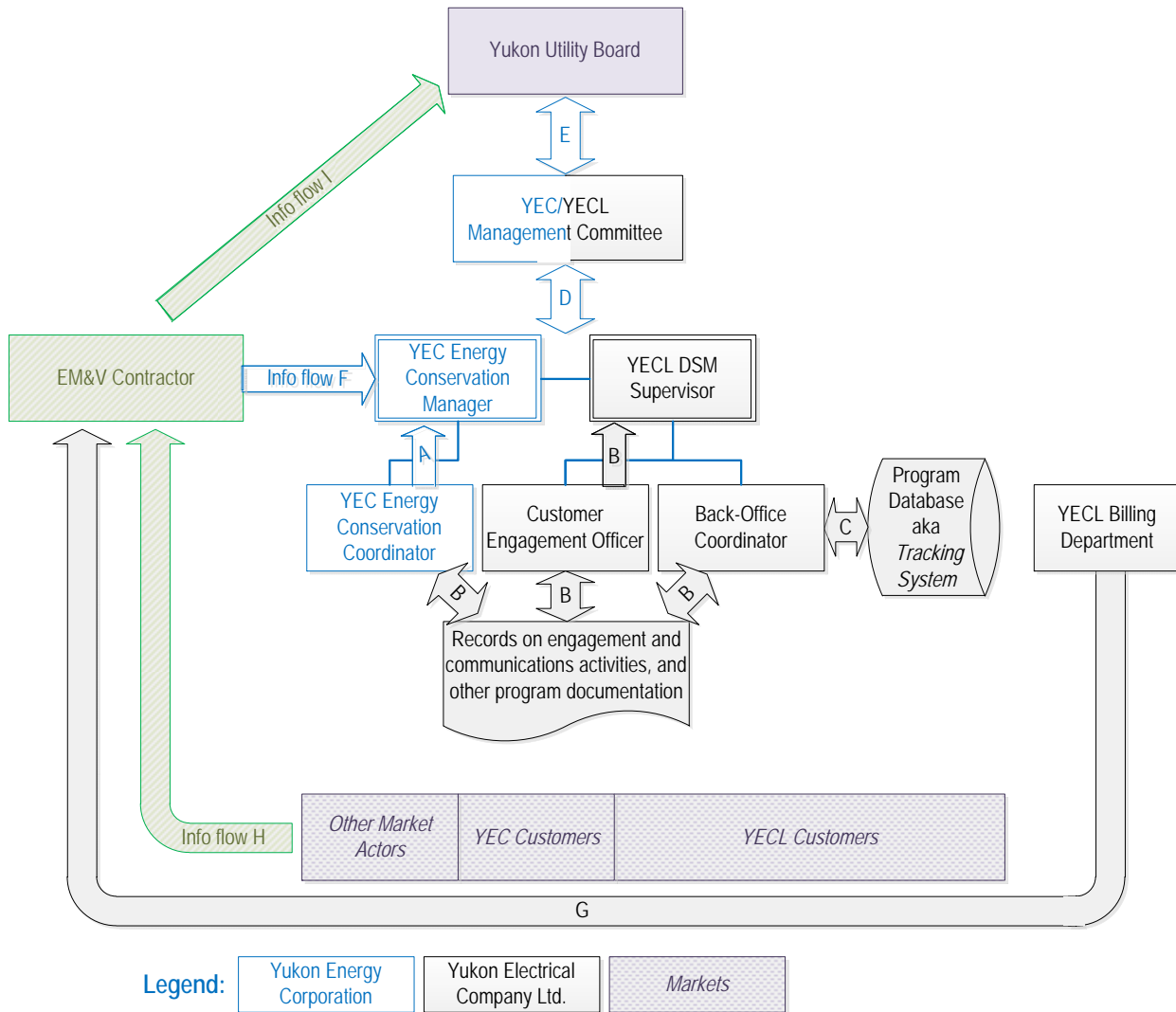
Explanation of the Information Flows – Application Processing and Incentive Payment

- C The tracking system/program database will be able to store the following data and generate reports based on it: time stamps for all transactions; participant information (names, contact information, etc.); type(s) and number of prescriptive conservation measures; description and claimed savings associated with custom conservation measures or projects; eligible savings as validated by the back-office coordinator; total measure or project cost; YECL/YEC account number and any other information used to verify participant eligibility; information used to verify technical eligibility of products or project; status of the application; claimed incentive amount; eligible incentive amount after validation; whether it is a YEC account or a YECL account; trade ally involved in the file; building or house type; how they learned about the program; and, whether the application came in directly or through YECL.
-
- D Whenever an incentive payment is authorized the YECL Back-Office coordinator will issue an internal form and send it to YECL Billing Department. The internal form will clearly lay out: the name of the recipient and electricity account information; the total amount of the incentive; any relevant explanatory notes – in particular if the incentive amount is not what the participant had originally claimed.
The YECL Customer Engagement Officer will coordinate with the YECL Billing Department to make sure that the incentive gets paid to the recipient diligently.
-
- E The incentive payment can be credited on the participant energy bill or sent otherwise. It could be accompanied with an explanatory notes (mentioned in (D) if the incentive amount is not what the participant had expected.
Once the payment is issued; the YECL Billing Department is expected to provide a form of feedback/confirmation to the YECL Customer Engagement Officer in order to update the database and generate the payment timestamps.
-
- A' The YEC Energy Conservation Coordinator will engage directly with YEC customers; ease them into one or many program elements; help them; and retrieve the paperwork from the participants.
YEC customers will send in their DSM applications and forms either through YEC Energy Conservation Coordinator or directly to the inCharge website. YEC customers are much fewer than the YECL customers; therefore, it is expected that the volume of applications and the information flows described from A' to E' will be smaller.
-
- B' & C' The YEC Energy Conservation Coordinator will work with YECL Back-Office Coordinator to process the applications; and feed the tracking system.
-
- D' The YEC Energy Conservation Coordinator will work with YEC Finance to get the incentive payment made to the YEC eligible participants.
-
- E' YEC Finance will send incentive payments to YEC eligible participants by sending them a cheque. The YEC Energy Conservation Coordinator will work with the YECL Back-Office Coordinator to make sure that the payment status is properly inputted and time-stamped in the program database.
-

Performance Reporting and EM&V Information Flow

The proposed information flow for performance reporting and EM&V activities is presented in Exhibit 12. An explanatory note is presented in tabular format following the chart.

Exhibit 12: Performance Reporting and EM&V Information-Flow Block Diagram



Explanation of the Information Flows – Performance Reporting and EM&V

Performance Reporting, Planning and Budgeting

- A The YEC Energy Conservation Coordinator will extract relevant statistics, indicators, tables, and charts from the tracking system and send it to the YEC Energy Conservation Manager.
- B The YECL Customer Engagement Officer and YEC Energy Conservation Coordinator will compute the direct engagement KPIs for the quarter or year and send them to the YEC Energy Conservation Manager who will produce a combined report.
- All members of the inCharge team will log and keep records of communication, training and engagement activities in a format that is consistent with the KPIs that will be agreed on at the program set-up stage. Communication, training and engagement KPIs were suggested on a preliminary basis as part of the EM&V plan.

Explanation of the Information Flows – Performance Reporting and EM&V

- C The YECL Back-Office Coordinator will be responsible for inputting participation data into the tracking system with technical support from the YEC Energy Conservation Coordinator. As mentioned in (A), the YECL Back-Office Coordinator and YEC Energy Conservation Coordinator will work together to extract relevant reports from the tracking system as needed to support the management of the DSM portfolio.
 - D The YEC Energy Conservation Manager will prepare a set of documents as described in Section 4.4 with the support of the YEC Energy Conservation Coordinator. They include: Annual Progress Report; Annual Work Plan; Annual Detailed Budget; and Quarterly Report. These documents are presented to the YEC/YECL Management Committee and will be reviewed, discussed and finalized.
 - E The YEC Energy Conservation Manager, YECL DSM Supervisor and YEC/YECL Management Committee will develop an Annual Summary that will be filed with the YUB (See description in Section 4.4).
-

Third-Party Evaluation Measurement and Verification

- F The YEC Energy Conservation Manager will work with the YEC Energy Conservation Coordinator to make the following data and documentation available to the EM&V contractor under confidentiality terms and conditions: the program database (or extract of that database); the engagement, training and communication records and KPIs; the CPR reports; the focus paper; the market characterization reports; the program design final report; the PIP; the draft EM&V Plan; the progress reports; work plans and budgets; and all of the communication materials.
The core program operation team must also be available for interviews with the EM&V contractor.
 - G The YECL Billing Department will be solicited to provide billing information to the EM&V Contractor about participants and non-participant monthly electricity consumption and peak demand for 24 to 36 months before participation in the program and then 24 to 36 months after. The EM&V Contractor might have to sign a confidentiality agreement with YECL.
 - H The EM&V Contractor will carry out surveys, site visits and other market research activities to gather the market intelligence needed to perform its process evaluation and impact evaluation.
 - I The EM&V Contractor will file three reports with the YUB: the Final EM&V Plan; the Process Evaluation Report; and the Impact Evaluation Report. (See Section 4.4).
The YEC Energy Conservation Manager, YECL DSM Supervisor and YEC/YECL management committee will be able to read early drafts of these reports, ask questions, highlight potential errors or omissions, and make comments on the reports before it is sent to the YUB.
-

5. Communication Plan

Section 5 provides a description of the target audiences, communication approach and goals, and key messages that will be used to strategically promote program understanding and uptake. This preliminary communication plan was designed to build on existing customer service functions and recognizes the importance of nurturing existing relationships between utilities and customers and supply-side market actors.

5.1 High-Level Communication Objectives

The high-level communication objectives are to:

1. Generate participation in the General Service and the Residential programs.
2. Raise awareness and educate Yukon residents and businesses on how adopting energy-efficient practices and equipment can save both power and money.
3. Increase YEC/YECL customer satisfaction.

To achieve the three objectives above the Utilities will seek to collaborate and develop formal or informal alliances with supply-side actors and other stakeholders to deliver information and energy efficient consumer products to the electricity end-users. The same groups may also partake in the implementation of energy efficiency projects.

5.2 Audiences

Major market actors that will need to be engaged to successfully operate the General Service and Residential programs in the Yukon include the following:

- Building owners/managers and institutional building facility managers
- Developers, architects and general contractors
- Residential customers
- Electrical distributors/independent lighting distributors
- Lighting designers
- Electrical contractors
- HVAC designers
- HVAC and control contractors
- Retailers
- External stakeholders⁹

⁹ Examples: Yukon Housing Corporation, Yukon Conservation Society, the City of Whitehorse, Energy Solutions Centre, the Yukon Contractor Association, the Association of Professional Engineers of Yukon, Yukon College, and the Whitehorse Chamber of Commerce.

As shown in Exhibit 13, some of these groups will be engaged as supply-side market actors and others will be target participants for various program elements. All of these groups will be target audiences for education and engagement activities.

Exhibit 13: Audiences and Relevant Program Elements

Audience	Relevant Program Elements	Supply-Side	Participant
Building Owners/Managers and Institutional Building Facility Managers	GS Lighting Redesign and Equipment Incentive		✓
	GS High-Efficiency Refrigeration		✓
	GS Energy Star Computer Incentive		✓
Developers, Architects, Contractors	GS New Construction Incentive	✓	
	GS Lighting Redesign and Equipment Incentive		✓
	Res. LED Lighting & Automotive Heater Timer Rebates		✓
Residential Customers	Res. LED Lighting & Automotive Heater Timer Rebates		✓
	Res. Low-Cost Energy Efficient Products		✓
Electrical/lighting Distributors	GS Lighting Redesign and Equipment Incentive	✓	
	Res. LED Lighting & Automotive Heater Timer Rebates	✓	
	GS Energy Star Computer Incentive		✓
Lighting Designers	GS Lighting Redesign and Equipment Incentive	✓	
	GS Energy Star Computer Incentive		✓
Electrical Contractors	GS Lighting Redesign and Equipment Incentive	✓	
	Res. LED Lighting & Automotive Heater Timer Rebates	✓	
HVAC/Control Designers	GS New Construction Incentive	✓	
	GS Energy Star Computer Incentive		✓
HVAC/Control Contractors	GS New Construction Incentive	✓	
Retailers	GS Lighting Redesign and Equipment Incentive		✓
	GS High Efficiency Refrigeration	✓	✓
	GS Energy Star Computer Incentive	✓	✓
	Res. LED Lighting & Automotive Heater Timer Rebates	✓	
	Res. Low-Cost Energy Efficiency Products	✓	

Program communication considerations for these key players as well as internal and external stakeholders are discussed in Appendix B. Communication activities will be strongly influenced by the fact that Whitehorse is a small close-knit community where news about good or bad installations is disseminated quickly and is remembered for a long time. It is also recognized that, generally speaking, market actors prefer the direct engagement approach.

Please refer to the Market Characterization reports for more details about each of these groups.

5.3 Approach

This section presents the approach that will be employed to address the objectives of the program launch and delivery. Detailed engagement, training and communication strategies are provided in the Program Design document. Please refer to Section 3.3.6 for the General Services Program and Section 4.3.6 for the Residential Program.

Public Launch of the Program Offerings

Tactics supporting the public launch of the DSM portfolio should be integrated and planned with care. Some media tactics will be used to vehicle information on both programs, and others should be used for one or the other.

Prior to the launch the team will:

- Develop extensive web content to explain the benefits, modalities, eligibility criteria and participation process of each of the offerings.
- Prepare a detailed memo containing the same information as above for the YEC and YECL front-end staff on the new DSM portfolio. That memo should be accompanied by a formal presentation. YECL and YEC front-end staff needs to be ready to answer most questions that their customers will have after the launch.
- Design information pieces (specific type, i.e. brochures, information sheets, bill inserts, etc. to be determined once a detailed communication strategy is prepared) prior to the launch and will include similar content to that for the inCharge website.

The communications contractor will be involved in the tactics that require significant graphic design.

For the launch of the inCharge DSM portfolio (both program) the team will:

- Make a public announcement regarding the launch of inCharge. This could be done through a media release, media briefing, or other methods deemed appropriate.
- Leverage existing public relations opportunities around the expected date of launch where to go public and where to present the entire DSM portfolio.

To increase uptake of the General Service Program during the first two quarters of operation (or as required) the following tactics may be employed:

- YECL and YEC may consider sending program information to the General Service customers along with their utility bills.
- YECL Customer Engagement Officer will call upon YECL largest accounts (building owners) to offer a face to face presentation of the offerings. Similarly, YEC will arrange in-person meetings with their large customers.
- The program team will engage with General Service supply-chain actors and prospective trade allies directly to present them the program and seek to collaborate – as described below.
- The team will distribute the aforementioned information brochures to the General Service supply-chain actors for them to pass along to their customers and use them to boost their sales.
- The team will carry out joint events with interested applicable trade and commerce organization (See external stakeholders in Appendix B) – as described below.

The program team will carry out the above tactics to increase uptake of the Residential Program during the first two quarters of operation (or as required). However, the supply-chain actors and the community and non-profit organizations require additional consideration. In addition to the tactics above, the launch of the Residential Program will also include:

- The team will design and create point-of-purchase materials for the retailer to display. See details about the work to be done with retail store managers below.
- YECL Customer Engagement Officer will carry out extensive community outreach and develop an energy efficiency community network in their service areas. YEC may do the same in their service area – more about this tactic is presented below.

Once passed the first two quarters of operation, the level of intensity of the engagement, marketing and communication will decrease. However, a continuous stream of new tactics should be planned and carried out. The team may choose to re-use the tactics presented above, and also:

- General Service and Residential customers will be able to sign in the inCharge website to receive news, information and updates about the programs. With time, a database of contact information will be built and the team will be able to reach out to people who signed up through newsletter and email blasts.
- As the General Service Program unfolds, early success stories will be captured and shared (where approved by the participants) through project case studies disseminated through the website, public relation opportunities, YECL and YEC direct customer engagement, and trade/commerce events.
- Public information campaigns will be used periodically throughout the operation of the program to support continued awareness of the Residential Program offerings.

Direct Engagement with Supply-side Market Actors

During the program portfolio launch, the team will engage with the appropriate supply chain actors as listed above and described in Appendix B (Retailers are discussed in the following section). The following tactics are being envisioned:

- The program team will provide technical support on the use of the standardized incentive calculation tool and the program forms and procedures.
- Direct engagement will be used (including emails, phone calls and in-person meetings) and hard-to reach contractors will be engaged through health and safety training from the Utilities and through collaboration with distributors.
- Hands-on training will be offered on advanced electricity efficiency lighting design and on the business aspects of electricity efficiency.
- Upon request from the local supply-side market actors the Utilities will act as a broker to procure technical expertise from highly specialized lighting and HVAC experts recruited from throughout North America.
- The supply-side market actors will be able to consult with these experts to work on specific projects and improve their design skills and professional competencies.

Supply-side market actors are also encouraged to participate in program offerings where eligible. Improving the energy efficiency of supply-side market actors' homes and offices allows them to share valuable personal success stories.

Direct Engagement with Retailers

The program team will develop partnerships with retail store managers to work with them to:

- Add low-cost energy efficient items to their shelves if they haven't already.

- Identify certain models that yield higher customer satisfaction and thus provide an incentive to increase shelf space for these models.
- Install point-of-purchase materials (Education on Low-Cost EE Product).
- Share EE product sales data (in units, and on a confidential basis) to monitor the impact of the program.

Large retailers will also be engaged as key participants in the suite of General Service program offerings as retail stores are energy intensive. Installations at large retail facilities would provide high-profile examples of successful program participation.

Direct Engagement with Major Building Owners/Managers

The YECL Customer Engagement Officer will offer personalized support to building owners/managers perhaps with the support of the Back-Office Coordinator and/or Expert Consultants. YEC will offer similar support for its customers. The owners/managers are the prospective participants in all General Service program components; thus, engaging them is critical to the success of the program. The Utilities intend to use the following tactics to engage them:

- Customized support to plan investment in assets and to identify which buildings to develop projects in.
- Customized support to optimize decisions on implementation and procurement approaches.
- Support before and during the tendering of project design services, particularly if the procurement approach is energy performance contracting (EPC).

Direct Engagement with Residential Customer and Creation of a Community Network

The YECL Customer Engagement Officer and YEC will engage individuals who are interested in energy conservation and are leaders among their peers to eventually join the community network.

At the start of the program operation the engagement officer will meet them at community events, at in-store events, workshops, and any opportunity for direct engagement. It is expected that distributing low-cost EE products free of charge will be a draw to initiate and build relationships with prospective EE ambassadors as well as an opportunity to demonstrate the products to their friends and relatives.

The Utilities will leverage the energy efficiency community to:

- Provide information to the communities on the low-cost EE products in a direct fashion.
- Disseminate educational and informational materials on low-cost EE products.
- Test certain low-cost products and gather customer satisfaction feedback.
- Extend the advertisement on the low-cost EE products through word-of-mouth marketing.

Training for Supply-Side Actors

The Utilities intend to provide technical support in the form of hands-on training where needed. The main training offerings that have been identified include:

- Program forms and procedures for Lighting Supply Channels.
- Program forms and procedures for HVAC and New-Construction Supply Channels.
- Electricity efficiency lighting design.
- Business aspect of electricity efficiency, including: energy audits; business cases; energy performance contracting; and energy efficiency financing.

It is expected that the knowledge provided to the supply-side actors will be passed on to many of their clients. Thus, the training should in turn educate Yukon residents and businesses on the benefits of energy efficiency and increase uptake in program offerings.

Events and Public Relations Opportunities

The Utilities propose to sponsor and attend trade shows and other events that gather local building owners/managers and/or supply-chain actors. Initially, the utilities will support existing trade events that have to do with lighting design or advanced HVAC design.

The Utilities intend to strengthen or create platforms that allow local energy conservation practitioners to present their success stories and share their lessons learned. Practitioners should be able to network within the Yukon and also with manufacturer reps and agents from outside the Yukon. The Utilities will also use the trade events to advertise the DSM portfolio.

To support the events, the Utilities envision using one or several of the following tactics:

- Small grants to support the logistics of the events.
- Attendance and presentation of content at the events, such as case studies, information on program offerings, etc.
- Dissemination of information about the events through other media used by the Utilities (email blast, newsletter, website content, direct engagement, etc.).
- Support for well-known experts in the lighting or HVAC field to come to the Yukon (perhaps representatives from the IES or from ASHRAE) in the form of an allocation to pay for transportation and accommodations.
- Engagement with manufacturer reps or agents in Northern BC and Northern Alberta with the intention of convincing them to attend the events. (For example, the Utilities could invite reps from OSRAM/Sylvania, GE, Philips, Canlite, Lithonia, Cooper, Mitsubishi, Honeywell, Siemens, Johnson Controls, Lennox, etc.).

With time and if early initiatives are successful, the Utilities will explore the possibility of financing and organizing an annual stand-alone trade event in Whitehorse.

6. Financial Plan

Section 6 provides a summary of the operational budget, together with a concise description of the main cash flows between the utilities and the ratepayers as well as between utilities.

6.1 Budget

The budget shown in Exhibit 14 has been organized using the breakdown structure (BBS) that is identical to the WPS presented in Section 2.2. We recommend basing the DSM finance tracking on this BBS and assigning the program staff time and expenses (including delivery and EM&V contractors) to one of the cost categories shown previously in Exhibit 2.

Exhibit 14 Portfolio Budget Including Government Buildings

Budget Breakdown Structure	Year-1 Quarterly Budget (\$1,000s)				5-Year Annual Budget Projections (\$1,000s)					TOTAL
	Y1-Q1	Y1-Q2	Y1-Q3	Y1-Q4	Year 1	Year 2	Year 3	Year 4	Year 5	
GRAND TOTAL	\$140	\$258	\$234	\$193	\$824	\$1,240	\$1,393	\$1,266	\$1,480	\$6,203
WP1 General Service Program	\$62	\$129	\$122	\$82	\$395	\$628	\$928	\$765	\$796	\$3,512
WP1.1 Program Management	\$15	\$19	\$26	\$27	\$88	\$80	\$79	\$82	\$84	\$413
WP1.2 Engagement, Training and Communication	\$12	\$64	\$58	\$39	\$174	\$240	\$229	\$174	\$179	\$996
WP1.3 Lighting Redesign Study & Equipm't Incentive	\$14	\$18	\$17	\$4	\$53	\$150	\$328	\$367	\$337	\$1,235
<i>WP1.3.1 Time & Materials</i>	\$14	\$18	\$14	\$1	\$47	\$15	\$35	\$40	\$38	\$174
<i>WP1.3.2 Incentive Disbursement</i>	\$0	\$0	\$3	\$3	\$6	\$135	\$294	\$327	\$299	\$1,062
WP1.4 Energy Star Computer Incentive	\$7	\$9	\$7	\$12	\$35	\$76	\$125	\$0	\$0	\$236
<i>WP1.4.1 Time & Materials</i>	\$7	\$9	\$7	\$6	\$29	\$40	\$68	\$0	\$0	\$137
<i>WP1.4.2 Incentive Disbursement</i>	\$0	\$0	\$0	\$6	\$6	\$35	\$57	\$0	\$0	\$98
WP1.5 High-Efficiency Refrigeration	\$7	\$9	\$7	\$0	\$23	\$77	\$139	\$74	\$147	\$460
<i>WP1.5.1 Time & Materials</i>	\$7	\$9	\$7	\$0	\$23	\$77	\$7	\$74	\$15	\$197
<i>WP1.5.2 Incentive Disbursement</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$132	\$0	\$132	\$263
WP1.6 New Construction Incentive	\$7	\$9	\$7	\$0	\$23	\$6	\$27	\$68	\$49	\$173
<i>WP1.6.1 Time & Materials</i>	\$7	\$9	\$7	\$0	\$23	\$0	\$2	\$28	\$4	\$58
<i>WP1.6.2 Incentive Disbursement</i>	\$0	\$0	\$0	\$0	\$0	\$6	\$25	\$39	\$45	\$115
WP2 Residential Program	\$78	\$129	\$111	\$111	\$429	\$468	\$465	\$501	\$430	\$2,294
WP2.1 Program Management	\$32	\$33	\$18	\$21	\$104	\$74	\$66	\$75	\$77	\$396
WP2.2 Engagement, Education and Communication	\$23	\$30	\$30	\$30	\$113	\$130	\$134	\$138	\$142	\$657
WP2.3 LED Lighting & Auto. Heater Timer Rebates	\$17	\$17	\$7	\$9	\$51	\$77	\$79	\$80	\$81	\$367
<i>WP2.3.1 Time & Materials</i>	\$17	\$17	\$2	\$3	\$39	\$26	\$27	\$28	\$29	\$150
<i>WP2.3.2 Incentive Disbursement</i>	\$0	\$0	\$5	\$7	\$12	\$51	\$52	\$52	\$52	\$217
WP2.4 Promotion of Low-Cost EE Products	\$6	\$49	\$47	\$46	\$148	\$157	\$155	\$152	\$104	\$715
<i>WP2.4.1 Time & Materials</i>	\$6	\$44	\$38	\$26	\$114	\$109	\$112	\$115	\$74	\$523
<i>WP2.4.2 Incentive Disbursement</i>	\$0	\$5	\$9	\$20	\$34	\$48	\$43	\$36	\$30	\$192
WP2.5 Innovative Heating Systems Initiative	\$0	\$0	\$9	\$4	\$14	\$31	\$32	\$56	\$26	\$159
<i>WP2.5.1 Time & Materials</i>	\$0	\$0	\$4	\$4	\$9	\$22	\$23	\$33	\$8	\$94
<i>WP2.5.2 Incentive Disbursement</i>	\$0	\$0	\$5	\$0	\$5	\$9	\$9	\$24	\$19	\$65
WP3 Evaluation, Measurement and Verification	\$0	\$0	\$0	\$0	\$0	\$144	\$0	\$0	\$253	\$397

6.2 Cash Flows and Payment Schemes

Four DSM cash flows are anticipated:

- The administration cost paid for by YEC** – Two FTEs that are members of the core staff; some direct expenses; and most of the contractor fees.
- The incentives paid by YEC to YEC customers** – This is expected to be a small fraction of the incentive disbursements.
- The administration cost paid for by YECL** – Two FTEs as members of the core staff; one corporate FTE and some direct costs.

4. The incentives paid by YECL to YECL customers – This is expected to be most of the incentive payment.

Incentives and costs will be reconciled between the two utilities on a quarterly basis

YEC DSM costs (administration and incentive) are going to be funded by the ratepayers because the cost will be presented to the YUB as part of the rate filing. This is going to be further defined by the outcome of the Joint Panel on DSM as part of the YECLs next general rate application.

YECL DSM costs (administration and incentive) are going to be funded by the ratepayers because the cost will be presented to the YUB as part of the rate filing. This will also be defined by the outcome of the Joint Panel on DSM as part of the YECLs next general rate application.

Appendices

Appendix A: Year-1 Detailed Action Plan

Please see attached – DSM Program Detailed Action Plan PDF

Appendix B: Audience Descriptions

Major market actors that will need to be engaged to successfully operate the General Service and Residential programs in the Yukon include the following:

- Building owners/managers and institutional building facility managers
- Developers, architects and general contractors
- Residential customers
- Electrical distributors/independent lighting distributors
- Lighting designers
- Electrical contractors
- HVAC designers
- HVAC and control contractors
- Retailers

Program communication considerations for these key players, as well as internal and external stakeholders, are discussed below.

Building Owners/Managers and Institutional Building Facility Managers

Commercial building owners/managers and institutional building managers will be targeted as major potential participants for the General Services program offerings. There are 8 large property managers/owners in the Yukon, located predominantly within Whitehorse. Building owners and managers, looking to better understand how to manage their energy bills, could find it fairly puzzling given that they work with various contractors that each has a vested interest. Owners/managers would have a higher level of trust in a third party such as the Utilities than in a supplier, so direct communication from the Utilities may be better received.

Commercial building owners/managers often have more freedom to make purchasing decisions than government building managers. Government facility managers must work within a budget decided by Council or the Territory and must follow the procurement policies. It is important to communicate the business case for program participation not only to facility managers but to City Council and other decision makers.

Building Developers, General Contractors and Architects

Developers and architects are already working in a market interested in buying environmentally-friendly homes. Words such as SuperGreen, electricity efficiency, energy conservation and ENERGY STAR are commonly used in sales pitches and collateral materials.

There are roughly 5-10 housing developers in the Yukon and developers, general contractors and architects are extremely busy. Direct and efficient communication is important with this group.

Residential Customers

Eligible participants for the Residential program include: owners of detached houses; town/row houses; condominium units; and mobile homes located in the Yukon who shop in Yukon retail stores. The program also includes online shoppers, landlords and renters. This is a group of approximately 20,000 shoppers. The primary source of information used to make purchase decisions is the store where the purchase is made. In-store marketing material should be clear and prominent. Other key sources of information for shoppers are friends and relatives as well as websites displaying user-generated content.

The relationship between landlords and tenants was discussed in Section 4.1.4 of the Program Design report. Given the significant split-incentive barrier between landlords and tenants this segment will not be main focus for engagement.

Some individuals are particularly passionate about or interested in improving the energy efficiency of their home. These individuals will likely be interested in developing a collaborative relationship with the Utilities.

Electrical Distributors

There are only two electrical distributors in the Yukon: EECOL and Guillevin, as well as a few independent lighting distributors selling to the Yukon residential and building sectors. These distributors are key market actors. Electrical distributors often maintain relationships with a variety of market actors situated both upstream and downstream in the supply chain including: lighting designers; building owners; electrical contractors and manufacturer agents and representatives. Electrical distributors are keen to participate in programs and are easier to engage than electrical contractors because new incremental projects mean increased sales.

Lighting Designers

Only two firms offer lighting design services by professional electrical engineers. These will be very important partners for the Lighting Redesign Incentive program offerings. These designers prefer direct engagement through email, phone calls, and in-person meetings.

Electrical Contractors

Electrical contractors active in the territory are smaller regional firms with a handful of employees. There are approximately 26 electrical contractors in the Yukon and they are a hard-to-reach group of people as they are very busy and are on the road much of the time.

Depending on the type of project, electrical contractors may have a contractual relationship with a general contractor or directly with the building owner. Unless their clients are very specific about the fixtures and lamps that they want, contractors have a great deal of influence on design choices. Electrical contractors make quick and conservative design decisions based on equipment they are accustomed to. There is an opportunity to make energy efficiency design decisions easier for them by providing simple and concise educational material with a suggested prescriptive approach; and/or to provide compensation if they need to spend more time making better design decisions.

HVAC and Control Designers

There are two firms offering HVAC/control design services in the Yukon, with design teams lead by senior mechanical engineers. Designers are facing a high demand for their services. Designers are the market actors most likely to be in a position to educate the end users about the lifecycle cost benefits of energy efficient designs. However, with very little competition and a large amount of new construction projects there is little incentive for them to proactively offer innovative and efficient designs. HVAC and Control designers prefer direct engagement and would be interested in trade shows or events if they saw value in terms of learning and networking opportunities.

HVAC and Control Contractors

For the most part control systems and HVAC equipment are sold locally by contractors. There are roughly 16 HVAC/control contractors serving the Yukon. Control contractors in the Yukon are smaller local firms with a handful of employees. The two control contractors in the Yukon consist of a Honeywell dealer and a Siemens dealer. Controls contractors have long-term

maintenance contracts therefore they have significant direct interactions with owners. This provides an opportunity to educate the energy end-users.

Retailers

Retail store managers are both target program participants for the General Services program and target supply-side market actors for the Residential program (and in some cases the General Services program). Most retail stores are concentrated in Whitehorse and consist of large “big-box” retail stores as well as smaller independent stores. Store managers are more knowledgeable about DSM programs in other jurisdictions than other actors because they often have branches in other parts of Canada and the United States. They are keen to participate in joint initiatives with the utilities but are dealing with a human resource shortage.

Internal Stakeholders

All YEC/YECL staff will need to be aware of the DSM portfolio to support program communication.

External Stakeholders

External stakeholders are other organizations and individuals in the Territory that may play a role (intentionally or unintentionally) in promoting or injuring the DSM program portfolio. The key stakeholders include: the Yukon Housing Corporation; the City of Whitehorse; Energy Solutions Centre; the Yukon Contractor Association; the Association of Professional Engineers of Yukon; Yukon College; and the Whitehorse Chamber of Commerce.

The City of Whitehorse is a very sustainability and conservation minded organization (including energy) and has been involved in CPR workshops and YEC’s energy planning charrettes. The General Services and Residential programs would benefit from ongoing engagement with the City on a number of fronts including: as a program participant and advocate; and as an informant of any building Bylaw changes that would affect commercial developments.

The Energy Solutions Centre (ESC) is a branch of the Yukon Government’s Department of Energy, Mines and Resources. ESC participates in the design of energy policies and delivers energy programs and projects for Yukon citizens, other government departments, First Nations, municipalities and businesses. The YEC/YECL DSM portfolio has been designed to minimize duplication and potential customer confusion. This will remain an ongoing consideration.

Among other programs and services, Yukon Housing is the delivery agent for the EcoEnergy Program through the federal Office of Energy Efficiency. They also manage the Green and SuperGreen endorsement label for new residential construction energy performance. Yukon Housing also delivers a variety of training courses for residential developers and construction contractors. As for the ESC, the YEC/YECL DSM portfolio was designed to avoid duplication but it will remain an ongoing consideration.

The Yukon Contractor Association’s primary objective is the overall improvement of the industry and the provision of services to their members. The Association is credible among contractors and provides several communication channels with members (who are generally difficult to reach).

The Association of Professional Engineers of Yukon (APEY) is a non-profit trade association representing professional engineers. APEY has very limited resources and did not show a high degree of interest in being an active stakeholder in YEC/YECL DSM portfolio. It may be valuable to keep the APEY aware of program activities as growth in Yukon Engineers’ knowledge of energy efficiency is beneficial to the program.

Yukon College is the only post-secondary provider in the Yukon. Although the College has limited resources, it may be valuable to engage the College in the training aspect of the General Services and Residential program offerings and as a program participant.

The Whitehorse Chamber of Commerce is a local organization of businesses whose goal is to further the interests of businesses. The Chamber organizes many events, which could be used to advertise the General Services program offerings to their members and provide a forum for energy efficiency education and discussion.