Balisage – Opportunistes & Bénévoles

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Ce document présente les résultats d'une étude d'étalonnage des méthodologies utilisées par différents distributeurs gaziers pour déterminer les taux d'opportunisme et de bénévolat associés aux programmes d'efficacité énergétique.

Dans son dossier tarifaire 2010, Gaz Métro précisait que :

> *« Gaz Métro entend réaliser un étalonnage des méthodologies utilisées pour déterminer le taux d'opportunisme ainsi que pour le taux de bénévolat. Les activités de recherche AR211 et AR212 prévues vont permettre de réaliser cet étalonnage. Gaz Métro désire comparer les méthodologies et les questions utilisées par les autres distributeurs pour identifier les opportunistes et les bénévoles. Cet étalonnage permettra à Gaz Métro de raffiner la nouvelle méthodologie de calcul du taux d'opportunisme et de développer une méthodologie de calcul du taux de bénévolat*[1]*. »*

OBJECTIFS

L'objectif principal est d'effectuer un balisage auprès de différents distributeurs gaziers afin d'avoir un portrait le plus complet possible des méthodologies utilisées, permettant de raffiner, s'il y a lieu, la méthodologie de calcul du taux d'opportunisme utilisée par Gaz Métro et de développer la méthodologie de calcul du taux de bénévolat associé aux programmes du PGEÉ.

Les objectifs spécifiques sont de :

- comparer les différentes méthodologies de calcul des taux d'opportunisme et de bénévolat; et
- identifier les concepts de questions utilisés dans les calculs des taux d'opportunisme et de bénévolat.

[1] R-3690-2009, Gaz Métro-9, Document 1, p.12

MÉTHODOLOGIE DE L'ÉTUDE

Gazières sollicitées

Pour rencontrer les objectifs, Gaz Métro a sollicité l'aide des membres du comité « *DSM Task Force* » de l'Association canadienne du gaz (CGA). Les distributeurs suivants siègent sur le comité « *DSM Task Force* » :

- Atco Gas (Mark Antonuk)
- Enbridge (Michael Brophy)
- Manitoba Hydro (Lloyd Kuczek)
- SaskEnergy (James Gates)
- Terasen Gas (Sarah Smith)
- Union Gas (Sarah Van Der Paelt)
- Gaz Métro (Vincent Pouliot)

En outre, les distributeurs gaziers Vermont Gas et Gazifère ont été sollicités pour participer à l'étalonnage. Ainsi, entre les mois d'avril et mai 2009, huit gazières ont été sollicitées pour participer à l'étalonnage.

Informations demandées

Gaz Métro a demandé aux distributeurs gaziers de fournir les éléments suivants :

- Les plus récents questionnaires utilisés afin d'identifier les bénévoles pour les différents programmes d'efficacité énergétique;
- Les plus récents questionnaires utilisés pour les calculs des taux d'opportunisme et de bénévolat des différents programmes d'efficacité énergétique; et
- Les méthodologies utilisées pour quantifier les taux d'opportunisme et de bénévolat.

Gazières participantes

Cinq des huit gazières sollicitées ont pu remettre, en totalité ou en partie, les informations demandées par Gaz Métro. Plus précisément, il s'agit d'Enbridge, Gazifère, Manitoba Hydro, Terasen Gas et Union Gas.

Gazières non participantes

Il est à noter qu'Atco Gas, SaskEnergy ainsi que Vermont Gas n'ont pu participer à l'étalonnage. Les raisons sont expliquées ci-dessous.

Atco Gas

Atco Gas n'a pas encore de programmes d'efficacité énergétique formels qui comprennent des incitatifs financiers. Ainsi, elle n'a pas de méthodologie pour identifier les bénévoles et les opportunistes.

SaskEnergy

SaskEnergy est une compagnie d'État et sa position est légèrement différente des autres gazières réglementées. Certains programmes d'efficacité énergétique sont basés sur les programmes gouvernementaux qui ne requièrent pas d'analyses spécifiques, telles que le test du coût total des ressources (TCTR), le taux de bénévolat ou le taux d'opportunisme. Il en est de même pour les programmes créés par l'entreprise. SaskEnergy produit un rapport à son régulateur, Crown Investments Corporation, mais elle n'a pas à justifier les programmes par une analyse économique. SaskEnergy s'inspire fortement des autres utilités réglementées. À titre d'exemple, le programme des chaudières commerciales est structuré exactement comme le programme de Terasen Gas qui a été lancé auparavant. Par conséquent, SaskEnergy n'a pas de méthodologie pour calculer les opportunistes et les bénévoles associés à ses programmes d'efficacité énergétique.

Vermont Gas

Les taux d'opportunisme de Vermont Gas sont constants depuis 1993 et ces derniers ont été estimés et négociés avec le Public Service Department and Public Service Board. Ainsi, Vermont Gas n'a pas sondé les participants pour calculer le taux d'opportunisme ou de bénévolat associés à ses programmes d'efficacité énergétique.

MÉTHODOLOGIES DES OPPORTUNISTES ET BÉNÉVOLES

La section suivante présente sommairement les méthodologies utilisées pour calculer les taux d'opportunisme et de bénévolat des gazières participantes.

Enbridge & Union Gas

Les informations suivantes sont basées sur l'étude *Custom projects attribution study*[2] réalisée par Summit Blue Consulting et remis à Enbridge ainsi qu'à Union Gas le 31 octobre 2008. Les taux d'opportunisme et de bénévolat ont été estimés à l'aide d'études auprès de participants, non-participants et partenaires. Le détail des questionnaires utilisés est présenté à l'annexe A.

Définitions

Les définitions suivantes sont utilisées dans l'étude :

> **Les opportunistes** sont les clients qui ont reçu un incitatif du programme d'efficacité énergétique mais qui auraient tout de même mis en place la même mesure d'efficacité si le programme n'avait pas existé.
>
> **Les opportunistes modérés** sont définis comme des clients qui, à un certain point, auraient mis en place la mesure d'efficacité énergétique même si le programme n'avait pas existé, mais pour qui le programme les a persuadés de mettre en place la mesure plus tôt que prévu initialement.
>
> **Les bénévoles** représentent des clients qui ont mis en place des mesures d'efficacité énergétique en raison du programme, sans toutefois bénéficier des aides financières et dont les économies générées ne sont pas comptabilisées.

L'effet d'entraînement intérieur représente un client ayant mis en place des mesures d'efficacité énergétique additionnelles à celles pour lesquelles il a déjà reçu une aide financière sur des bâtiments où d'autres mesures ont été subventionnées dans le passé. Les mesures d'efficacité énergétique additionnelles génèrent des économies d'énergie qui sont non incluses dans les statistiques du programme mais qui sont directement attribuables à l'influence du programme.

L'effet d'entraînement extérieur représente un client ayant mis en place des mesures d'efficacité énergétique additionnelles à celles pour lesquelles il a reçu une aide financière sur des bâtiments où aucune mesure n'a été subventionnée dans le passé. Les mesures d'efficacité énergétique additionnelles génèrent des économies

[2] Custom projects attribution study final submitted to DSM evaluation Union Gas limited - a Spectra Energy Co. & Enbridge Gas distribution, Summit Blue Consulting, October 31, 2008.

d’énergie qui sont non incluses dans les statistiques du programme mais qui sont directement attribuables à l’influence du programme.

Bénévole non participant représente un client ayant mis en place des mesures d’efficacité énergétique générant des économies d’énergie qui sont directement attribuables à l’influence du programme sans avoir déjà participé au programme auparavant.

Net-to-Gross Ratio: Le “net-to-gross ratio” est défini comme suit : 1 – taux d’opportunisme + l’effet d’entraînement + taux de bénévolat.

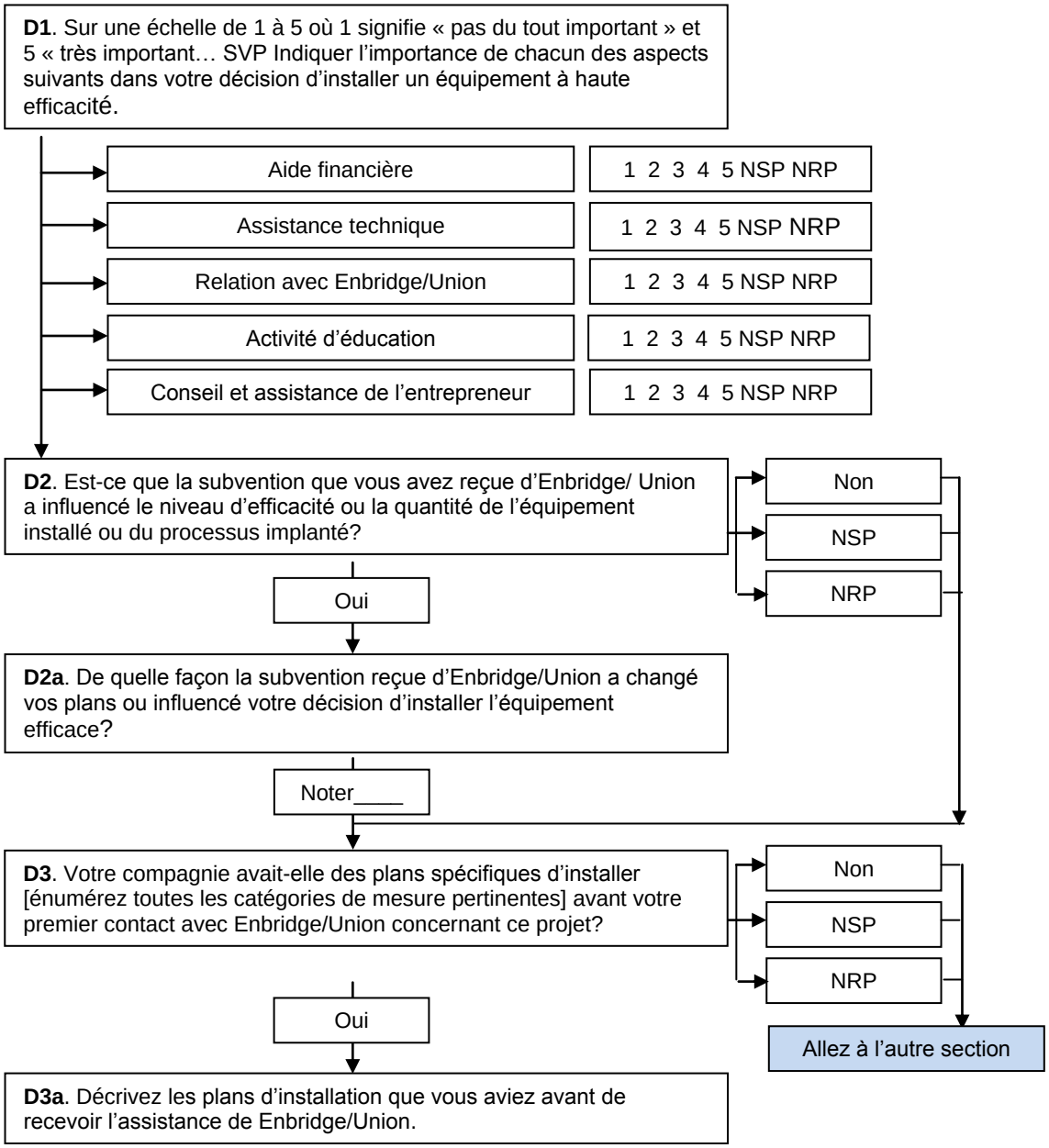
On peut constater que la méthodologie proposée par Summit Blue tient compte des opportunistes « purs » et des opportunistes « modérés ». De plus, elle tient compte de l’effet d’entraînement et des bénévoles.

Le cheminement méthodologique pour le calcul du taux d’opportunisme est illustré à l’annexe B.

Méthodologie de calcul du taux d'opportunisme

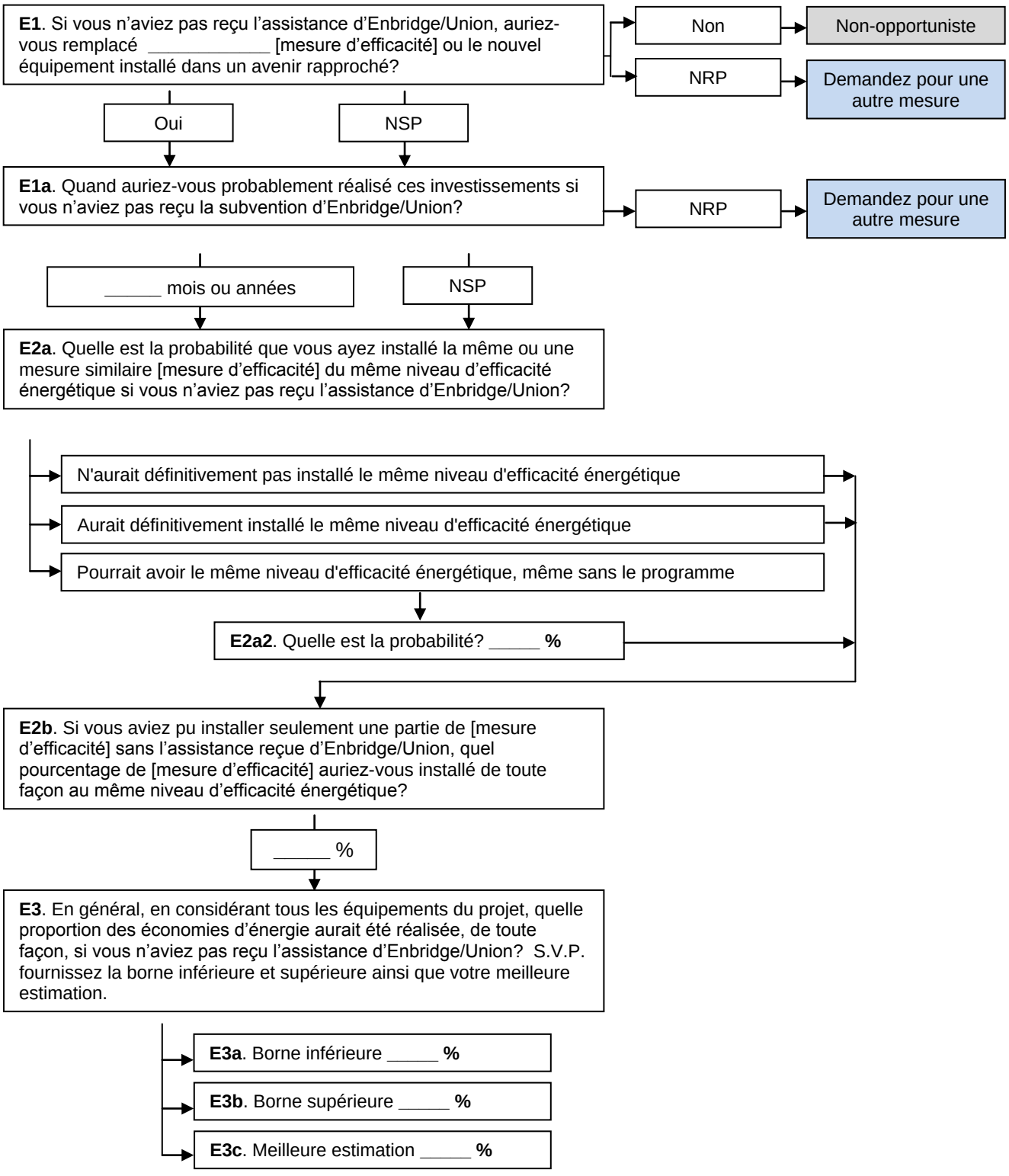
Les questions suivantes, traduites par l'auteur, réfèrent à la section 1.6[3] du questionnaire officiel disponible à l'annexe A.

Questions de validation ou d'influence



[3] Custom projects attribution study final submitted to DSM evaluation Union Gas limited - a Spectra Energy Co. & Enbridge Gas distribution, Summit Blue Consulting, October 31, 2008.

Questions directes

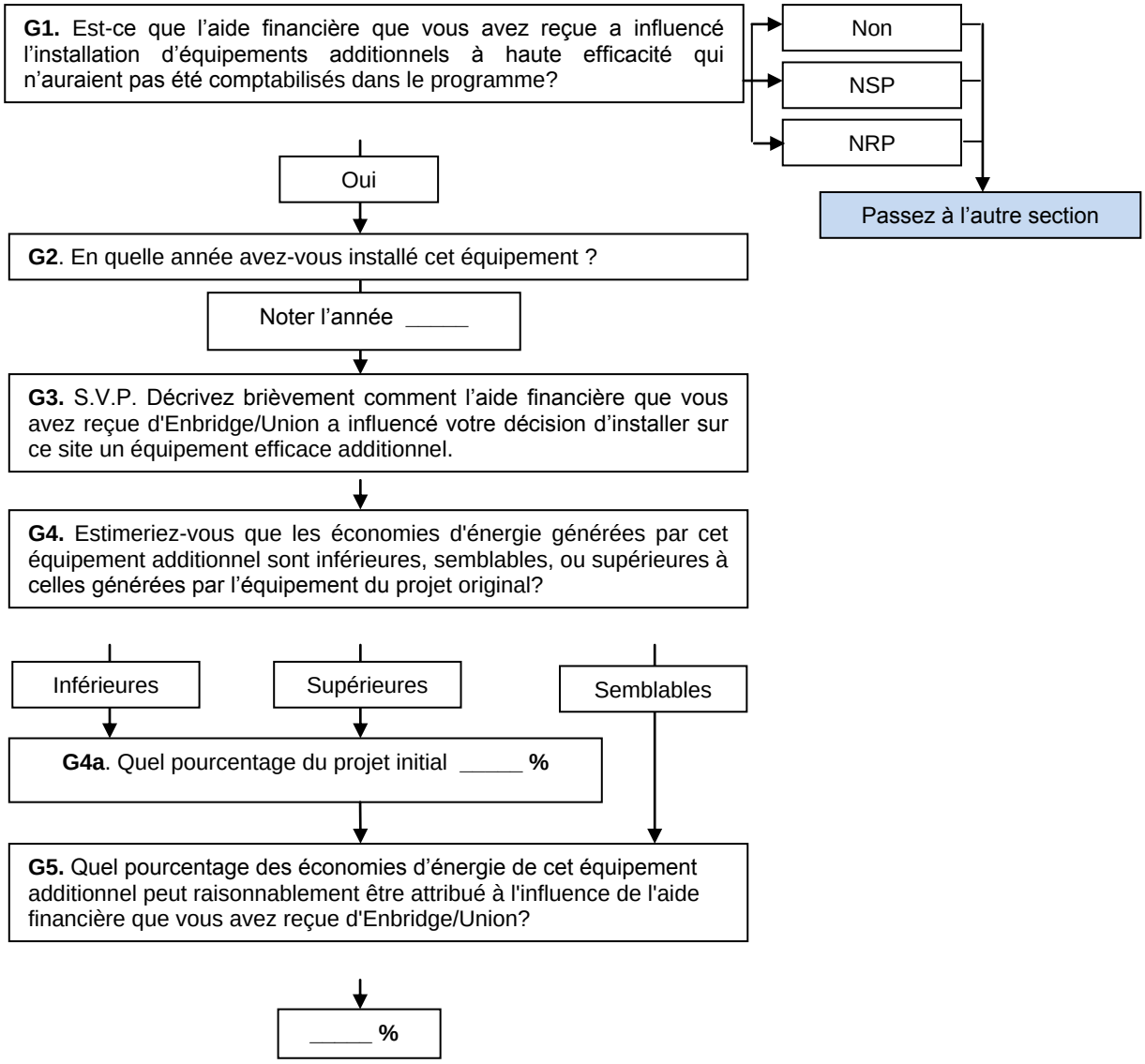


Méthodologie de calcul de l'effet d'entraînement

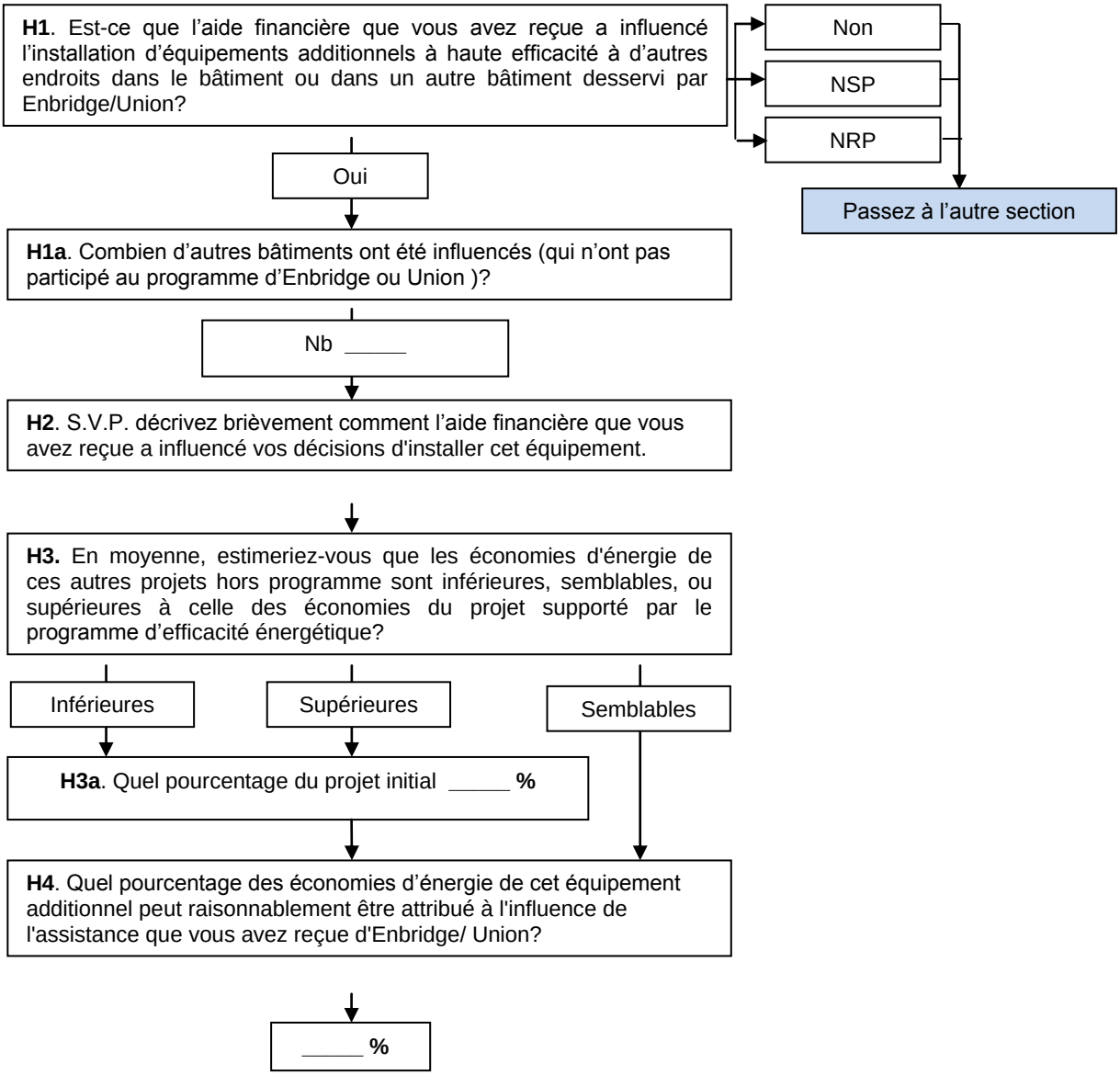
L'effet d'entraînement « intérieur et extérieur »

Les questions, ayant pour but d'estimer l'effet d'entraînement « intérieur et extérieur », ont été incorporées dans les questionnaires des participants et des partenaires commerciaux. L'analyse a, quant à elle, été réalisée à même la méthodologie de calcul du taux opportunisme.

Effet d'entraînement « intérieur »

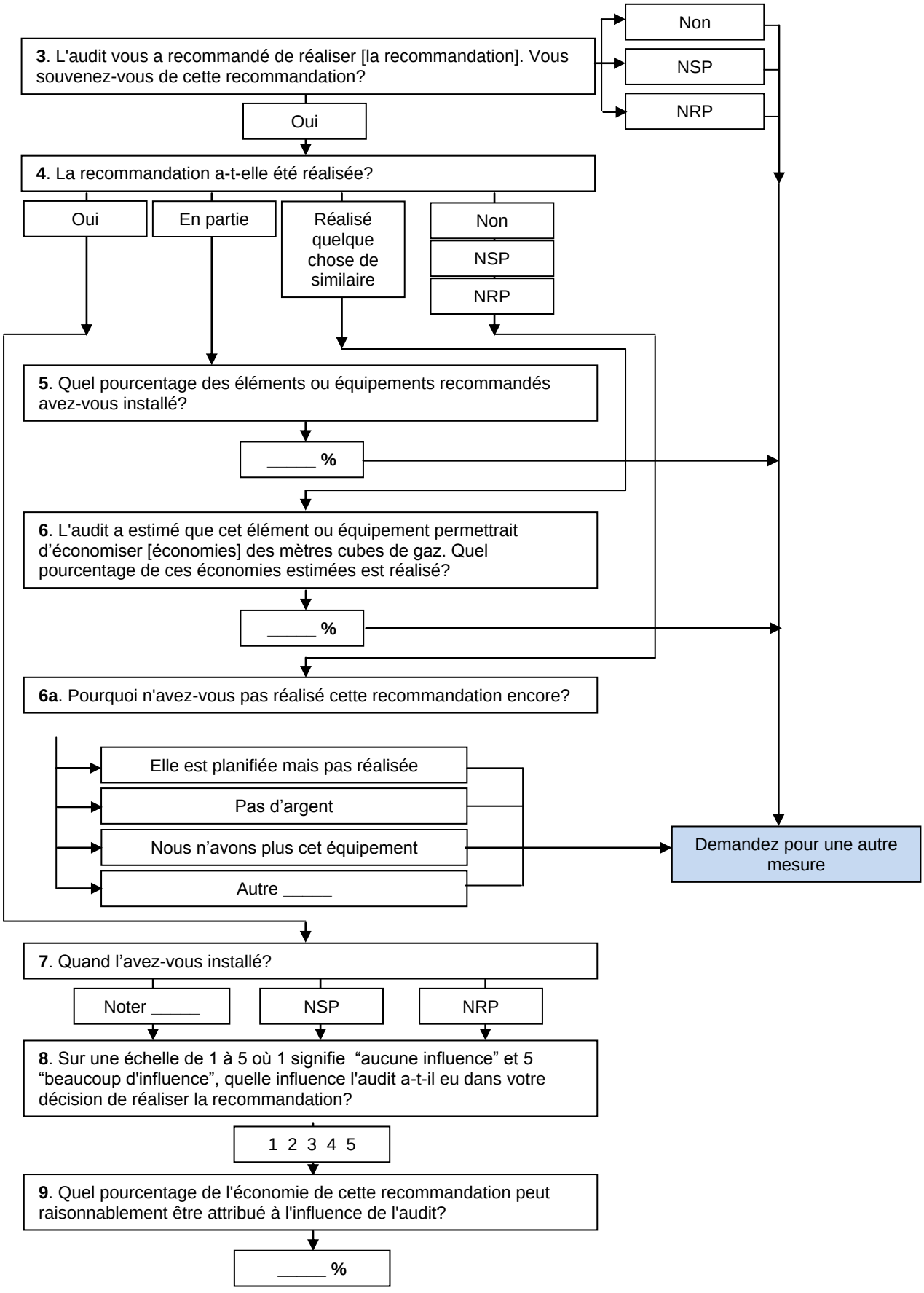


Effet d'entraînement « extérieur »



Méthodologie de calcul des bénévoles audités

Les participants à des études de faisabilité ou à des audits subventionnés, qui ont implanté une mesure d'efficacité énergétique recommandée, mais qui ne se sont pas prévalus de l'aide financière disponible, peuvent être considérés comme des bénévoles. Ces « clients » ne sont pas inclus dans les questionnaires des participants ou des non-participants. Un questionnaire, qui se trouve à la section 2.5 « mesure-specific questions » de l'annexe A, a été spécialement conçu pour eux.


3. L'audit vous a recommandé de réaliser [la recommandation]. Vous souvenez-vous de cette recommandation?
Non
NSP
NRP
Oui
4. La recommandation a-t-elle été réalisée?
Oui
En partie
Réalisé quelque chose de similaire
Non
NSP
NRP
5. Quel pourcentage des éléments ou équipements recommandés avez-vous installé?
_____ %
6. L'audit a estimé que cet élément ou équipement permettrait d'économiser [économies] des mètres cubes de gaz. Quel pourcentage de ces économies estimées est réalisé?
_____ %
6a. Pourquoi n'avez-vous pas réalisé cette recommandation encore?
Elle est planifiée mais pas réalisée
Pas d'argent
Nous n'avons plus cet équipement
Autre _____
Demandez pour une autre mesure
7. Quand l'avez-vous installé?
Noter _____
NSP
NRP
8. Sur une échelle de 1 à 5 où 1 signifie "aucune influence" et 5 "beaucoup d'influence", quelle influence l'audit a-t-il eu dans votre décision de réaliser la recommandation?
1 2 3 4 5
9. Quel pourcentage de l'économie de cette recommandation peut raisonnablement être attribué à l'influence de l'audit?
_____ %

Voici comment le taux de bénévolat pour les « bénévoles audités » est calculé :

Multiplicateur de bénévole = (influence du programme {converti en pourcentage} + le pourcentage d'économie) ÷ 2.

Taux de bénévolat = (estimation d'économie {de l'échantillon}) * (multiplicateur de bénévole) * (pourcentage des éléments recommandés qui ont été installés).

Influence du programme est convertie en pourcentage :

Influence moyenne en nombre	**1,00**	**2,00**	**3,00**	**4,00**	**5,00**
Influence en %	0 %	25 %	50 %	75 %	100 %

Méthodologie de calcul des bénévoles non participants

Summit Blue a estimé les bénévoles non participants en utilisant un questionnaire qui s'adresse uniquement aux non-participants. Voici les étapes de collecte et d'analyse des données :

1. Obtenir l'échantillon des non-participants.
2. Effectuer une enquête téléphonique afin d'identifier des clients qui ont réalisé des mesures d'efficacité énergétique admissibles suite à l'influence d'un programme d'efficacité énergétique.
3. Réaliser une entrevue de suivi avec un ingénieur de Summit Blue afin d'estimer les économies des mesures réalisées sous l'influence du programme.

L'enquête téléphonique est effectuée en suivant les étapes suivantes :

1. Trouver un client qui connaît bien l'équipement installé ou remplacé.
2. Le client connaît-il l'existence du programme? Si non, le questionnaire est terminé.
3. Est-ce que le client a participé au programme dans les trois dernières années? Si oui, le questionnaire est terminé.
4. Le client non participant a-t-il modifié ou installé un équipement qui aurait pu être admissible à un programme depuis les trois dernières années? Si non, le questionnaire est terminé.
5. Déterminer quel effet (s'il y en a un) a eu le programme sur la décision.
6. Obtenir la permission de réaliser une entrevue de suivi.

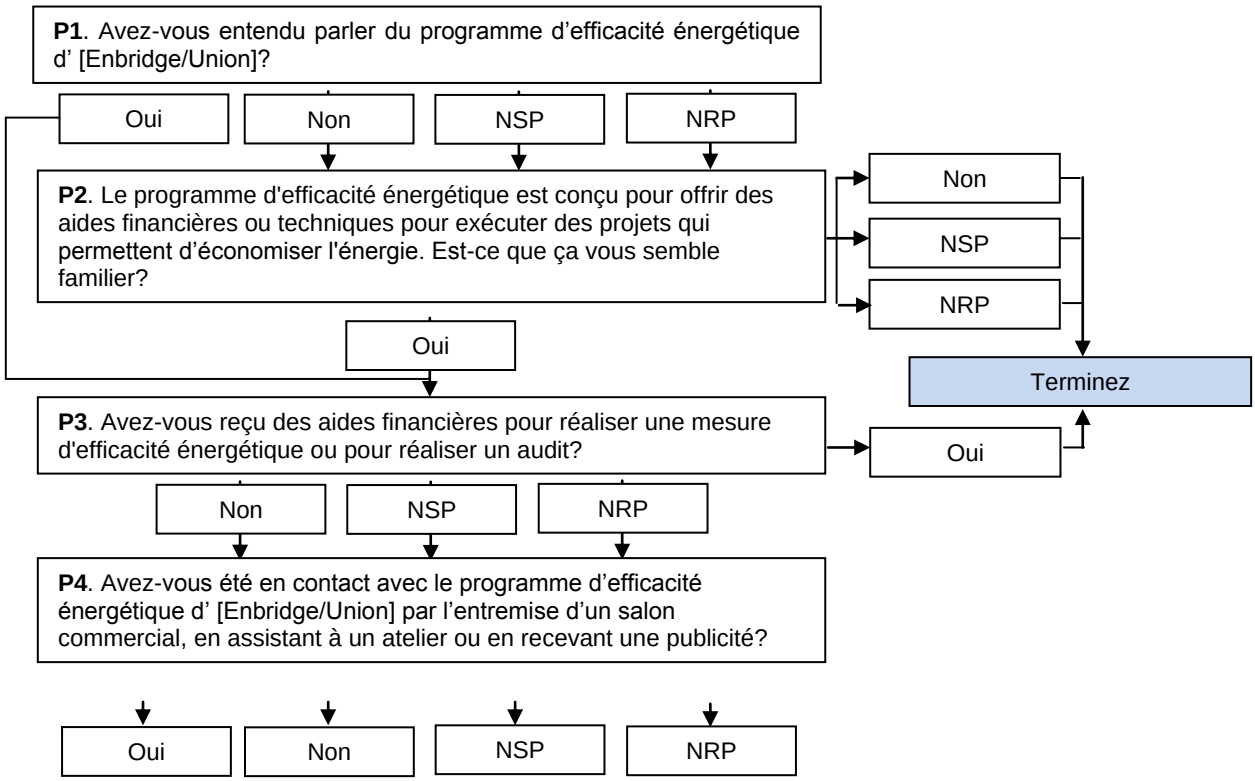
Durant l'entrevue de suivi, les ingénieurs de Summit Blue posent des questions concernant l'équipement pour faire une estimation des économies d'énergie réalisées.

Voici comment le taux de bénévolat des « bénévoles non participants » est calculé :

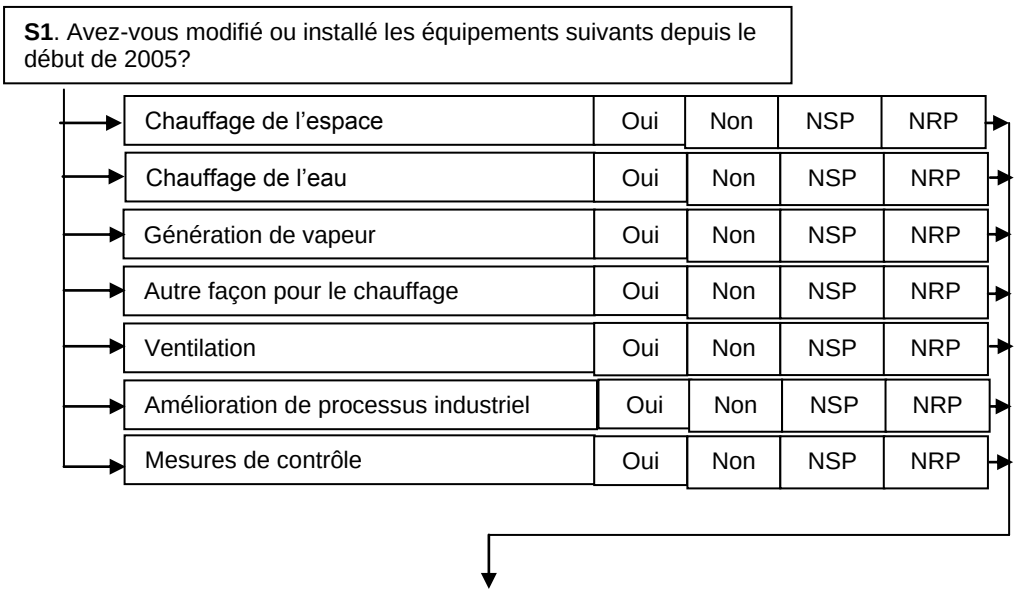
Bénévoles non participants = (Estimation des économies de l'ingénieur) * (multiplicateur de bénévole {calculé lors de l'enquête})

Il est à noter que le multiplicateur est calculé de la même façon que le multiplicateur des bénévoles audités.

Sélection des participations



Sélection des appareils



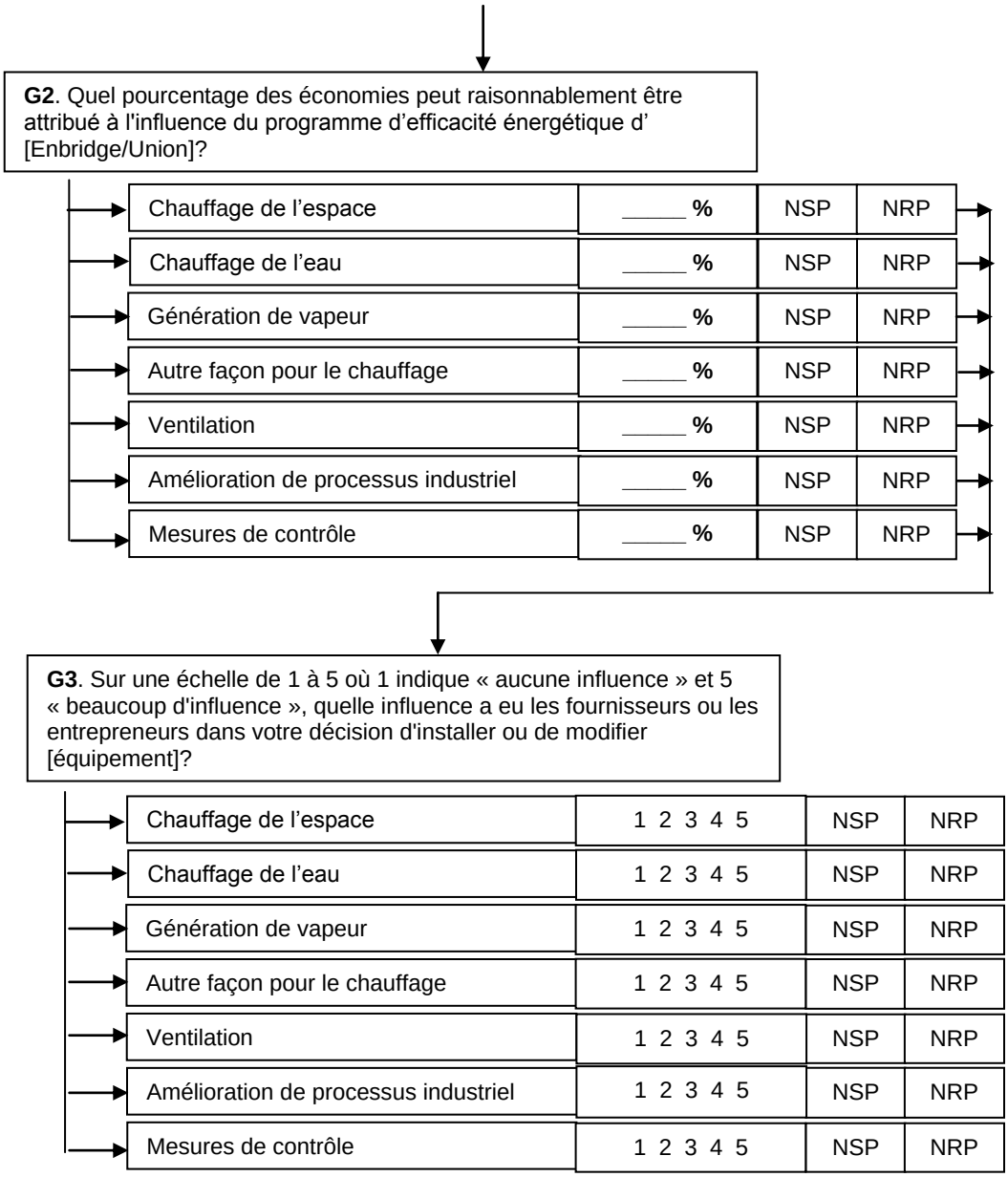
S2. Quand avez-vous modifié ou installé ces équipements?

Chauffage de l'espace	Mois	Année	NSP	NRP
Chauffage de l'eau	Mois	Année	NSP	NRP
Génération de vapeur	Mois	Année	NSP	NRP
Autre façon pour le chauffage	Mois	Année	NSP	NRP
Ventilation	Mois	Année	NSP	NRP
Amélioration de processus industriel	Mois	Année	NSP	NRP
Mesures de contrôle	Mois	Année	NSP	NRP

Influence du programme

G1. Sur une échelle de 1 à 5 où 1 indique « aucune influence » et 5 est « beaucoup d'influence », quelle influence a eu le programme d' [Enbridge/Union] dans votre décision d'installer ou de modifier [équipement]?

Chauffage de l'espace	1 2 3 4 5	NSP	NRP
Chauffage de l'eau	1 2 3 4 5	NSP	NRP
Génération de vapeur	1 2 3 4 5	NSP	NRP
Autre façon pour le chauffage	1 2 3 4 5	NSP	NRP
Ventilation	1 2 3 4 5	NSP	NRP
Amélioration de processus industriel	1 2 3 4 5	NSP	NRP
Mesures de contrôle	1 2 3 4 5	NSP	NRP



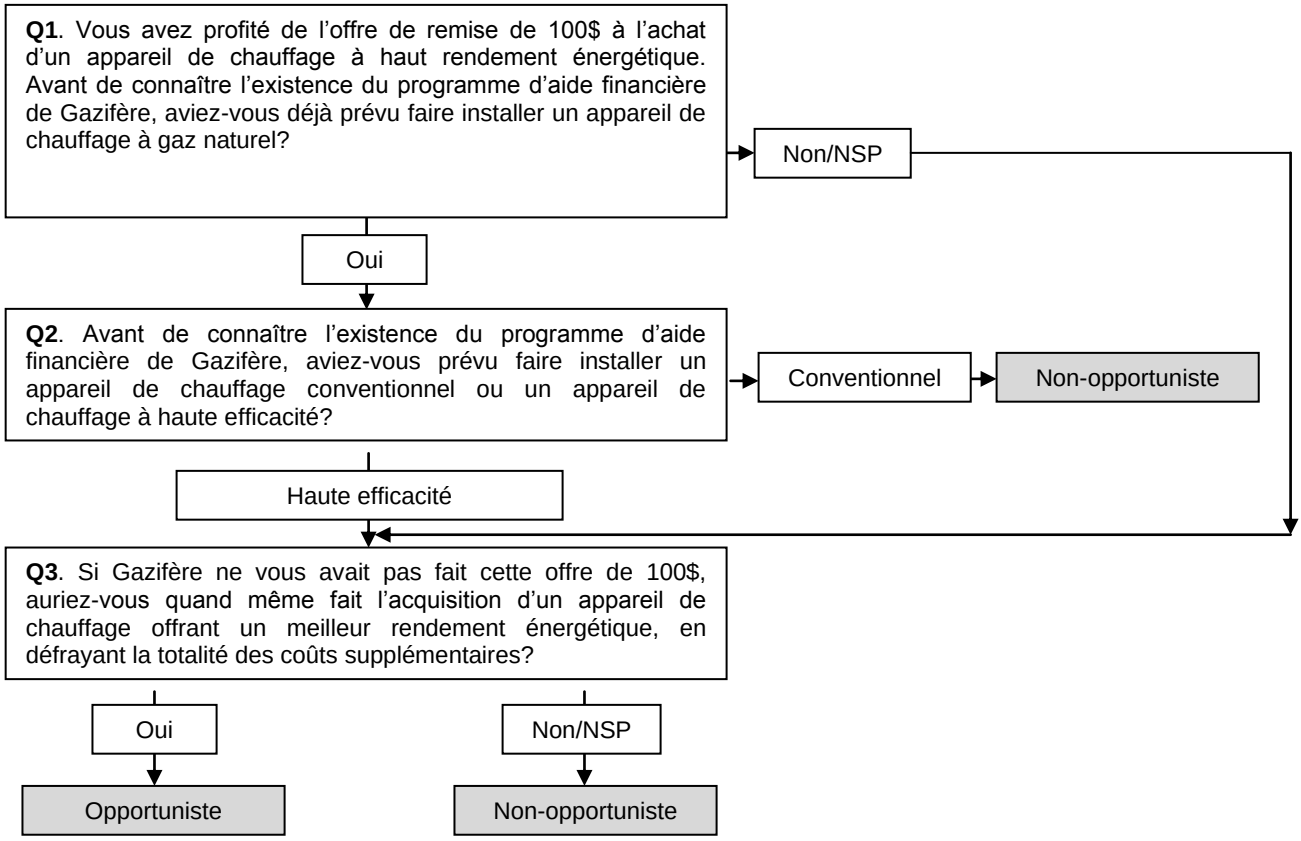
Conclusion

Summit Blue Consulting a développé pour plusieurs méthodologies afin de calculer le taux d'opportunisme, l'effet d'entraînement et le taux de bénévolat. On remarque que les participants au programme et les partenaires commerciaux d'Enbridge/Union Gas sont consultés pour déterminer le taux d'opportunisme. L'approche méthodologique permettant de calculer le taux d'opportunisme est cependant complexe et inclus l'effet d'entraînement (intérieur et extérieur). En ce qui a trait aux bénévoles, il est intéressant de constater que les questions portant sur l'influence du programme (sur une échelle de 1 à 5) sont converties en pourcentage.

Gazifère

Opportuniste

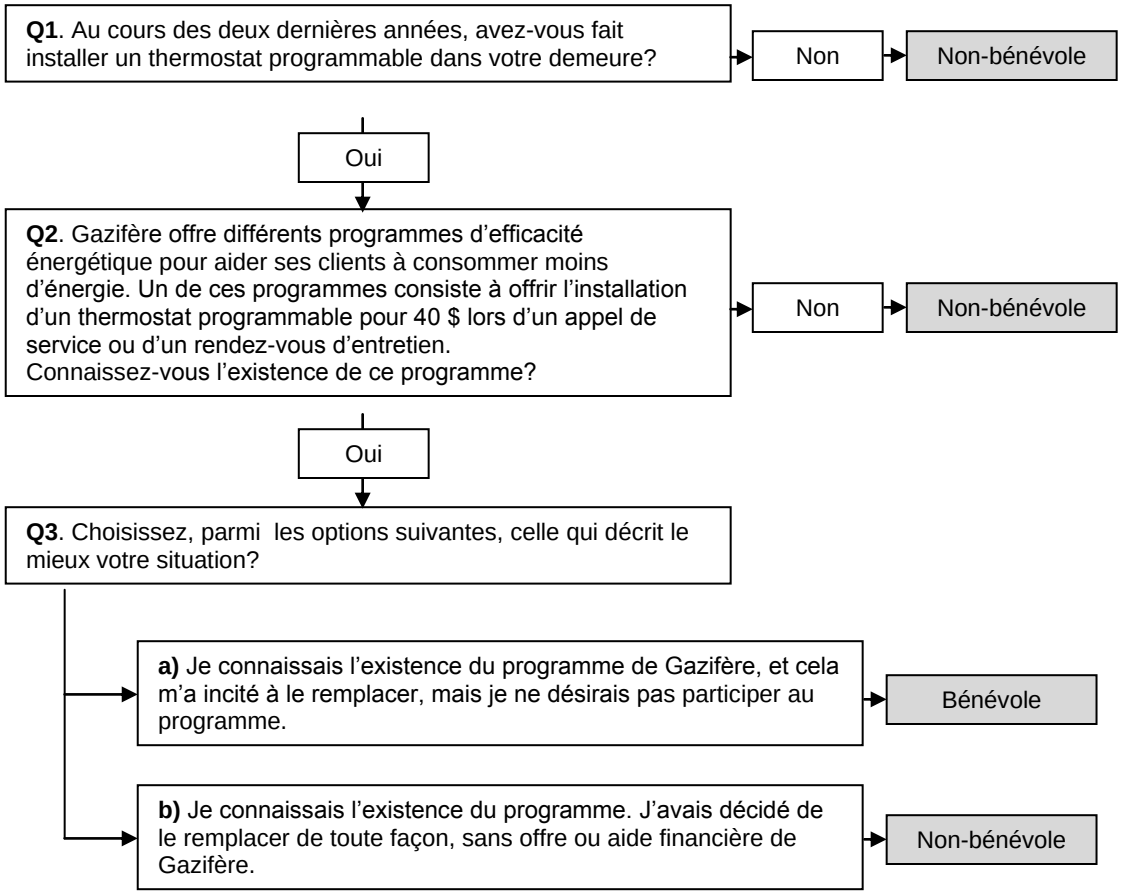
Gazifère utilise la méthodologie suivante afin de calculer le taux d'opportunisme.



Le taux d'opportunisme est calculé en multipliant les pourcentages des participants qui ont répondu positivement aux questions1, 2 et 3. Cette même méthodologie est utilisée pour tous les programmes évalués mais les termes utilisés varient en fonction de l'appareil visé. Le questionnaire est administré à des participants aux programmes d'efficacité énergétique.

Bénévole

Afin de calculer le taux de bénévolat, Gazifère utilise la méthodologie présentée ci-dessous.



Le taux de bénévolat est calculé en multipliant les pourcentages des non-participants qui ont répondu positivement aux questions 1, 2 et (a) à la question 3. Plus précisément, le non-participant doit sélectionner « Je connaissais l'existence du programme de Gazifère, et cela m'a incité à remplacer le thermostat, mais je ne désirais pas participer au programme » à la question 3. Cette méthodologie est aussi utilisée pour tous les programmes évalués mais les termes utilisés varient en fonction de l'appareil visé.

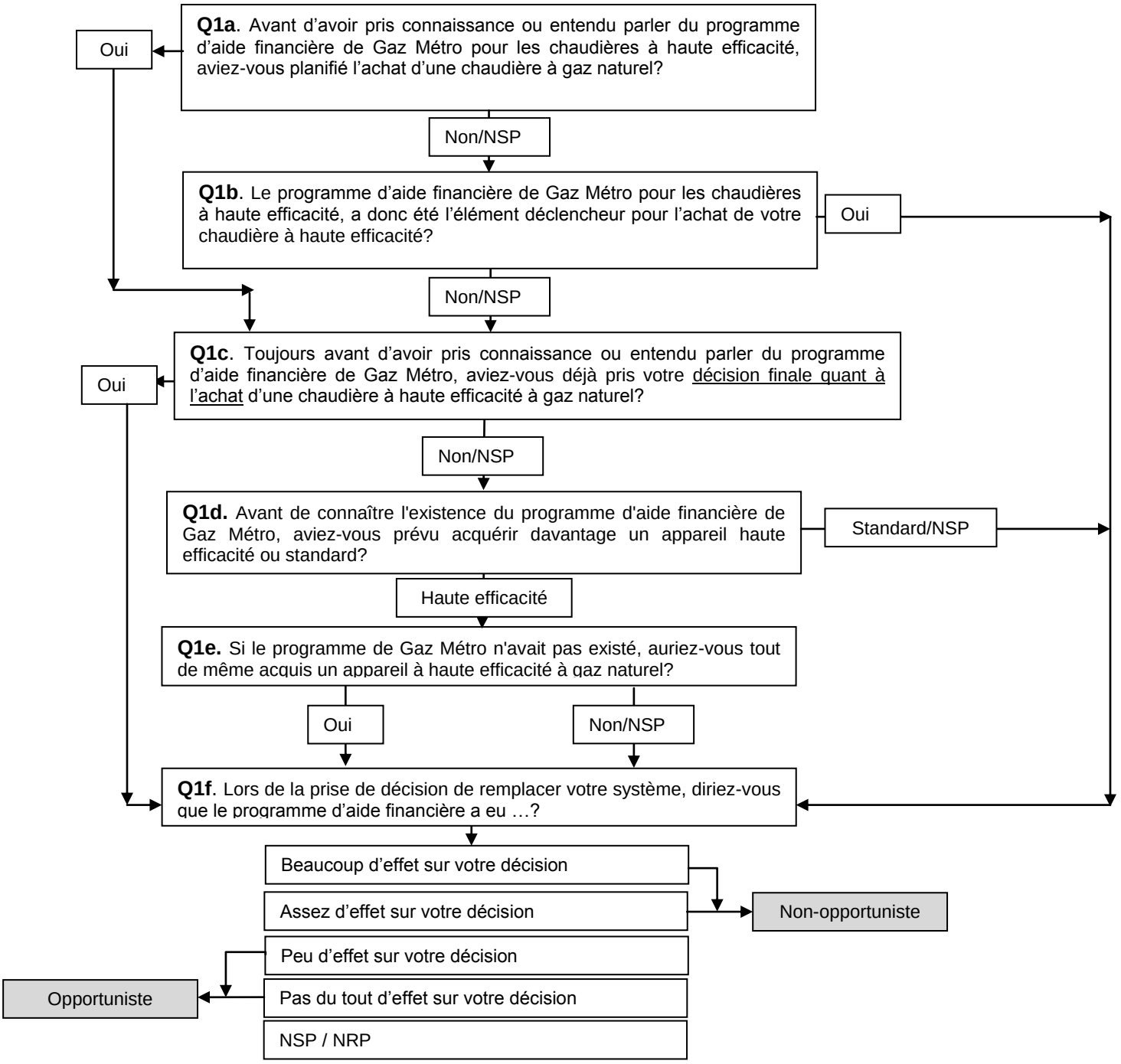
Conclusion

Gazifère utilise des méthodologies relativement simples afin de calculer le taux d'opportunisme et de bénévolat. Il est intéressant de constater que ces méthodologies sont utilisées pour tous les programmes évalués mais les termes utilisés varient en fonction de l'appareil visé.

Gaz Métro

Opportuniste

Gaz Métro utilise la méthodologie suivante afin de calculer le taux d'opportunisme. Le questionnaire comprend six questions et est administré à des participants aux programmes d'efficacité énergétique. Cette même méthodologie est utilisée pour tous les programmes évalués mais les termes utilisés varient en fonction de l'appareil visé. Il est à noter que la question Q1d ne s'applique pas pour les programmes d'étude de faisabilité et d'encouragement à l'implantation.



Le taux d'opportunisme est calculé en additionnant les pourcentages des participants qui ont répondu « Beaucoup d'effet sur votre décision » et « Peu d'effet sur votre décision ». Bien que techniquement les participants ayant répondu « peu d'effet sur votre décision » à la Q1f puissent être considérés comme des non-opportunistes, Gaz Métro a jugé adéquat de les considérer comme des opportunistes afin de demeurer conservateur.

Bénévole

Tel que mentionné précédemment, Gaz Métro n'a pas de méthodologie permettant de calculer le taux de bénévolat.

Conclusion

La méthodologie de calcul du taux d'opportunisme de Gaz Métro comporte six questions. Par ailleurs, Gaz Métro n'a pas de méthodologie permettant de calculer le taux de bénévolat.

Manitoba Hydro

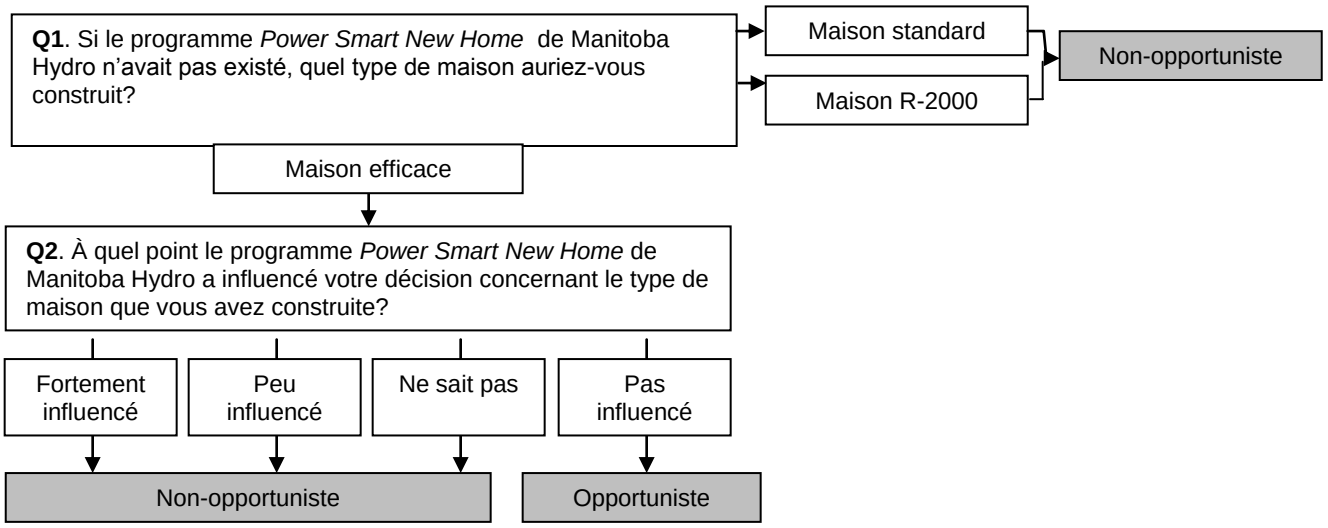
Opportuniste

Manitoba Hydro utilise huit différentes méthodologies afin de calculer le taux d'opportunisme. Les méthodologies comprennent une ou deux questions. Plus précisément, les méthodologies associées aux programmes suivants sont présentées :

- Power smart New homes
- Home Insulation Program
- Residential High Efficiency Furnaces
- Programmable Thermostats
- Commercial HVAC
- Commercial Rinse and Save
- Commercial Building Envelope
- Industrial Natural Gas Optimisation

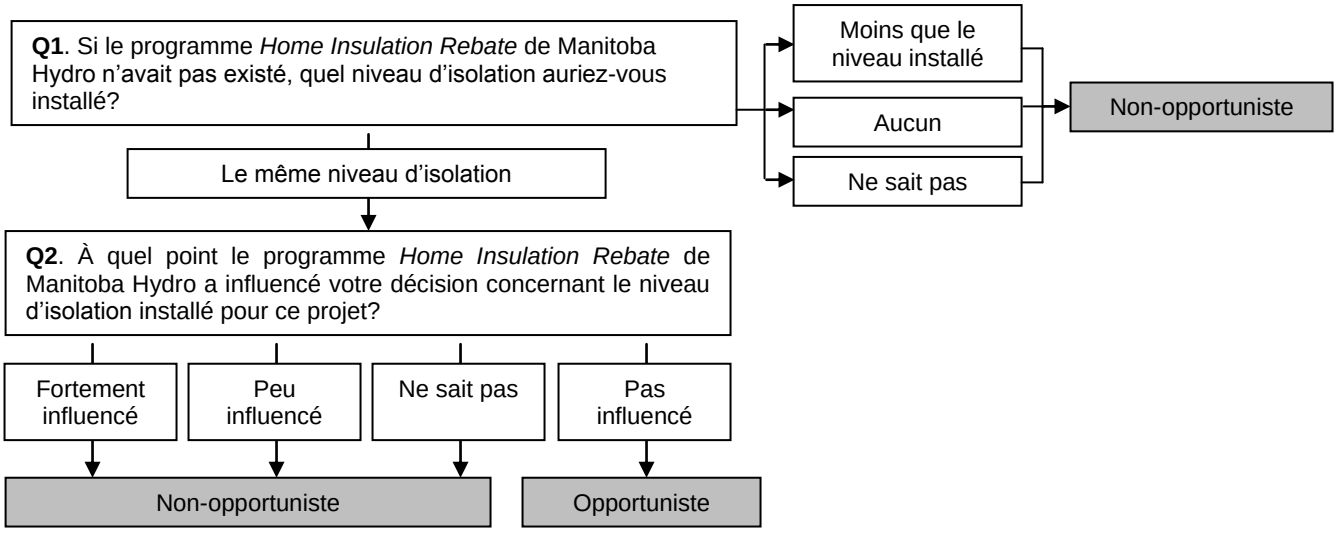
Les versions originales des questionnaires sont présentées à l'annexe C.

Programme : **Power Smart New Homes**



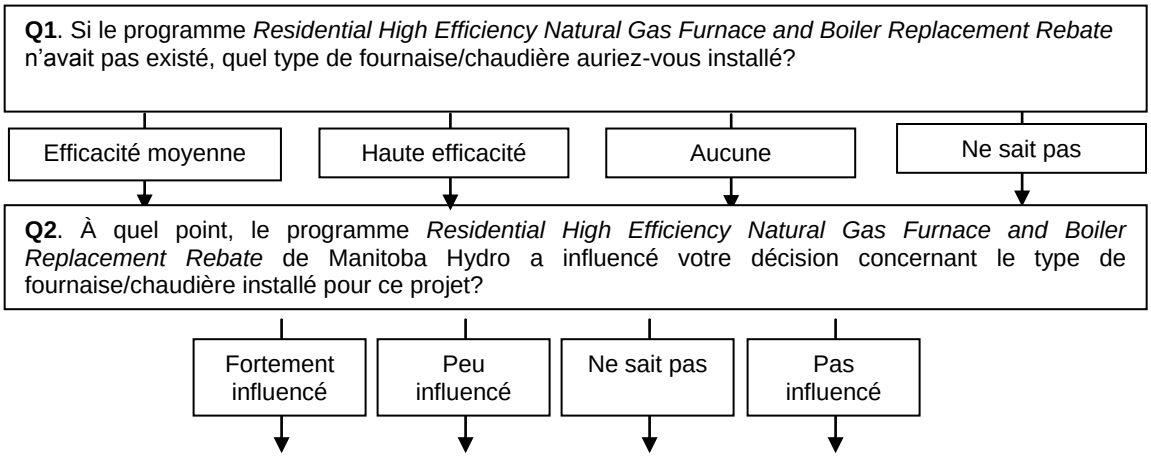
Le taux d'opportunisme correspond au nombre de participants qui ont répondu « maison efficace » à Q1 et « pas influencé » à Q2.

Programme : **Home Insulation Program**



Le taux d'opportunisme correspond au nombre de participants qui ont répondu « Le même niveau d'isolation » à Q1 et « pas influencé » à Q2.

Programme : **Residential High Efficiency Furnaces**

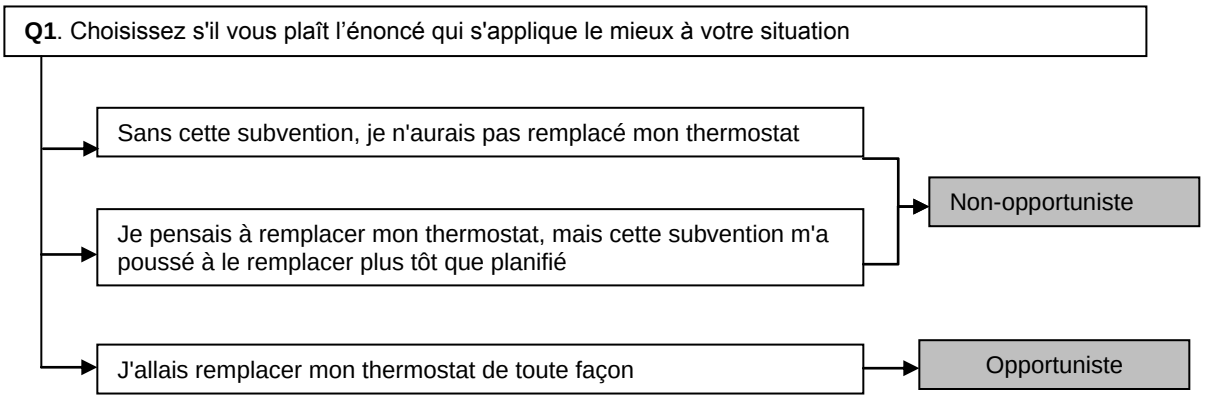


Les participants qui sont classés avec un « X » sont considérés opportunistes.

	Fortement influencé	Peu influencé	Ne sait pas	Pas influencé
Efficacité moyenne				X
Haute efficacité			X	X
Aucune			X	
Ne sait pas			X	X

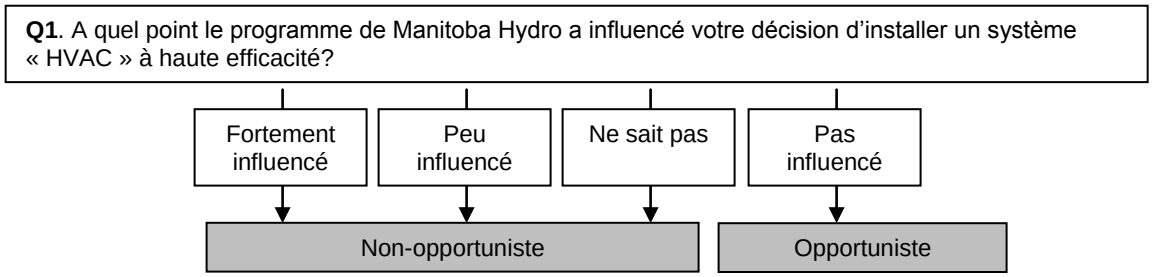
Le taux d'opportunisme est calculé en divisant les répondants considérés opportunistes par l'ensemble des répondants au sondage.

Programme : **Programmable thermostats**



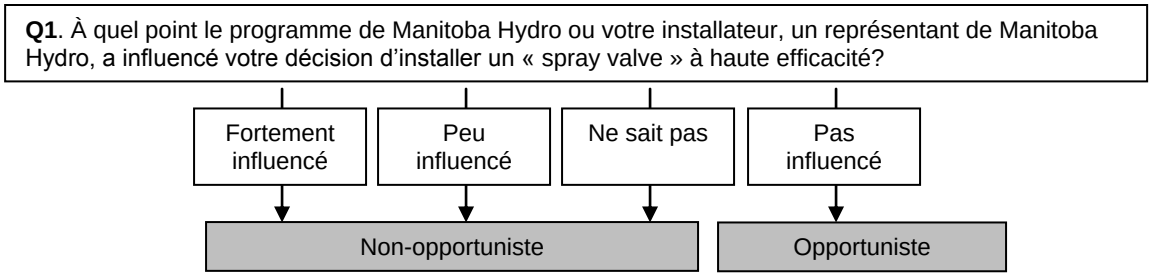
Le taux d'opportunisme équivaut au pourcentage des participants qui ont répondu « J'allais remplacer mon thermostat de toute façon » à Q1.

Programme : **Commercial HVAC**



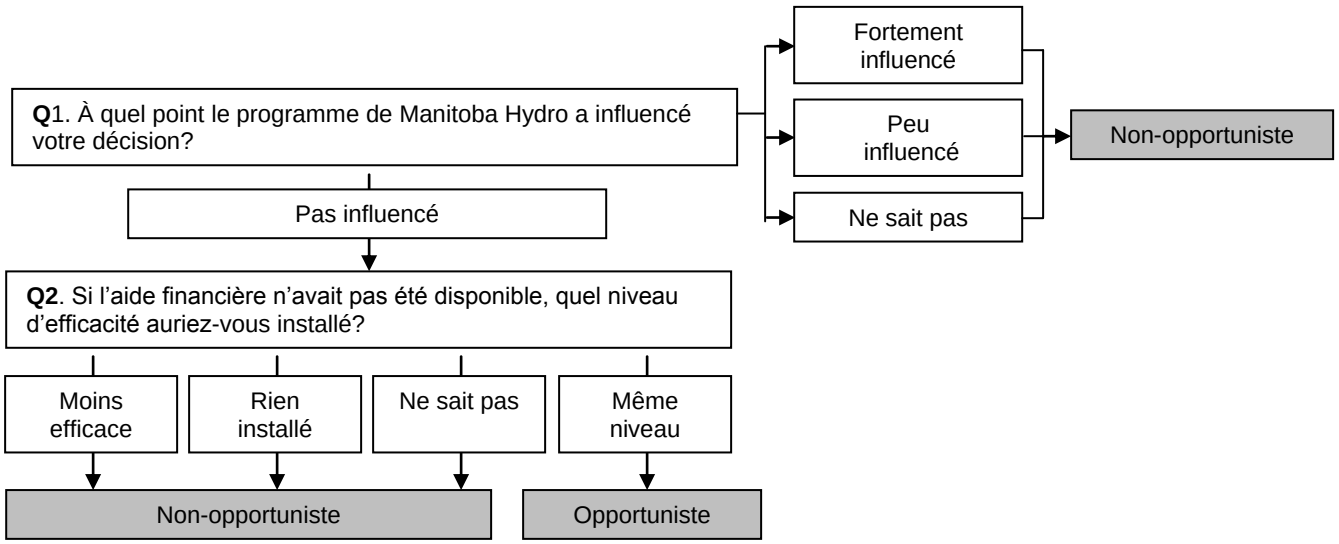
Le taux d'opportunisme équivaut au pourcentage des participants qui ont répondu « pas influencé » à Q1.

Programme : **Commercial Rinse and Save**



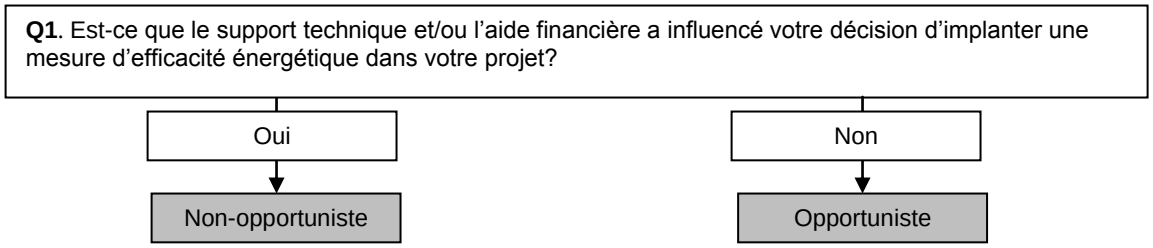
Le taux d'opportunisme équivaut au pourcentage des participants qui ont répondu « pas influencé » à Q1.

Programme : **Commercial Building Envelope**



Le taux d'opportunisme est calculé en multipliant les pourcentages des participants qui ont répondu « pas influencé » à Q1 et « même niveau » à Q2.

Programme : **Industrial Natural Gas Optimisation**



Le taux d'opportunisme équivaut au pourcentage des participants qui ont répondu « Non » à Q1.

Bénévole

Manitoba Hydro a soumis deux méthodologies pour le calcul du taux de bénévolat. Cependant, aucun questionnaire n'est utilisé. Pour le programme *Power Smart New Homes*, le taux de bénévolat est obtenu en additionnant tous les participants qui ont contribué au niveau « Power Smart Silver » sans bénéficier de l'aide financière. Plus précisément, ce programme est offert aux clients qui désirent :

- inclure des éléments d'efficacité énergétique dans leur nouvelle maison;
- réduire leurs coûts d'énergie; et
- construire une maison responsable au niveau environnemental.

Le détail des caractéristiques du niveau « Power Smart Silver » se trouve à l'annexe D.

Pour le programme « commercial HVAC », la formule suivante est utilisée pour calculer le taux de bénévolat :

Natural Conservation Sales level = High Efficiency Market Sales * Natural Conservation Rate Program Impacted Sales = High Efficiency Market Sales - Natural Conservation Sales level
Program Driven Rebates = Total Rebates - Free Riders
Free Drivers = Program Impacted Sales - Program Driven Rebates

Conclusion

Manitoba Hydro a développé huit différentes méthodologies afin de calculer le taux d'opportunisme. Il est intéressant de constater que Manitoba Hydro catégorise les participants qui répondent « peu influencé » comme des non-opportunistes. Pour ce qui est des bénévoles, on remarque qu'aucun questionnaire n'est utilisé pour calculer le taux de bénévolat.

Terasen Gas

Définitions

Les définitions suivantes sont utilisées :

> Les **opportunistes** sont définis comme les clients qui ont participé au programme *Terasen Heating System Rebate*, mais qui auraient tout de même acheté une chaudière à haute efficacité si la subvention n'avait pas été disponible. Les économies d'énergie des opportunistes sont exclues pour déterminer l'effet net du programme.
>
> Pour les évaluations de programme de chaudière, les économies associées aux **bénévoles** ont été définies comme les économies additionnelles provenant des clients encouragés à moderniser leur chaudière plus tôt qu'ils l'auraient fait autrement. Il est à noter que cette définition est différente de celles utilisées par les autres gazières faisant partie du balisage[1].

Opportuniste

Deux approches ont été utilisées par Terasen pour estimer le taux d'opportunisme (défini comme les participants au programme qui auraient acheté la technologie même si le programme n'avait pas existé).

1. La première approche est nommée « Discrete Choice Analysis » (DCA), et est une approche statistique qui permet au taux d'opportunisme d'être estimé et basé sur les données objectives (les variables explicatives), au lieu des réponses subjectives de clients. Dans cette approche, les méthodes de régression linéaires sont utilisées pour estimer la probabilité d'acheter une technologie efficace basée sur les variables explicatives clés. La régression linéaire est alors utilisée pour estimer une équation qui rattache le comportement d'achat observé aux variables explicatives. Cette équation logistique peut alors être utilisée pour prédire la probabilité qu'un client achète une technologie efficace et ce, basée sur les niveaux des variables d'explication pour ce client.

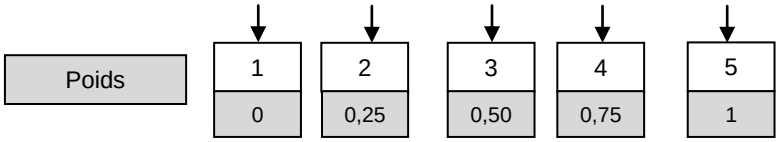
2. La deuxième approche est basée sur des questions d'enquête directes. L'approche pourrait être nommée « multiple lines of evidence » puisque les questions sont posées aux participants du programme, aux non-participants du programme et aux partenaires commerciaux. Ensuite, les résultats obtenus sont analysés pour déterminer le taux d'opportunisme.

[1] Cette terminologie a été adoptée en 2002. Aujourd'hui, l'approche utilisée est d'estimer les économies totales par rapport aux gains attribuables à un client qui convertit sa fournaise pour une fournaise à la haute efficacité, et par la suite de déduire les économies d'une fournaise à efficacité standard (norme d'efficacité) à un moment où le client, en l'absence du programme, aurait quand même modernisé sa fournaise. Cette approche est considérée comme la méthode opportuniste modérée.

Opportuniste (participants)

Il est à noter que cette question est posée aux participants du programme d'efficacité énergétique.

Q20. Sur une échelle de 1 à 5, où 1 = « pas du tout important » et 5 « très important », quelle importance a eu l'aide financière de Terasen Gas dans votre choix d'une fournaise à haute efficacité?



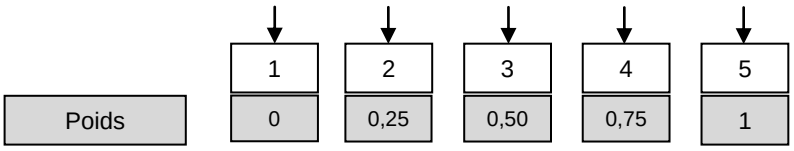
Le taux d'opportunisme est calculé ainsi :

Taux d'opportunisme = 1 – ((% des réponses « 1 » x 0)+(% des réponses « 2 » x .25)+(% des réponses « 3 » x ,50)+(% des réponses « 4 » x ,75)+(% des réponses « 5 » x 1)).

Opportuniste (partenaires commerciaux)

Il est à noter que cette question est posée aux partenaires commerciaux du programme d'efficacité énergétique.

Q16. Sur une échelle de 1 à 5, où 1 = « pas du tout important » et 5 « très important », quelle importance a eu l'aide financière de Terasen Gas dans le choix de vos clients d'une fournaise à haute efficacité ?



Le taux d'opportunisme est aussi calculé ainsi :

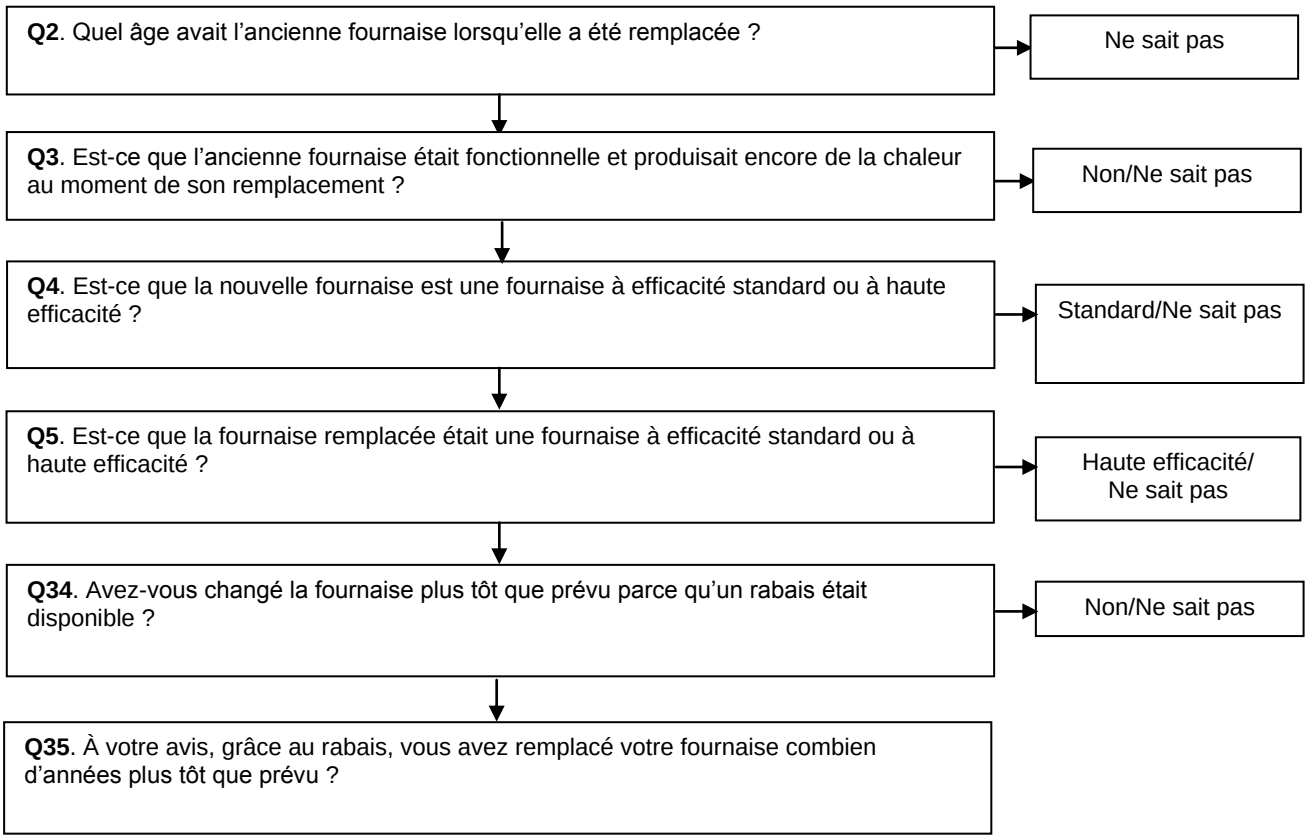
Taux d'opportunisme = 1 – ((% des réponses « 1 » x 0)+(% des réponses « 2 » x 0,25)+(% des réponses « 3 » x 0,50)+(% des réponses « 4 » x 0,75)+(% des réponses « 5 » x 1)).

Il est à noter qu'un jugement est requis de l'analyste afin d'interpréter les résultats des différents acteurs du programme. Le questionnaire complet et la méthodologie de calcul détaillée se trouvent respectivement aux annexes F et G.

Bénévole

Tel que mentionné précédemment, il est important de rappeler que la définition des bénévoles de Terasen est différente de celle utilisée par les autres distributeurs. Les économies d'énergie réalisées en devançant le remplacement de l'équipement sont attribuables au programme de Terasen. Les économies d'énergie sont calculées en prenant la différence du niveau d'efficacité de l'équipement remplacé et du nouvel équipement. Les économies d'énergie calculées sont ensuite multipliées par la moyenne des années d'avancement.

Le questionnaire complet se trouve à l'annexe E et la méthodologie concernant les bénévoles se trouve à l'annexe G.



Nota bene : La même série de questions est demandée aux participants et aux non-participants, le taux d'opportunisme est estimé en se basant sur la différence obtenue. La logique derrière cette méthode est qu'en l'absence d'un programme, les clients remplaceront quand même leur fournaise avant que celle-ci ne se brise. Le taux de bénévolat est estimé en se basant sur l'augmentation des « remplacements hâtifs » pour les participants au programme.

Conclusion

Terasen Gas consulte ses participants et partenaires commerciaux pour déterminer le taux d'opportunisme. Il est intéressant de constater que l'importance de l'aide financière (sur une échelle de 1 à 5) est convertie en pourcentage. Par ailleurs, la définition des bénévoles est différente de celles utilisées par les autres gazières faisant partie du balisage.

Union Gas

Les informations suivantes sont basées sur l'étude *Free Ridership & Spillover for (Low Flow) Pre-Rinse Spray Nozzles – Detailed Research Methodology* déposée par PA Consulting Group pour le compte d'Union Gas Ltd le 29 août 2008.

Définitions

Les définitions suivantes sont utilisées dans l'étude :

Le **taux d'opportunisme** d'un programme est le pourcentage des économies du programme attribué aux opportunistes.

Un **opportuniste** se définit comme un participant au programme qui a reçu l'incitatif du programme d'efficacité énergétique (dans ce cas-ci un ou plusieurs pulvérisateurs de pré rinçage) mais qui aurait installé la même ou une plus petite quantité de cette mesure d'efficacité si le programme n'avait pas existé. Pour les opportunistes, on suppose que le programme n'a eu aucune influence ou seulement une influence légère sur leur décision d'installer l'équipement.

Les **opportunistes purs** (100%) auraient installé exactement la même quantité, la même efficacité de pulvérisateurs de pré rinçage et au même moment si le programme n'avait pas existé.

Les **opportunistes modérés** (1–99%) sont les participants qui auraient installé un équipement au même moment, mais avec une quantité et/ou une efficacité moindre.

Les **opportunistes reportés** (1–99 %) sont ceux qui auraient installé un équipement de la même efficacité ou d'une efficacité moindre à une date ultérieure. Ainsi, le programme avait un peu d'impact sur leur décision.

Les **non-opportunistes** (0%) sont les clients qui n'auraient pas installé de pulvérisateurs de pré rinçage dans les deux années suivant leur participation au programme, si le programme n'avait pas existé.

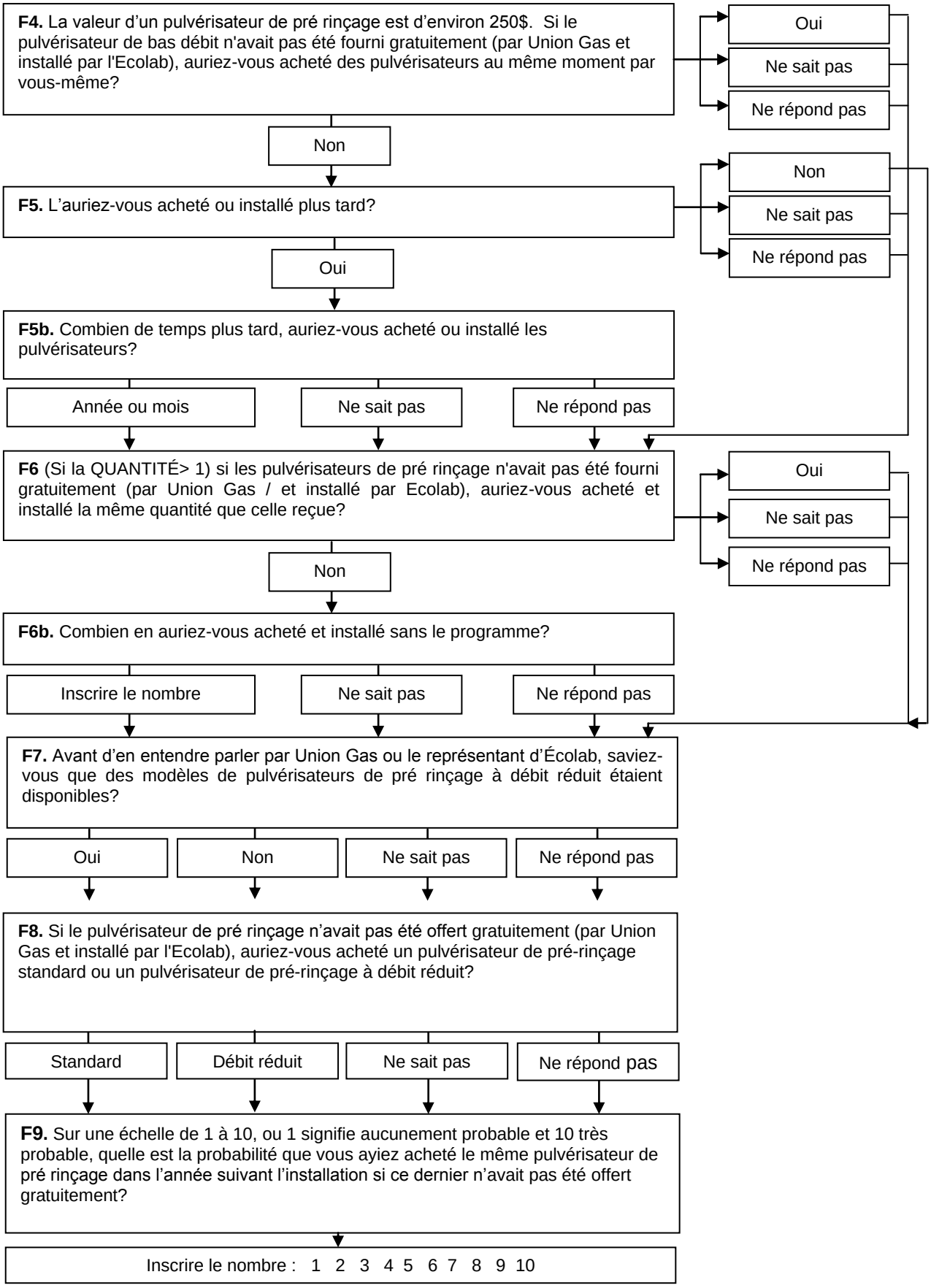
Les **bénévoles** font référence aux clients qui ont installé des équipements efficaces en raison de l'influence du programme sans qu'une aide financière ou technique leur soit fournie.

L'effet d'entraînement fait référence à la situation où un participant qui a installé un équipement efficace dans le passé, installe ensuite un équipement efficace supplémentaire en raison des influences et expériences du programme. (Il est à noter que le participant n'a pas reçu une aide financière pour l'équipement efficace supplémentaire).

Les **bénévoles influencé par un tiers** sont des clients ayant fait l'installation d'équipements à haute efficacité énergétique installés suite à une recommandation du distributeur ou d'un partenaire commercial et en raison de l'influence du programme et ce, sans qu'une aide financière ou technique soit fournie.

Opportuniste

Voici un aperçu de la méthodologie utilisée par Union Gas. Après l'établissement du contexte, les participants doivent répondre à une série de questions qui permettent d'évaluer l'impact que le programme d'efficacité énergétique a eu sur le moment du remplacement (temps), niveau d'efficacité et la quantité de pulvérisateur de pré-rinçage installée. Le questionnaire complet se trouve à l'annexe H.


F4. La valeur d'un pulvérisateur de pré rinçage est d'environ 250$. Si le pulvérisateur de bas débit n'avait pas été fourni gratuitement (par Union Gas et installé par l'Ecolab), auriez-vous acheté des pulvérisateurs au même moment par vous-même?
Oui
Ne sait pas
Ne répond pas
Non
F5. L'auriez-vous acheté ou installé plus tard?
Non
Ne sait pas
Ne répond pas
Oui
F5b. Combien de temps plus tard, auriez-vous acheté ou installé les pulvérisateurs?
Année ou mois
Ne sait pas
Ne répond pas
F6 (Si la QUANTITÉ> 1) si les pulvérisateurs de pré rinçage n'avait pas été fourni gratuitement (par Union Gas / et installé par Ecolab), auriez-vous acheté et installé la même quantité que celle reçue?
Oui
Ne sait pas
Ne répond pas
Non
F6b. Combien en auriez-vous acheté et installé sans le programme?
Inscrire le nombre
Ne sait pas
Ne répond pas
F7. Avant d'en entendre parler par Union Gas ou le représentant d'Écolab, saviez-vous que des modèles de pulvérisateurs de pré rinçage à débit réduit étaient disponibles?
Oui
Non
Ne sait pas
Ne répond pas
F8. Si le pulvérisateur de pré rinçage n'avait pas été offert gratuitement (par Union Gas et installé par l'Ecolab), auriez-vous acheté un pulvérisateur de pré-rinçage standard ou un pulvérisateur de pré-rinçage à débit réduit?
Standard
Débit réduit
Ne sait pas
Ne répond pas
F9. Sur une échelle de 1 à 10, ou 1 signifie aucunement probable et 10 très probable, quelle est la probabilité que vous ayiez acheté le même pulvérisateur de pré rinçage dans l'année suivant l'installation si ce dernier n'avait pas été offert gratuitement?
Inscrire le nombre : 1 2 3 4 5 6 7 8 9 10

Le tableau suivant présente les pourcentages d'économies attribués pour chacun des participants au sondage. Ils sont déterminés en fonction des réponses fournies par les participants. Le taux d'opportunisme global est calculé de cette façon :

Taux d'opportunisme = somme des économies du programme attribuée en fonction du tableau ci-dessous durant la durée de vie de la mesure ÷ économies totales durant la durée de vie de la mesure.

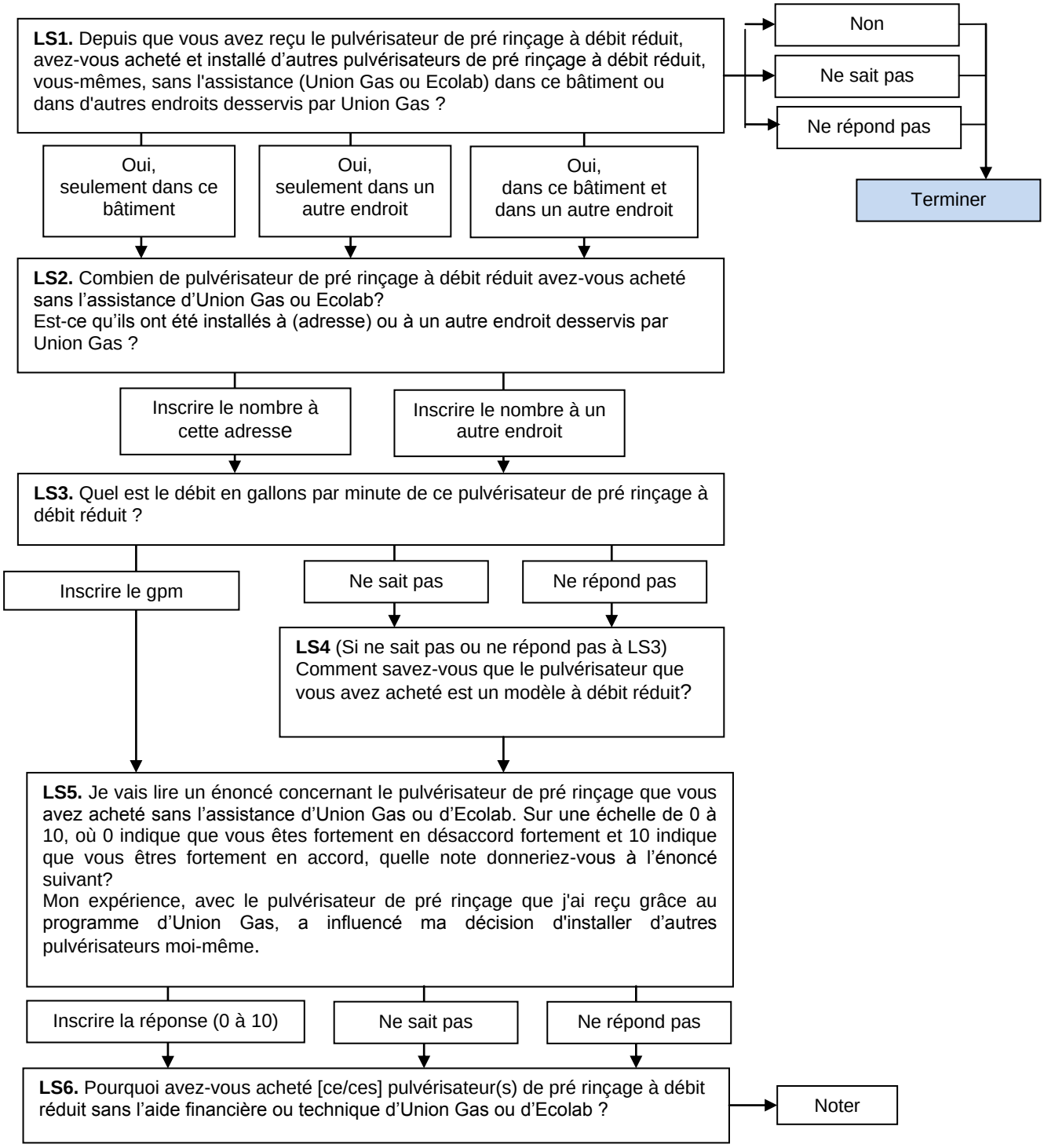
Timing questions (Questions F4-F5b)	Efficiency questions (Question F8)	Quantity questions (Questions F6-F6b)	Attribution
never	—	—	Attribution = 100% of prescriptive savings
same time	same efficiency	same qty	Attribution = 0% of prescriptive savings
same time	same efficiency	fewer qty	Attribution = decrease savings by prescriptive savings associated with the quantity they would not have installed
same time	less efficient	same qty	Attribution = 100% of prescriptive savings
same time	less efficient	fewer qty	Attribution = 100% of prescriptive savings
later date	same efficiency	same qty	If accelerated by >2 years, attribution = 100% of prescriptive savings for all quantity If accelerated by 2 or less years, attribution = 100% of prescriptive savings for all nozzles for the amount of time accelerated
later date	same efficiency	fewer qty	If accelerated by > 2 years, attribution = 100% of prescriptive savings for all quantity If accelerated by 2 or less years, attribution = 100% of prescriptive savings for the quantity would not have installed for the amount of time accelerated
later date	less efficient	same qty	If accelerated by > 2 years, attribution = 100% of prescriptive savings for all quantity If accelerated by 2 or less years, attribution = 100% of prescriptive savings for all nozzles for the amount of time accelerated
later date	less efficient	fewer qty	If accelerated by > 2 years, attribution = 100% of prescriptive savings for all quantity If accelerated by 2 or less years, attribution = 100% of prescriptive savings for the amount of time accelerated
if don't know/missing information for an individual			PA analyst to review context, direct attribution, and consistency responses to determine if there is enough consistent information to include this case in the analysis; if not and there is no other decision maker survey for this case, exclude it from the analysis.
if any inconsistencies for an individual after probing (questions F9-F10)			PA analyst to review context, direct attribution, and consistency responses to determine attribution. Benefit of the doubt is given to the program.

Effet d'entraînement

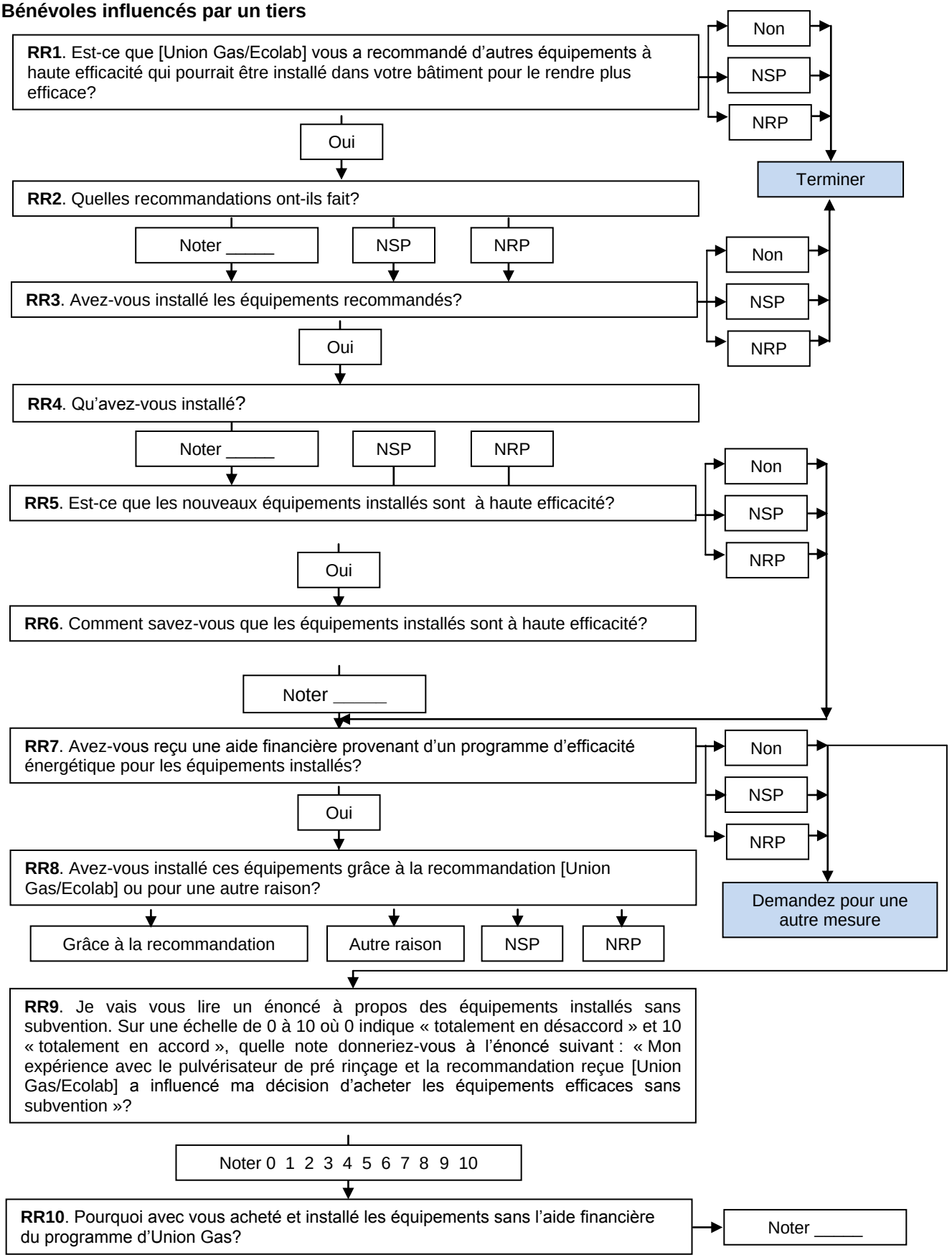
Le questionnaire des opportunistes est suivi du questionnaire de l'effet d'entraînement. La série de questions cherche à déterminer si le participant a fait l'achat d'un ou de plusieurs pulvérisateurs de pré rinçage de même type qu'installé depuis sa participation au programme et ce, sans aide financière. Le détail de cette section du

questionnaire se trouve à l'annexe H. Lorsque le participant répond qu'il a installé un ou plusieurs pulvérisateurs de pré rinçage additionnel dû à son expérience avec le programme d'efficacité énergétique, l'effet d'entraînement est calculé comme suit :

Effet d'entraînement = ((nombre de pulvérisateurs achetés à cause de l'influence du programme X économies prescriptives) / économies totales du programme).



Bénévoles influencés par un tiers



Malgré plusieurs questions posées aux « bénévoles influencés par un tiers », aucun taux de bénévolat n'a pu être calculé. Cette méthodologie jette plutôt un regard qualitatif sur le programme. La méthodologie précise le processus décisionnel et les influences des clients lors de l'acquisition d'autres types d'équipement à haute efficacité énergétique installés sans qu'une aide financière ou technique lui soit fournie.

Conclusion

Plusieurs méthodologies ont été développées afin de calculer le taux d'opportunisme, l'effet d'entraînement et le taux de bénévolat. Il est à noter que trois éléments sont essentiels chez Union Gas pour qu'un participant soit considéré un 100 % opportuniste. Plus précisément, il s'agit des éléments temps, niveau d'efficacité énergétique et quantité. Concernant la méthodologie permettant de calculer l'effet d'entraînement, la question LS6 est particulièrement intéressante puisqu'elle permet d'obtenir la raison pour laquelle le répondant n'a pas profité de l'aide financière ou technique disponible.

Consortium d'utilités américaines

Méthodologie standardisée pour les opportunistes et les bénévoles

Une firme américaine s'est penchée sur la standardisation des méthodologies utilisées pour évaluer les opportunistes et les bénévoles. L'étude porte le nom de *National Grid, NSTAR Electric, Northeast Utilities, Until, Cape Light Compact Standardized methods for free-ridership and spillover evaluation – Task 5 final Report* et elle a été complétée par PA Government Services Inc. le 16 juin 2003. Il est à noter que cette étude a été réalisée pour des distributeurs d'électricité.

Objectif de l'étude

L'objectif de cette étude était de développer une méthodologie standardisée pour un regroupement d'utilités dans laquelle les techniques d'échantillonnage, les approches de collecte de données, les questionnaires et l'analyse méthodologique pouvaient être utilisées pour déterminer le taux d'opportunisme, l'effet d'entraînement et le taux de bénévolat pour des programmes du marché affaires.

Définitions

Un **opportuniste** fait référence à un client ayant reçu l'incitatif du programme d'efficacité énergétique mais qui aurait installé la même ou une plus petite quantité d'équipement à haute efficacité si le programme n'avait pas existé et ce, à l'intérieur d'un an. Pour les opportunistes, on suppose que le programme n'a eu aucune influence ou seulement une influence légère sur leur décision d'installer l'équipement.

Les **opportunistes purs** (100%) auraient installé exactement la même quantité et la même efficacité à l'intérieur d'un an si le programme n'avait pas existé.

Les **opportunistes modérés** (1–99%) sont les participants qui auraient installé un équipement à l'intérieur d'un an, mais avec une quantité et/ou une efficacité moindre.

Les **non-opportunistes** (0%) sont ceux qui n'auraient pas installé d'équipement à l'intérieur d'un an si le programme n'avait pas existé.

Les **bénévoles** font référence à des clients qui ont installé des équipements efficaces en raison de l'influence du programme sans qu'une aide financière ou technique ne soit attribuée au client.

Effet d'entraînement fait référence à la situation où un participant qui a installé un équipement efficace dans le passé, installe ensuite un équipement efficace supplémentaire en raison de l'influence et/ou de l'expérience du programme. (Il est à noter que le participant n'a pas reçu une aide financière pour l'équipement efficace supplémentaire).

Bénévole non participant représente les économies d'énergie provenant des mesures prises par des clients non participant qui sont directement attribuables à l'influence du programme.

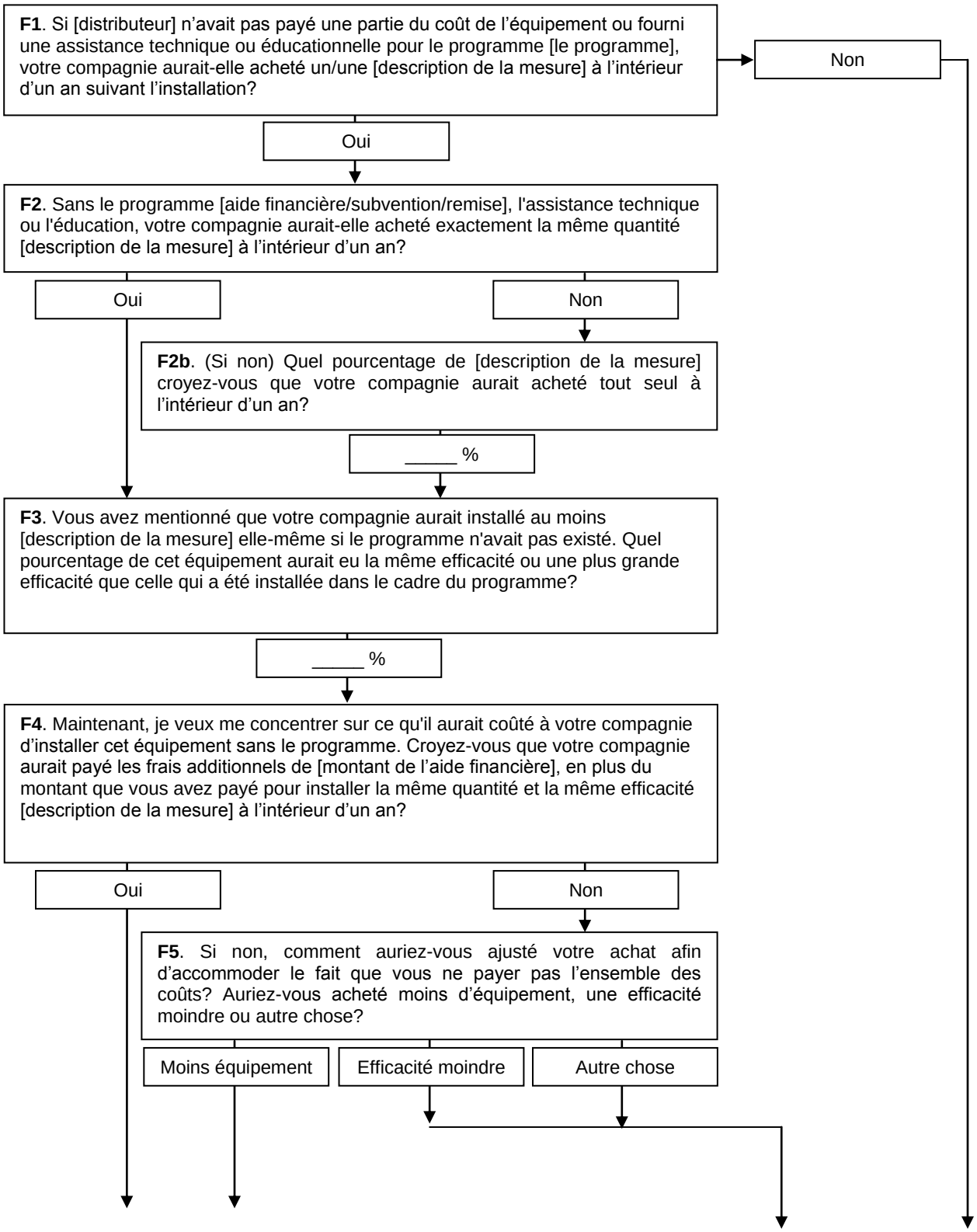
Questionnaire

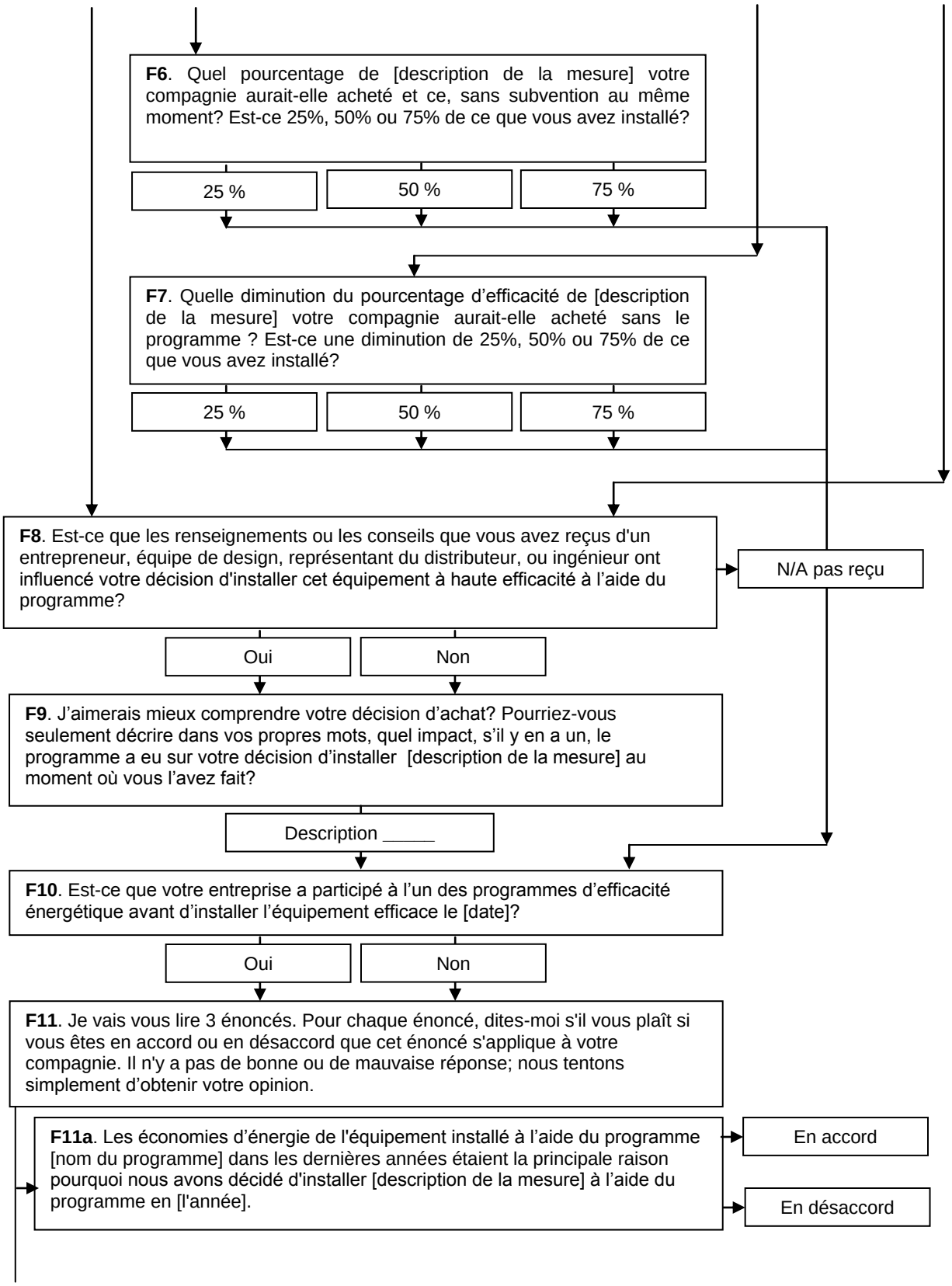
Le questionnaire complet de la méthodologie standardisée se trouve à l'annexe I.

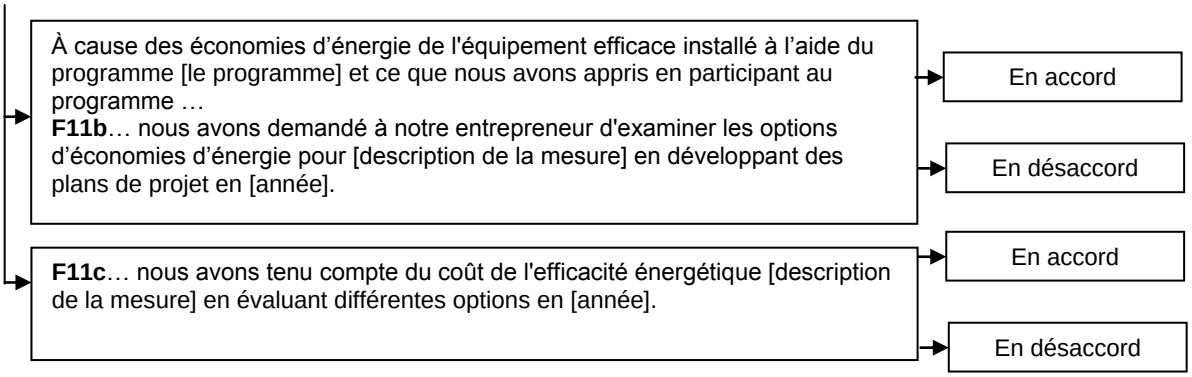
Opportuniste

La méthodologie permettant de calculer le taux d'opportunisme se divise en quatre séries de questions :

1. Questions initiales du taux d'opportunisme.
2. Validation des questions initiales.
3. Évaluation technique (applicable lors d'une étude seulement).
4. Impact de la participation antérieure au programme.


F1. Si [distributeur] n'avait pas payé une partie du coût de l'équipement ou fourni une assistance technique ou éducationnelle pour le programme [le programme], votre compagnie aurait-elle acheté un/une [description de la mesure] à l'intérieur d'un an suivant l'installation?
Non
Oui
F2. Sans le programme [aide financière/subvention/remise], l'assistance technique ou l'éducation, votre compagnie aurait-elle acheté exactement la même quantité [description de la mesure] à l'intérieur d'un an?
Oui
Non
F2b. (Si non) Quel pourcentage de [description de la mesure] croyez-vous que votre compagnie aurait acheté tout seul à l'intérieur d'un an?
_____ %
F3. Vous avez mentionné que votre compagnie aurait installé au moins [description de la mesure] elle-même si le programme n'avait pas existé. Quel pourcentage de cet équipement aurait eu la même efficacité ou une plus grande efficacité que celle qui a été installée dans le cadre du programme?
_____ %
F4. Maintenant, je veux me concentrer sur ce qu'il aurait coûté à votre compagnie d'installer cet équipement sans le programme. Croyez-vous que votre compagnie aurait payé les frais additionnels de [montant de l'aide financière], en plus du montant que vous avez payé pour installer la même quantité et la même efficacité [description de la mesure] à l'intérieur d'un an?
Oui
Non
F5. Si non, comment auriez-vous ajusté votre achat afin d'accommoder le fait que vous ne payer pas l'ensemble des coûts? Auriez-vous acheté moins d'équipement, une efficacité moindre ou autre chose?
Moins équipement
Efficacité moindre
Autre chose


F6. Quel pourcentage de [description de la mesure] votre compagnie aurait-elle acheté et ce, sans subvention au même moment? Est-ce 25%, 50% ou 75% de ce que vous avez installé?
25 %
50 %
75 %
F7. Quelle diminution du pourcentage d'efficacité de [description de la mesure] votre compagnie aurait-elle acheté sans le programme ? Est-ce une diminution de 25%, 50% ou 75% de ce que vous avez installé?
25 %
50 %
75 %
F8. Est-ce que les renseignements ou les conseils que vous avez reçus d'un entrepreneur, équipe de design, représentant du distributeur, ou ingénieur ont influencé votre décision d'installer cet équipement à haute efficacité à l'aide du programme?
N/A pas reçu
Oui
Non
F9. J'aimerais mieux comprendre votre décision d'achat? Pourriez-vous seulement décrire dans vos propres mots, quel impact, s'il y en a un, le programme a eu sur votre décision d'installer [description de la mesure] au moment où vous l'avez fait?
Description _____
F10. Est-ce que votre entreprise a participé à l'un des programmes d'efficacité énergétique avant d'installer l'équipement efficace le [date]?
Oui
Non
F11. Je vais vous lire 3 énoncés. Pour chaque énoncé, dites-moi s'il vous plaît si vous êtes en accord ou en désaccord que cet énoncé s'applique à votre compagnie. Il n'y a pas de bonne ou de mauvaise réponse; nous tentons simplement d'obtenir votre opinion.
F11a. Les économies d'énergie de l'équipement installé à l'aide du programme [nom du programme] dans les dernières années étaient la principale raison pourquoi nous avons décidé d'installer [description de la mesure] à l'aide du programme en [l'année].
En accord
En désaccord



Les questions F10 à F11c mesurent l'impact de la participation antérieure à un programme d'efficacité énergétique. Le taux d'opportunisme déterminé à l'aide des questions F1 à F9 peut être diminué en fonction du nombre d'énoncés pour lesquels le répondant est en accord tel que présenté ci-dessous.

Nombre d'énoncés en accord F11a à F11c	Réduction du taux d'opportunisme
3	- 75,0 %
2	-37,5 %
1	- 0,0 %

Le taux d'opportunisme mesuré inclut les opportunistes purs et les opportunistes modérés. Pour être considéré un opportuniste pur (100% opportuniste), le participant aurait :

- réalisé la mesure à l'intérieur d'une année (TEMPS);
- acheté exactement le même nombre d'appareil (QUANTITÉ);
- acheté des appareils avec le même niveau d'efficacité énergétique (NIVEAU D'EFFICACITÉ ÉNERGÉTIQUE); et
- payé le coût total de la mesure/appareil (COÛT).

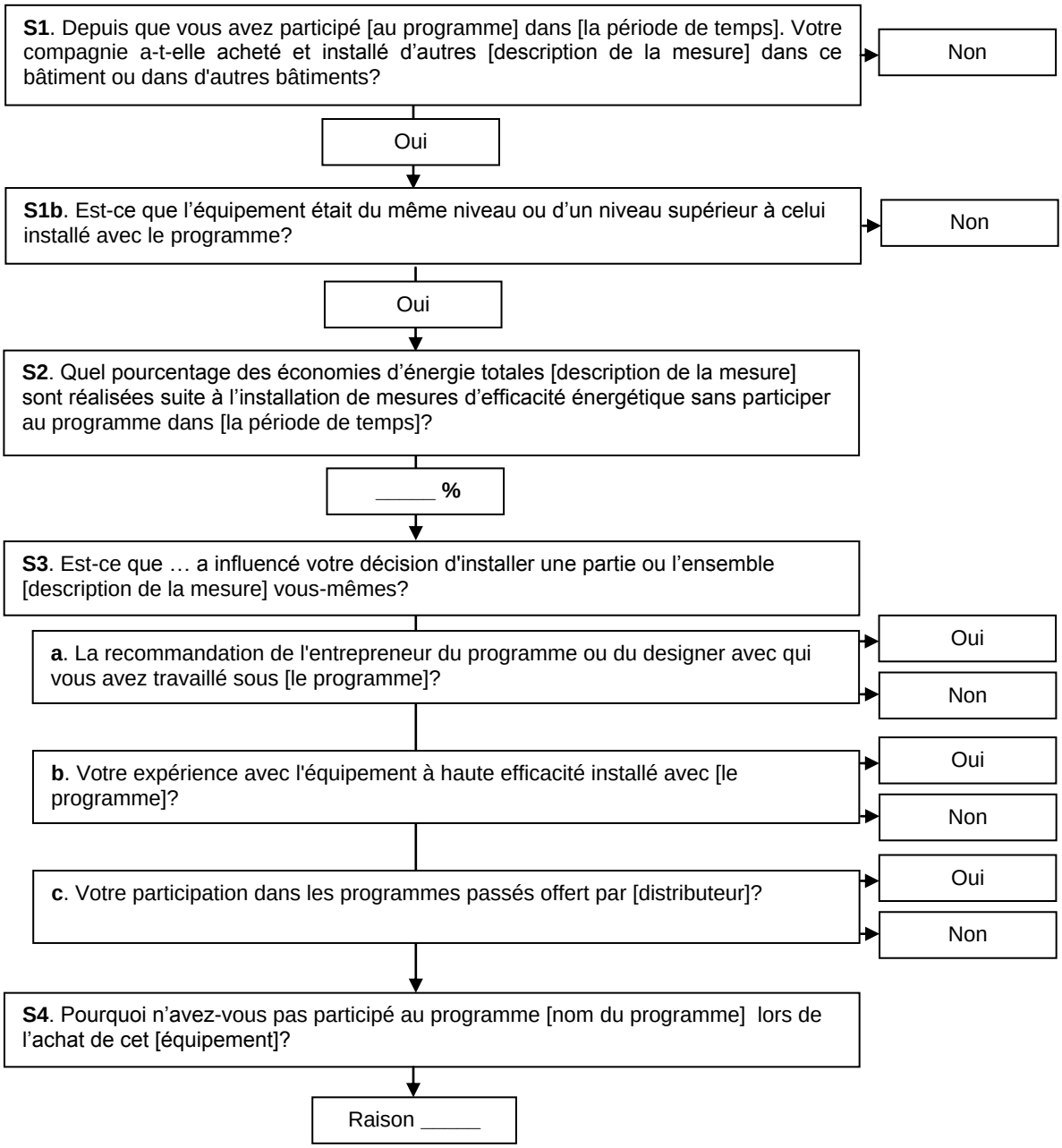
Le schéma méthodologique qui permet de calculer le taux d'opportunisme de chacune des catégories de mesure installée par les participants est présenté à l'annexe J.

Effet d'entraînement

Le questionnaire demande au participant s'il a ajouté des équipements d'efficacité énergétique de même type que ceux installés lors de sa participation au programme et ce, à cause de l'influence de ce dernier. Les questions S1 à S4 sont utilisées pour calculer l'effet d'entraînement du participant.

L'algorithme suivant est utilisé pour calculer l'effet d'entraînement pour les questions S3a à S3c.
Si (S3a = oui et (S3b =non et S3c = non)) alors l'effet d'entraînement = 50 %.
Si (S3b = oui ou S3c = oui) alors l'effet d'entraînement = 100 %.

Le schéma méthodologique qui permet de calculer l'effet d'entraînement est présenté à l'annexe K.

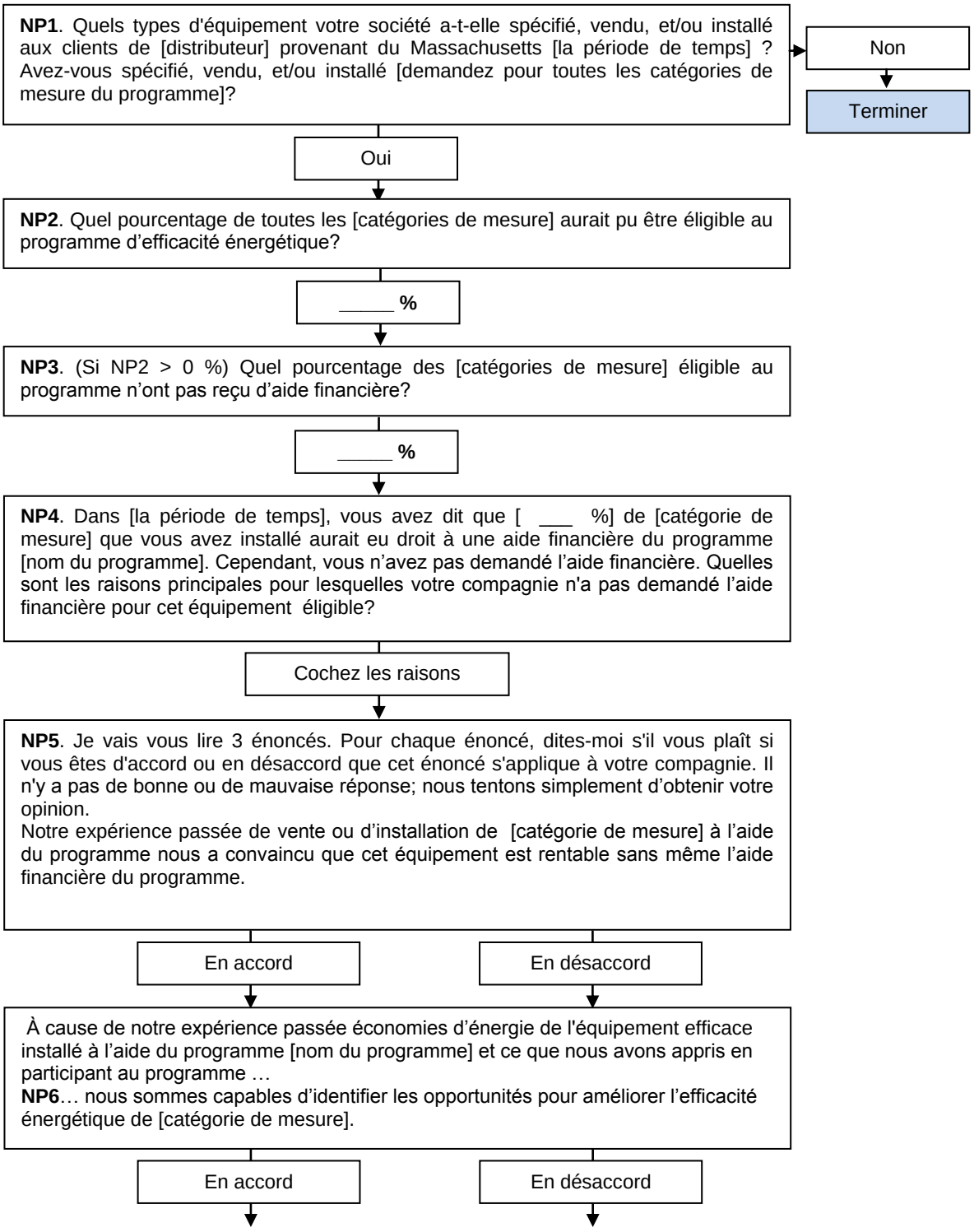


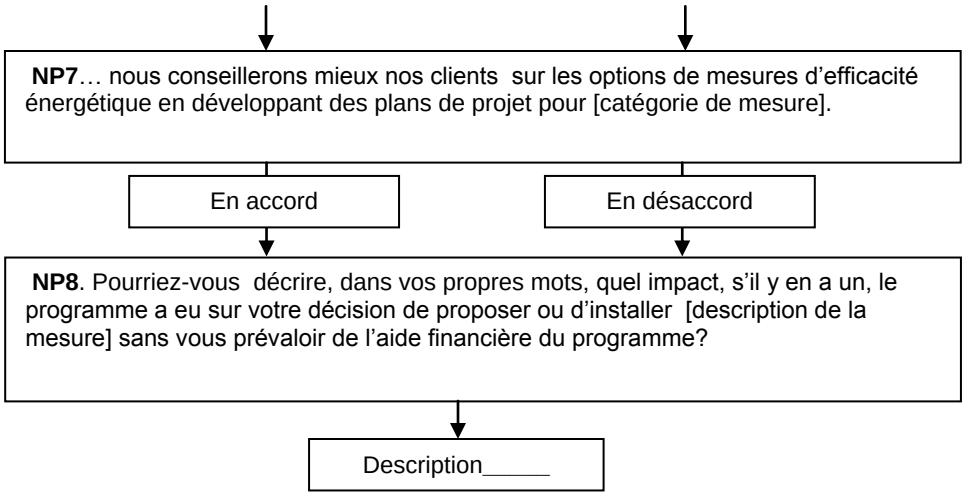
Bénévole non participant

Les donnés permettant de calculer le taux de bénévolat peuvent provenir des clients non participants au programme d'efficacité énergétique ou des professionnels de design et des vendeurs d'appareils. L'approche retenue est celle des professionnels de design et des vendeurs d'appareils. Les quatre étapes suivantes sont utilisées pour déterminer le taux de bénévolat des non-participants.

1. Pour chacun des professionnels de design et des vendeurs d'appareils, le pourcentage de tous les appareils éligibles vendus/installés à l'extérieur du programme est déterminé.
2. Pour chacun des professionnels de design et des vendeurs, l'étude détermine si la vente ou l'installation d'appareils éligibles à l'extérieur du programme est due à l'influence de ce dernier.
3. Pour chacun des professionnels de design et des vendeurs, les économies associées à l'appareil du client bénévole non participant sont déterminées en examinant la base de données des participants et des quantités installées.
4. Les économies des bénévoles non participants sont ensuite extrapolées aux économies totales du programme.

Le schéma méthodologique qui permet de calculer le taux des « bénévoles participant » est présenté à l'annexe L.


NP1. Quels types d'équipement votre société a-t-elle spécifié, vendu, et/ou installé aux clients de [distributeur] provenant du Massachusetts [la période de temps] ? Avez-vous spécifié, vendu, et/ou installé [demandez pour toutes les catégories de mesure du programme]?
Non
Terminer
Oui
NP2. Quel pourcentage de toutes les [catégories de mesure] aurait pu être éligible au programme d'efficacité énergétique?
_____ %
NP3. (Si NP2 > 0 %) Quel pourcentage des [catégories de mesure] éligible au programme n'ont pas reçu d'aide financière?
_____ %
NP4. Dans [la période de temps], vous avez dit que [___ %] de [catégorie de mesure] que vous avez installé aurait eu droit à une aide financière du programme [nom du programme]. Cependant, vous n'avez pas demandé l'aide financière. Quelles sont les raisons principales pour lesquelles votre compagnie n'a pas demandé l'aide financière pour cet équipement éligible?
Cochez les raisons
NP5. Je vais vous lire 3 énoncés. Pour chaque énoncé, dites-moi s'il vous plaît si vous êtes d'accord ou en désaccord que cet énoncé s'applique à votre compagnie. Il n'y a pas de bonne ou de mauvaise réponse; nous tentons simplement d'obtenir votre opinion.
Notre expérience passée de vente ou d'installation de [catégorie de mesure] à l'aide du programme nous a convaincu que cet équipement est rentable sans même l'aide financière du programme.
En accord
En désaccord
À cause de notre expérience passée économies d'énergie de l'équipement efficace installé à l'aide du programme [nom du programme] et ce que nous avons appris en participant au programme …
NP6… nous sommes capables d'identifier les opportunités pour améliorer l'efficacité énergétique de [catégorie de mesure].
En accord
En désaccord



Conclusion

Les méthodologies standardisées développées permettent de calculer le taux d'opportunisme, l'effet d'entraînement et le taux de bénévolat. Il est à noter que quatre éléments sont essentiels pour qu'un participant soit considéré un 100 % opportuniste. Plus précisément, il y a les éléments temps, quantité, niveau d'efficacité énergétique et coût. Pour ce qui est de l'élément temps, le participant doit avoir accéléré sa décision à l'intérieur d'un an pour être considéré opportuniste. Par ailleurs, on constate que la participation antérieure à un programme d'efficacité pourrait réduire sur le taux d'opportunisme. Le taux de bénévolat peut être calculé en consultant des clients non participants ou des professionnels de design et des vendeurs d'appareils.

IDENTIFIER LES CONCEPTS DE QUESTIONS

Cette section porte sur les constats réalisés après l'analyse des méthodologies utilisées chez les distributeurs participants. Il est intéressant de constater que toutes les méthodologies sont différentes et que le nombre de questions et le niveau de complexité varient d'un distributeur à l'autre.

Sommaire des méthodologies

Le tableau suivant résume la situation en ce qui concerne les opportunistes, l'effet d'entraînement et les bénévoles pour chacun des distributeurs participants.

Distributeurs	Opportuniste		Effet d'entraînement	Bénévole
	Participants	Partenaires commerciaux		
Enbridge/Union Gas	X	X	X	X
Gazifère	X			X
Gaz Métro	X			
Manitoba Hydro	X			X
Terasen Gas	X	X		
Union Gas	X		X	X
Consortium d'utilités électriques américaines	X		X	X

On remarque que tous les distributeurs sondent les participants des programmes d'efficacité énergétique afin de calculer le taux d'opportunisme. De plus, les méthodologies utilisées par Enbridge/Union Gas et Terasen Gas sondent les partenaires commerciaux pour déterminer et/ou valider le taux d'opportunisme. Par ailleurs, l'effet d'entraînement est calculé par Enbridge/Union, Union Gas et le consortium d'utilités américaines. De plus, tous les distributeurs évaluent le taux de bénévolat, à l'exception de Gaz Métro. Terasen Gas utilise, quant à elle, une définition différente des bénévoles de celle présentée dans la littérature.

Opportuniste

L'étude des *Standardized methods for free-ridership and spillover evaluation* réalisée par PA Government Services Inc. fait état de quatre éléments importants à mesurer. Il y a les éléments « temps », « niveau d'efficacité énergétique », « coût » et « quantité ». Le tableau suivant présente les distributeurs qui possèdent une ou plusieurs questions reliées aux quatre éléments jugés importants.

Distributeurs	Temps	Niveau d'efficacité énerégtique	Coût	Quantité
Enbridge/Union Gas	X	X	X	X
Gazifère		X	X	
Gaz Métro		X	X	
Manitoba Hydro		X	X	
Terasen Gas	X		X	
Union Gas	X	X	X	X
Consortium d'utilités américaines	X	X	X	X

On remarque que tous les distributeurs ont des questions reliées à l'élément « coût » et tous, à l'exception de Terasen Gas, ont des questions reliées à l'élément « niveau d'efficacité énergétique. Par ailleurs, on constate que les éléments « temps » et « quantité » ne sont pas intégrés au questionnaire de Gaz Métro.

Plus précisément, voici les questions utilisées par les distributeurs pour les quatre différents éléments.

Distributeurs	Temps
Enbridge/Union Gas	**E1**. Si vous n'aviez pas reçu l'assistance d'Enbridge/ Union, auriez-vous remplacé _____ [mesure d'efficacité] ou le nouvel équipement installé dans un avenir rapproché? **E1a.** Quand auriez-vous probablement réalisé ces investissements si vous n'aviez pas reçu la subvention d'Enbridge/Union?
Terasen Gas	**Q34.** Avez-vous remplacé votre fournaise plus tôt que prévu à cause de la disponibilité de la subvention? **Q35**. Vous estimez avoir remplacé votre fournaise combien d'année plus tôt grâce à la disponibilité de la subvention?
Union Gas	**F4** La valeur d'un pulvérisateur de pré rinçage est d'environ 250 $. Si le pulvérisateur de débit réduit n'avait pas été fourni gratuitement (par Union Gas et installé par l'Ecolab), auriez-vous acheté des pulvérisateurs au même moment par vous-mêmes? **F5** L'auriez-vous acheté ou installé plus tard? **F5b.** Combien de temps plus tard auriez-vous acheté ou installé les pulvérisateurs? **F9**. Sur une échelle de 1 à 10, où 1 signifie aucunement probable et 10 très probable, quelle est la probabilité que vous ayez acheté le même pulvérisateur de pré rinçage dans l'année suivant l'installation si ce dernier n'avait pas été offert gratuitement ?

Consortium d'utilités américaines	**F1**. Si [distributeur] n'avait pas payé une partie du coût de l'équipement ou fourni une assistance technique ou éducationnelle pour le programme [le programme], votre compagnie aurait-elle acheté un/une [description de la mesure] à l'intérieur d'un an suivant l'installation?

Distributeurs	Niveau d'efficacité énergétique
Enbridge/Union Gas	**D2**. Est-ce que la subvention que vous avez reçue d'Enbridge/ Union a influencé le niveau d'efficacité ou la quantité de l'équipement installé ou du processus implanté? **D2a**. De quelle façon la subvention reçue d'Enbridge/ Union a changé vos plans ou influencé votre décision d'installé l'équipement efficace? **E2a**. Quelle est la probabilité que vous ayez installé la même ou une mesure similaire [mesure d'efficacité] du même niveau d'efficacité énergétique si vous n'aviez pas reçu l'assistance d'Enbridge/ Union?
Gazifère	**Q2**. Avant de connaître l'existence du programme d'aide financière de Gazifère, aviez-vous prévu faire installer un appareil de chauffage conventionnel ou un appareil de chauffage à haute efficacité?
Gaz Métro	**Q1d.** Avant de connaître l'existence du programme d'aide financière de Gaz Métro, aviez-vous prévu acquérir davantage un appareil à haute efficacité ou standard?
Manitoba Hydro	**Q1**. Si le programme *Power Smart New Home* de Manitoba Hydro n'avait pas existé, quel type de maison auriez-vous construit? **Q1**. Si le programme *Home Insulation Rebate* de Manitoba Hydro n'avait pas existé, quel niveau d'isolation auriez-vous installé? **Q1**. Si le programme *Residential High Efficiency Natural Gas Furnace and Boiler Replacement Rebate Program* n'avait pas existé, quel type de fournaise/chaudière auriez-vous installé? **Q2**. Si l'incitatif de Manitoba Hydro n'avait pas été disponible, l'auriez-vous installé? **Q1**. A quel point le programme de Manitoba Hydro a influencé votre décision d'installer un système « HVAC » à haute efficacité? **Q1**. À quel point le programme de Manitoba Hydro ou votre installateur, un représentant de Manitoba Hydro, a influencé votre décision d'installer un « spray valve » à haute efficacité? **Q2**. Si l'aide financière n'avait pas été disponible, quel niveau d'efficacité auriez-vous installé?

Union Gas	**F7**. Avant d'en entendre parler par Union Gas ou le représentant d'Ecolab, saviez-vous que des modèles de pulvérisateur de pré rinçage à débit réduit étaient disponibles? **F8**. Si le pulvérisateur de pré rinçage n'avait pas été offert gratuitement (par Union Gas et installé par l'Ecolab), auriez-vous acheté un pulvérisateur de pré rinçage standard ou un pulvérisateur de pré-rinçage à débit réduit?
Consortium d'utilités américaines	**F3**. Vous avez mentionné que votre compagnie aurait installé au moins [description de la mesure] elle-même si le programme n'avait pas existé. Quel pourcentage de cet équipement aurait eu de la même efficacité ou une plus grande efficacité que celle qui a été installée dans le cadre du programme? **F7**. Quelle diminution du pourcentage d'efficacité de [description de la mesure] votre compagnie aurait-elle acceptée sans le programme ? Est-ce 25 %, 50 % ou 75 % de ce que vous avez installé ?

Distributeurs	**Coût**
Enbridge/Union Gas	**D1.** Sur une échelle de 1 à 5, où 1 signifie « pas du tout important » et 5 « très important »… S.V.P. indiquez l'importance de chacun des aspects suivants dans votre décision d'installer l'équipement à haute efficacité dans votre bâtiment? D1a Aide financière
Gazifère	**Q3**. Si Gazifère ne vous avait pas fait cette offre de 100 $, auriez-vous quand même fait l'acquisition d'un appareil de chauffage offrant un meilleur rendement énergétique, en défrayant la totalité des coûts supplémentaires?
Gaz Métro	**Q1f**. Lors de la prise de décision de remplacer votre système, diriez-vous que le programme d'aide financière a eu … A) Beaucoup d'effet sur votre décision B) Assez d'effet sur votre décision C) Peu d'effet sur votre décision D) Pas du tout d'effet sur votre décision
Manitoba Hydro	**Q2**. À quel point le programme *Power Smart New Home* de Manitoba Hydro a influencé votre décision concernant le type de maison que vous avez construite? **Q2**. À quel point le programme *Home Insulation Rebate* de Manitoba Hydro a influencé votre décision concernant le niveau d'isolation installé pour ce projet?

	Q2. À quel point, le programme *Residential High Efficiency Natural Gas Furnace and Boiler Replacement Rebate* de Manitoba Hydro a influencé votre décision concernant le type de fournaise/chaudière installé pour ce projet? **Q1.** À quel point le programme de Manitoba Hydro a influencé votre décision?
Terasen Gas	**Q20**. Sur une échelle de 1 à 5, où 1 = « pas du tout important » et 5 « très important », quelle importance a eu l'aide financière de Terasen Gas dans votre choix d'une fournaise à haute efficacité? **Q16**. Sur une échelle de 1 à 5, où 1 = « pas du tout important » et 5 « très important », quelle importance a eu l'aide financière de Terasen Gas dans votre choix d'une fournaise à haute efficacité?
Union Gas	**F4.** La valeur d'un pulvérisateur de pré rinçage est d'environ 250 $. Si le pulvérisateur de bas débit n'avait pas été fourni gratuitement (par Union Gas et installé par l'Ecolab), auriez-vous acheté des pulvérisateurs en même temps par vous-mêmes? **F9**. Sur une échelle de 1 à 10, où 1 signifie aucunement probable et 10 très probable, quelle est la probabilité que vous ayez acheté le même pulvérisateur de pré rinçage dans l'année suivant l'installation si ce dernier n'avait pas été offert gratuitement?
Consortium d'utilités américaines	**F4**. Maintenant, je veux me concentrer sur ce qu'il aurait coûté à votre compagnie d'installer cet équipement sans le programme. Croyez-vous que votre compagnie aurait payé les frais additionnels de [montant de l'aide financière], en plus du montant que vous avez payé pour installer la même quantité et la même efficacité [description de la mesure] à l'intérieur d'un an? **F5**. Si non, comment auriez-vous ajusté votre achat afin d'accommoder le fait que vous ne payez pas l'ensemble des coûts? Auriez-vous acheté moins d'équipement, une efficacité moindre ou autre chose?

Distributeur	**Quantité**
Enbridge/Union Gas	**E2b**. Si vous aviez pu installer seulement une partie de [mesure d'efficacité] sans l'assistance reçu d'Enbridge/ Union, quel pourcentage de [mesure d'efficacité] auriez-vous installé de toute façon au même niveau d'efficacité énergétique? **E3**. En général, en considérant tous les équipements du projet, quelle proportion des économies d'énergie aurait été réalisée de toute façon si vous n'aviez pas reçu l'assistance d'Enbridge / Union? S.V.P. fournissez les bornes inférieure et supérieure ainsi que votre meilleure estimation.

Union Gas	**F6** (Si la QUANTITÉ> 1) si le pulvérisateur de pré rinçage n'avait pas été fourni gratuitement (par Union Gas / et installé par Ecolab), auriez-vous acheté et installé la même quantité que celle reçue? **F6b.** Combien en auriez-vous acheté et installé sans le programme?
Consortium d'utilités américaines	**F2**. Sans le programme [aide financière/subvention/remise], l'assistance technique ou l'éducation, votre compagnie aurait-elle acheté exactement la même quantité [description de la mesure] à l'intérieur d'un an? **F2b**. (Si non) Quel pourcentage de [description de la mesure] croyez-vous que votre compagnie aurait acheté tout seul à l'intérieur d'un an? **F6**. Quel pourcentage de [description de la mesure] votre compagnie aurait-elle acheté et ce, sans subvention au même moment? Est-ce 25 %, 50 % ou 75 % de ce que vous avez installé?

Effet d'entraînement

Trois distributeurs ont remis des questionnaires qui permettent le calcul de l'effet d'entraînement. Les trois questionnaires ont été comparés et trois principaux concepts de questions ont été identifiés. Il y a la «modification/installation d'un appareil/mesure éligible », le « niveau d'efficacité », et l'« influence du programme d'efficacité énergétique ». Il est important de préciser que ces questions ont été posées à des clients qui ont participé aux programmes d'efficacité énergétique.

Distributeur	**Modification/installation d'un appareil/mesure éligible (Additionnel)**
Enbridge/Union Gas	**G1.** Est-ce que l'aide financière que vous avez reçu a influencé l'installation d'équipements à haute efficacité additionnels qui n'ont pas été comptabilisés dans le programme? **H1.** Est-ce que l'aide financière que vous avez reçu a influencé l'installation d'équipements à haute efficacité additionnels à d'autres endroits dans le bâtiment ou dans un autre bâtiment desservi par Enbridge/Union?
Union Gas	**LS1** Depuis que vous avez reçu le pulvérisateur de pré rinçage à débit réduit, avez-vous acheté et installé d'autres pulvérisateurs de pré rinçage à débit réduit, vous-même, sans l'assistance (Union Gas ou Ecolab) dans ce bâtiment ou dans d'autres endroits desservis par Union Gas? **LS2** Combien de pulvérisateur de pré rinçage à débit réduit avez-vous acheté sans l'assistance d'Union Gas ou Ecolab? Est-ce qu'ils ont été installés à (adresse) ou à un autre endroit desservi par Union Gas?

Consortium d'utilités américaines	**S1**. Depuis que vous avez participé [au programme] dans [la période de temps], votre compagnie a-t-elle acheté et installé d'autres [description de la mesure] dans ce bâtiment ou dans d'autres bâtiments?

Distributeurs	Niveau d'efficacité
Enbridge/Union Gas	**G4.** Estimeriez-vous que les économies d'énergie générées par cet équipement additionnel sont inférieures, semblables, ou supérieures que celles générées par l'équipement du projet original? **G4a**. Quel pourcentage du projet initial? **H3.** En moyenne, estimeriez-vous que les économies d'énergie de ces autres projets horsprogramme sont inférieures, semblables, ou supérieures à celle des économies du projet supporté par le programme d'efficacité énergétique? **H4.** Quel pourcentage des économies d'énergie de cet équipement additionnel peut raisonnablement être attribué à l'influence de l'assistance que vous avez reçue d'Enbridge/Union?
Union Gas	**LS3** Quel est le débit de gallon par minute de ce pulvérisateur de pré rinçage à débit réduit? **LS4** (Si ne sait pas ou refuse à LS3) Comment savez-vous que le pulvérisateur que vous avez acheté est un modèle à bas débit?
Consortium d'utilités américaines	**S1b**. Est-ce que l'équipement était du même niveau ou d'un niveau supérieur à celui installé avec le programme?

Distributeurs	Influence du programme d'efficacité énergétique
Enbridge/Union Gas	**G3.** S.V.P. Décrivez brièvement comment l'aide financière que vous avez reçue d'Enbridge/Union a influencé votre décision d'installer sur ce site un équipement efficace additionnel? **G5.** Quel pourcentage des économies d'énergie de cet équipement additionnel peut raisonnablement être attribué à l'influence de l'aide financière que vous avez reçue d'Enbridge/Union? **H1a**. Combien d'autres bâtiments ont été influencés? **H2**. S .V.P. décrivez brièvement comment l'aide financière que vous avez reçue a influencé vos décisions d'installer cet équipement.

Union Gas	**LS5.** Je vais lire un énoncé concernant le pulvérisateur de pré rinçage que vous avez acheté sans l'assistance d'Union Gas ou d'Ecolab. Sur une échelle de 0 à 10, où 0 indique que vous êtes fortement en désaccord et 10 indique que vous êtres fortement en accord, quelle note attribuez-vous à la déclaration suivante? « Mon expérience avec le pulvérisateur de pré rinçage que j'ai reçu grâce au programme d'Union Gas a influencé ma décision d'installer d'autres pulvérisateurs moi-même. »
Consortium d'utilités américaines	**S3**. (Si S1b=Oui) Est-ce que … a influencé votre décision d'installer une partie ou l'ensemble [description de la mesure] vous-même? a) La recommandation de l'entrepreneur du programme ou du designer avec qui vous avez travaillé sous [le programme]? b) Votre expérience avec l'équipement à haute efficacité installé avec [le programme] ? c) Votre participation dans les programmes passés offerts par [distributeur]?

Bénévole non participant

Quatre distributeurs ont remis des questionnaires qui permettent le calcul du taux de bénévolat. Cependant, le questionnaire utilisé pour la « méthodologie standardisée » s'adresse aux professionnels de design et des vendeurs d'appareil. De cette façon, trois questionnaires ont été comparés. Nous pouvons remarquer quatre principaux concepts de questions. Il y a la « connaissance du programme d'efficacité énergétique », la « modification/installation d'un appareil/mesure éligible », le « temps » et l'« influence du programme d'efficacité énergétique ». Il est important de préciser que ces questions ont été posées à des clients non participants aux programmes d'efficacité énergétique.

Distributeur	Connaissance du programme
Enbridge/Union Gas	**P1**. Avez-vous entendu parler du programme d'efficacité énergétique d'[Enbridge/Union]? **P2**. Le programme d'efficacité énergétique est conçu pour offrir des aides financières ou techniques pour exécuter des projets qui permettent d'économiser l'énergie. Est-ce que ça vous semble familier?
Gazifère	**Q2**. Gazifère offre différents programmes d'efficacité énergétique pour aider ses clients à consommer moins d'énergie. Un de ces programmes consiste à offrir l'installation d'un thermostat programmable pour 40 $ lors d'un appel de service ou d'un rendez-vous d'entretien. Connaissez-vous l'existence de ce programme?

Distributeurs	Modification/installation d'un appareil/mesure éligible
Enbridge/Union Gas	**S1**. Avez-vous modifié ou installé les équipements suivants depuis le début de 2005?
Gazifère	**Q1**. Au cours des deux dernières années, avez-vous fait installer un thermostat programmable dans votre demeure?
Union Gas	**RR3** Avez-vous installé les équipements recommandés? **RR4** Qu'avez-vous installé?

Distributeurs	Temps
Enbridge/Union Gas	**S2**. Quand avez-vous modifié ou installé ces équipements?
Gazifère	**Q1**. Au cours des deux dernières années, avez-vous fait installer un thermostat programmable dans votre demeure?

Distributeurs	Influence du programme d'efficacité énergétique
Enbridge/Union Gas	**G1**. Sur une échelle de 1 à 5 où 1 indique « aucune influence » et 5 est « beaucoup d'influence », quelle influence a eu le programme d' [Enbridge/Union] dans votre décision d'installer ou modifier [équipement]? **G3**. Sur une échelle de 1 à 5 où 1 indique « aucune influence » et 5 « beaucoup d'influence », quelle influence a eu les fournisseurs ou les entrepreneurs dans votre décision d'installer ou modifier [équipement]?
Gazifère	**Q3**. Choisissez, parmi les options suivantes, celle qui décrit le mieux votre situation? **a)** Je connaissais l'existence du programme de Gazifère, et cela m'a incité à le remplacer, mais je ne désirais pas participer au programme. **b)** Je connaissais l'existence du programme. J'avais décidé de le remplacer de toute façon, sans offre ou aide financière de Gazifère.
Union Gas	**RR8** Avez-vous installé ces équipements grâce à la recommandation [Union/Ecolab] ou pour une autre raison? **RR9**. Je vais vous lire un énoncé à propos des équipements installés sans subvention. Sur une échelle de 0 à 10 où 0 indique « totalement en désaccord » et 10 « totalement en accord », quelle note donneriez-vous à l'énoncé suivant? Mon expérience avec le pulvérisateur de pré rinçage et la recommandation reçue [Union Gas/Ecolab] a influencé ma décision d'acheter les équipements efficaces sans subvention.

CONCLUSION

Ce balisage a permis de comparer les différentes méthodologies de calcul du taux d'opportunisme et du taux de bénévolat utilisées par plusieurs distributeurs. On a pu remarquer que les méthodologies pour évaluer le taux d'opportunisme, l'effet d'entraînement et le taux de bénévolat varient d'un distributeur à l'autre que ce soit au niveau de leur contenu ou de leur complexité. Par ailleurs, la comparaison a permis d'identifier les différents concepts de questions à privilégier dans les questionnaires méthodologiques. À cet effet, on a pu constater que les éléments « temps » et « quantité » ne sont pas intégrés au questionnaire méthodologique de l'effet d'opportunisme de Gaz Métro.

Annexe A

Questionnaires
Enbridge & Union Gas

CUSTOM PROJECTS PARTICIPANT SURVEY

1.1 CONVENTIONS

- Bold text is spoken.
- Italics text is instructions for the interviewer.
- *{VIP}* indicates questions that are particularly important and represent specific boxes in the analysis flow chart.

2.2 SAMPLE DATA

(NOTE: Projects are the survey unit, so each project to be interviewed separately. Thus, use separate form for each Project, even if the same interviewee is associated with multiple projects).

Name _____ Interviewer Initials _____
Firm Name _____ Survey Date _____
Address _____ Sample ID # _____
Phone Number _____ Project ID #_____
Project Completion Date_____

Equipment installed: _____
Channel Partner Involved : _____
Program activity: _____

2.2 Project Briefing Information – Union Gas sales/marketing staff input :
2.2.1 Month/year of initial Union Gas involvement with the project or its precursors :
2.2.1a Month _____
2.2.1b Year _____
2.2.2. General context of Union Gas relationship with Customer :
a) Historical education effort with customers on efficiency opportunities & Union Gas programs (high, medium, low level of effort) :

_____
_____

b) Facility energy audits performed (steam traps, boilers, etc)

_____
_____

c) Distribution and merchant services support provided (general credibility & relationship building)

_____
_____

d) Other (describe)

_____
_____

2.2.3. Services provided to customer in project-related contacts:
a. Gas bill histories (usage, cost) _____
b. Approximate number of project-related contacts with customer _____
c. General information on program _____
_____
_____
d. Project-specific technical information or analysis: technical/engineering, financial,

vendor/technology alternatives, etc.

e. Project/technology recommendations

f. Other (describe)

ga. Low/medium/high intensity of support to customer generally

gb. Low/medium/high intensity of support to project specifically

h. Low/medium/high effect of on project's efficiency level

1.3 IDENTIFY CORRECT RESPONDENT

[Note: These questions may be covered on the phone while setting up an appointment]

A1. Are you the most appropriate person to talk to about the decision to install that equipment and about the selection of the specific energy efficiency equipment?

1. YES, Continue to Question A3

2. NO »» "May I ask who would be the best person to talk to?"
[obtain names and phone numbers]

[Ask to speak with this person. Start again at the beginning].

1. DO NOT REMEMBER PROJECT »» Ask Question A2

A2. Do you recall participating in <u>any</u> programs through Union Gas/Enbridge Gas Distribution in the past few years regarding this location?

1. YES

A2A. Did the program involve assistance from Union Gas/Enbridge Gas Distribution in identifying energy efficient equipment or process changes and financing toward the initial capital costs?

1. YES, *Continue to Question A3*
2. NO »» "Can you provide me…" *[See text for "NO" above]*

2. NO »» "Can you provide me with a contact name and phone number for a person who might be familiar with the work that was done?"
[Get contact information and call this person; Start again at the beginning].

[If they express hesitation, use an appropriate combination of the following].
Confidentiality. We are an independent research firm and will not report your individual responses in any way that would reveal your identity, as your response only will be presented in aggregate along with responses from other survey participants.
Security. Your responses will not affect your ability to participate in the program in the future.
Sales concern. I am not selling anything. I simply want to understand what factors were important to your company when deciding to install energy efficient equipment with assistance from this program.
Contact. If you would like to talk with someone about this effort from

- Union Gas, you can call your account manager.
- Enbridge Gas Distribution, the Enbridge Industrial contact is Peter Goldman at 416-495-6348, the Enbridge Commercial contact is Stefan Surdu at 416-495-5917, or you may contact your Energy Solutions Consultant.

1.4 CONFIRMATION OF EQUIPMENT INSTALLED

B1. *Prior to calling, review program records for the project. In Table 1 below under "Program Records," check off each measure category for which energy efficient equipment was installed.*

B2. **Just to make sure that we're talking about the same project, I show that you installed** *[list major equipment or equipment categories]***. To your recollection, was all this equipment installed?**
[Check off each category for which respondent recalls installing equipment. If information is not available from program records, ask the respondent to recall what measures were undertaken].

B3. **Did Union Gas/Enbridge Gas Distribution provide financial assistance for installing this equipment?**
[Ask of only those checked in B2. Check off each category for which respondent recalls that Union Gas/Enbridge Gas Distribution provided financial assistance].

B3b. **Approximately how much was the incentive as a percent of the total project cost?**
[Ask of only those checked in B3].

B4. **Did you receive any technical assistance from Union Gas/Enbridge Gas Distribution staff with any of this equipment?**
[Ask of only those checked in B2. Check off each category for which respondent recalls that Union Gas/Enbridge Gas Distribution provided technical assistance for the measure].

Table 1. Equipment in program records and recalled by respondent

Measure Category	B1. Program Records [Check if Yes]	B2. Respondent Recollection [Check if Yes]	B3. Union Gas/Enbridge Gas Financial Assistance [Check if Yes]	B3b. Incentive as % of Project Cost	B4. Union Gas/Enbridge Gas Distribution Technical Assistance [Check if Yes]	Notes/Caveats
a. Machine/Process	❑	❑	❑	%	❑	
b. HVAC (incl. furnaces, all boilers, A/Cs, chillers, EMS, etc.)	❑	❑	❑	%	❑	
c. Lighting	❑	❑	❑	%	❑	
d Controls (boiler controls, variable frequency drive controls	❑	❑	❑	%	❑	
e. Building envelope (incl. insulation, windows)	❑	❑	❑	%	❑	
f. Domestic hot water	❑	❑	❑	%	❑	
g. Refrigeration	❑	❑	❑	%	❑	
h. Agriculture	❑	❑	❑	%	❑	
i. Converted equipment from electricity to gas (fuel substitution)	❑	❑	❑	%	❑	
j. Other: _____	❑	❑	❑	%	❑	

1.5 SET THE CONTEXT

C1. Prior to the project being discussed, did your organization have a general policy regarding the energy efficiency specification of projects involving new construction and equipment retrofits, replacements or building remodeling generally?
1. Yes 2. No -8. Do not know -9. Refused

C2. [If yes] Did your policy target a specific standard of efficiency levels?
1. Yes 2. No -8. Do not know -9. Refused

C2a. [If yes] Can you specify what those efficiency levels are?
-8. Do not know -9. Refused

C3. Since the project, has your energy efficiency policy changed
1. Yes 2. No -8. Do not know -9. Refused

C4. [If Yes] How?

_____

C5. Does your organization have specific criteria for selecting energy efficient equipment based on payback periods, life cycle costs, or internal rate of return?
1. Yes 2. No -8. Do not know -9. Refused

C6. [If C5=1 (yes)] Which?
1. Simple payback period
2. Life-cycle cost analysis
3. Internal rate of return
4. Other [Record verbatim] C6B. _____
-8. Don't know
-9. Refused

C7. [If C6=1 (simple payback period)] How many years or less must the project payback be?
-8. Do not know -9. Refused

C8. [If C6=2 (internal rate of return)] What is the minimum percent rate of return required for energy-efficiency related projects? [Record 10% as "10" not "0.10"]
-8. Do not know -9. Refused

C9. What was simple payback period for this project prior to any financial assistance from Enbridge/Union?
-8. Do not know -9. Refused

C10. What was simple payback period for this project after financial assistance from Enbridge/Union? *{VIP}*
-8. Do not know -9. Refused

C11. [Note other relevant comments about how payback period figured in the decision process].

_____

C12. Do you recall receiving energy efficiency information and training in any of the following areas that was sponsored or delivered by Union Gas/Enbridge Gas Distribution?
1. Yes 2. No -8. Do not know -9. Refused

C12a. General energy efficiency information
C12b. Energy audits
C12c. Technology seminars (including those co-sponsored with trades)
C12d. Program information
C12e. Specific project identification

1.6 FREE RIDERSHIP BATTERY

1.1.1 Program Influences

[Ask Questions in this section for all the equipment installed in aggregate].

I'm going to ask a few more questions about the influence of Enbridge Gas Distribution/Union Gas on your decisions to install high efficiency equipment.

D1. On a scale of 1 to 5, where 1 = "not at all important" and 5 = "very important"…
Please indicate how important each of the following aspects of your experience with [Enbridge/Union] were in your decision to install energy efficient equipment at your facility?
{*VIP*}

D1a. Financial assistance	**1 2 3 4 5**	**DK**	**Refused**
D1b. Project technical assistance	**1 2 3 4 5**	**DK**	**Refused**
D1c. Your ongoing relationship with the utility *(Providing impartial advice and facilitating unbiased contacts, e.g., business partners)*	**1 2 3 4 5**	**DK**	**Refused**
D1d. Utility education activities *(e.g., case studies, best practice information, training, seminars, conferences, trade shows)*	**1 2 3 4 5**	**DK**	**Refused**
D1e. Advice and assistance from a contractor	**1 2 3 4 5**	**DK**	**Refused**

D1e1. [If D1e>3] Who was that contractor?

D1e2. [If D1e>3] May I have the name and phone number of your main contact there?

D2. Did the assistance you received from [Enbridge/Union] in any way influence the <u>type</u> or <u>efficiency level</u> of the equipment or the <u>amount</u> of high efficiency equipment you installed or process changes implemented?

1 Yes »» *Continue to Question D2a*
2 No (all the same equipment would have been installed at the same high efficiencies)
»» *Skip to Question D3*
-8 Don't know »» *Skip to Question D3*
-9 Refused »» *Skip to Question D3*

D2a. In what ways did the assistance you received from [Enbridge/Union] change your Plans or in any other way influence your decision to install energy efficient equipment. Be sure to identify specific equipment.

D2b. [Based on response to D2a, fill in a "1 to 5"score indicating the extent to which the program influenced the decision to install energy efficient equipment. DO NOT ASK RESPONDENT DIRECTLY. "1" indicates that the program had no influence; "5"indicates that the program was the primary reason that energy efficient equipment was installed].
{VIP}

(No program influence) 1 2 3 4 5 (Program was primary influence)

D3. Did your company have specific plans to install any of the *[list all relevant measure categories]* **equipment prior to your first contact with [Enbridge/Union] staff regarding this project?**

1 Yes **»»** *Continue to Question D3a*
2 No **»»** *Skip to Next Section*
-8 Don't know **»»** *Skip to Next Section*
-9 Refused **»»** *Skip to Next Section*

D3a. Please describe any plans that you had to install the equipment prior to receiving assistance you received from [Enbridge/Union].

[Interviewer note: the goal here is to understand the plans that were in place before being influenced by program. Probe for equipment type, timing, quantity, and efficiency, as well as prior budgeting. Attempt to elicit responses that will provide answers for the "likelihood" or "share of savings" questions (E2a and E2b)].

D3b. *[Based on responses to D3a, fill in a "1 to 5"score indicating the extent to which respondent was already planning to install the energy efficient equipment. DO NOT ASK RESPONDENT DIRECTLY. "1" indicates that respondent had no plans at all; "5" indicates that respondent had documented plans and had budgeted for all of the efficient equipment].* ***{VIP}***

(No plans) 1 2 3 4 5 (Documented plans/budget)

1.1.2 Direct Decision Making Questions

[Ask the following questions for each measure category checked under Question B2 in Table 1 above. If previous open-ended questions have provided the necessary information, interviewer may skip the question/measure category. By the end of the interview, interviewer should be able to populateTable 2 below with EITHER a "likelihood" OR a "share of equipment" OR both, for each relevant measure category].

Now I'd like to try to quantify the impact of the [Enbridge/Union] assistance. I'd like you to think about the energy savings you achieved with the equipment you replaced. Some of the savings may have come from just replacing old equipment with any new equipment *[as appropriate: or replacing your existing process with a new process]***. And some of the savings may have come from the fact that the equipment you installed was more efficient than standard new equipment. I'd like you to think about the utility's influence on this last type of savings.**

First, let me ask about the _____ *[MEASURE CATEGORY]***.**

E1. If you had not received assistance you received from [Enbridge/Union] , would you have replaced your existing _____***[MEASURE CATEGORY]*** **or installed new equipment in the foreseeable future?** ***{VIP}***
[Note that these do not have to be "energy efficient" equipment].

1 Yes »» *Continue to Question E1a*
2 No »» *ENTER 0% for the category in the Free Ridership Value column in Table 2 below (E2c) and move on to the next measure category.*
-8 Don't know »» Probe, perhaps using *Question E1a*
-9 Refused »» *Skip to next measure category*

E1a. When would you likely have made these investments if you had not received assistance from [Enbridge/Union]? ***[If clarification needed:]*** **(Within how many months or years of when you participated in the program?)** ***{VIP}***

E1a M. _____ Months
E1a Y. _____ Years

-8 Don't know »» Probe, perhaps using *Question E1a*

-9 Refused »» *Skip to next measure category*

- *Fill in only for categories for which equipment has been installed.*
- *Enter "0" years if equipment would have been installed in the same timeframe regardless of program participation.*
- *If respondent says, "…in a year or two," enter "1.5" years.*
- *Based on earlier responses, ask either the "likelihood" question below or the "share of equipment" question, whichever is more appropriate.*
- *For example, if respondent installed a single chiller, then the "likelihood" question may be most appropriate; if they installed multiple measures of various types/sizes, then the "share of equipment" may be more appropriate. Some respondents may be able to offer valid responses to both questions.*
- *If you are uncertain, ask both questions. If respondent can provide a response to each, then record both responses.*

E2a. ***[Likelihood]*** **What is the likelihood that you would have installed the same or Similar _____ *[MEASURE CATEGORY]* of the same level of energy efficiency if it had not been for the assistance you received from [Enbridge/Union]?** ***{VIP}***

1 Definitely would NOT have installed equipment of the same level of energy efficiency
2 Definitely WOULD have installed equipment of the same level of energy efficiency anyway
3 MAY HAVE installed equipment of the same level of energy efficiency, even without the program

E2a2. About what percent likelihood? _____%
-8 Don't know
-9 Refused

E2b. ***[Share of equipment]*** **(Or, if you might have installed some but not all of the _____**

[MEASURE CATEGORY] **even without the assistance you received from [Enbridge/Union] , then…) what share of the _____ *[MEASURE CATEGORY]* would you have installed anyway at the <u>same level of energy efficiency</u>?** ***{VIP}***

[If necessary, or if the flow of the interview dictates, you may derive this value by asking 1) the share of equipment that would have been installed (at any efficiency) and 2) the share of installed equipment that would have been high efficiency. The value in the table below for Question E2b would be the product of these two values].

Table 2. Equipment

[Fill in EITHER the "likelihood" value OR the "share of equipment" value OR both values for each relevant measure category.
If respondents ask for the timeframe, use the timeframe specified above in Question E1a.
Then enter the appropriate free ridership value (E2c), which will be one of the following, depending on the nature of the project and the responses:

1) *The single value for "likelihood" or "share of equipment" if only one is entered;*
2) *If value provided for both, enter either Likelihood or Share value, whichever best represents the appropriate value*
3) *The product of the two, if appropriate (e.g., if there is a 50% likelihood that 75% of the equipment would have been installed, and respondent definitely wouldn't have done the final 25%)*

Measure Category	E1. Change when the equipment was installed?	E1a. Forward or Slow	E1b. When would it have been installed?	E2a. Likelihood that energy efficient equipment…		E2b. Share of energy efficient equipment that… …would have been installed without the program	E2c. *[Entered by interviewer]* Free Ridership Value
a. Machine/Process	Y N DK R	F S	Months Yrs	%	and/or	%	%
b. HVAC (incl. furnaces, all boilers, A/Cs, chillers, EMS, etc.)	Y N DK R	F S	Months Yrs	%	and/or	%	%
c. Lighting	Y N DK R	F S					
d Controls (boiler controls, variable frequency drive controls	Y N DK R	F S	Months Yrs	%	and/or	%	%
e. Building envelope (incl. insulation, windows)	Y N DK R	F S	Months Yrs	%	and/or	%	%
f. Domestic hot water	Y N DK R	F S	Months Yrs	%	and/or	%	%
g. Refrigeration	Y N DK R	F S	Months Yrs	%	and/or	%	%
h. Agriculture	Y N DK R	F S	Months Yrs	%	and/or	%	%
i. Converted equipment from electricity to gas (fuel substitution)	Y N DK R	F S	Months Yrs	%	and/or	%	%
j. Other: _____	Y N DK R	F S	Months Yrs	%	and/or	%	%

E2d. *[Additional notes/caveats (e.g., explaining how/why free ridership value was chosen, if necessary)]* _____

E3. Overall, <u>across all equipment</u>, that is the entire project, how much of these <u>extra energy savings</u> would have been achieved anyway, even if you had not received assistance from [Enbridge/Union]. Please provide a lower and upper bound, and then your best estimate. {VIP}
***[If needed for clarification:]* For example, 50% means that half of the extra savings from the energy efficient equipment would have been achieved anyway. Remember, I'm asking only about the extra savings from installing energy efficient equipment instead of standard equipment.**

E3A.Lower bound »» _____ % E3B. Upper bound »» _____ % E3C. Best estimate »» ____ %

1.7 PARTICIPANT INSIDE SPILLOVER

Now I want to ask about whether the assistance you received from [Enbridge/Union] has influenced you to install any other energy efficient equipment that did not receive financial support from [Enbridge/Union].
[For these questions, I'm talking about all your company's participation in the program, not just since October 2006].

G1. Did the assistance you got from [Enbridge/Union] in any way influence you to install additional energy efficient equipment <u>at this site</u> that did not get reported to the program (i.e., *equipment that would not have been installed without the influence of the program)***?**
1 Yes **»»** Continue to Question G2
2 No **»»** Skip to next section
-8 Don't know **»»** Skip to next section
-9 Refused **»»** Skip to next section

G2. [*If G1 = "yes"]* **What year did you install this equipment?**

G3. *[If G1 = "yes"]* **Please briefly describe how the assistance you received from [Enbridge/Union] has influenced your decisions to install additional energy efficient equipment at your facility.**
[Identify the types of equipment affected].

G4. Would you estimate the energy savings from this extra equipment to be less than, similar to, or more than the savings from the energy efficient equipment from the original project?
1 Less than the original project »»
G4a. About what percentage of the savings from the original project?
____*% [Enter a number less than 100%]*
2 About the same savings
3 More than the original project **»»**
G4b. About what percentage of the savings from the original project?
____*% [Enter a number greater than 100%]*
-8 Don't know
-9 Refused

G5. What share of the savings from this extra equipment can reasonably be attributed to the influence of the assistance you received from [Enbridge/Union]?
_____% *[100% or less]*
-8 Don't know
-9 Refused
[Interviewer may be able to complete this based on response to G3, or at least use G3 to checkFor consistency. Probe if inconsistent to ensure that respondent is correctly interpreting the question].

1.8 PARTICIPANT OUTSIDE SPILLOVER

H1. Did the assistance you received from [Enbridge/Union] in any way influence you to install any additional energy efficient equipment *at other jobs or facilities in Union Gas/Enbridge Gas Distribution's Service Territory* beyond what you would have done otherwise?
[Don't include projects that participated in another Union/Enbridge program].

1 Yes »»

H1a. How many other facilities were influenced (that did not participate in Union Gas/Enbridge Gas Distribution programs)? _____ (-8 Don't know, -9 Refused)

2 No »» Skip to next section
-8 Don't know »» Skip to next section
-9 Refused »» Skip to next section

H2. *[If H1 = "yes"]* **Please briefly describe how the assistance you received has influenced your decisions to install this equipment. (Probe to identify the types of equipment affected.)**

H3. On average, would you estimate the energy savings from these other non-program projects to be less than, similar to, or more than the savings from the energy efficient equipment from the program-supported that we've been discussing?
[E.g., if the same equipment was implemented in a facility twice as big, then savings would be 200%. Be sure to emphasize that this is savings "on average" not in aggregate across the many buildings that might be affected].

1. Less than the Custom Projects project
   H3A. About what percentage of the savings from the Custom Projects project?
   ____**%** ***[Enter a number less than 100%]***
2. About the same savings
3. More than the Custom Projects project
   H3B. About what percentage of the savings from the Custom Projects project?
   ____**%** ***[Enter a number greater than 100%]***

-8 Don't know
-9 Refused

H4. What share of the savings from energy efficient equipment at these facilities can reasonably be attributed to the influence of the assistance you received from [Enbridge/Union]?
[Interviewer may be able to complete this based on response to H2, or at least use H2 to check for consistency. Probe if inconsistent to ensure that respondent is correctly interpreting the question].

_____% [100% or less] -8 Don't know -9 Refused

1.9 FIRMOGRAPHICS

Z1. Does your company own or lease this building? :

1. Owner -8. Don't know
2. Lease -9. Refused

Z2. Approximately how large is the facility that received the efficiency improvements we have been talking about? (square meters)

1.	Up to 5,000	6.	50,001 to 100,000
2.	5,001 to 10,000	7.	100,001 to 200,000
3.	10,001 to 15,000	8.	200,001 to 500,000
4.	15,001 to 25,000	9.	Over 500,000
5.	25,001 to 50,000	-8	Do not know
		-9	Refused

Z3. Is your company independent, or part of a larger organization?

1. Independent
2. Part of a larger company
3. Other Z3a. (specify) _____
-8. Don't know
-9. Refused

Z4. How old is your facility?

-8 Don't know -9 Refused

Z5. Does your building contain any manufacturing processes?

1. Yes 2. No -8. Do not know -9. Refused

Z6a. [If yes] What type of energy do they use?

1.	Natural Gas	-8	Don't know
2.	Electricity	-9	Refused
3.	Other		

Z6b. [If yes to Z5] Have you reviewed their energy usage?

1. Yes 2. No -8. Do not know -9. Refused

Z7. How many locations does your organization have in Ontario?

1.	One	5.	More than 20
2.	2 to 5	6.	Currently Unoccupied
3.	6 to 10	-8.	Don't know
4.	11 to 20	-9.	Refused

Z8. Approximately how many full time employees or full time equivalents does your organization have at your locations in Ontario?

1.	Fewer than 5	5.	50 to 99
2.	5 to 9	6.	100 to 249
3.	10 to 19	7.	250 or More
4.	20 to 49	-8	Do not know
		-9	Refused

Those are all the questions I had.

Z9. Do you have any final comments you would like to make?

Thank you very much for your time!

Z10. Record all additional or supporting comments here.

2. CUSTOM PROJECTS TRADE ALLY SURVEY
Business Partner (EGD) or Channel Partner (UG)

2.1 CONVENTIONS

- Bold text is spoken.
- Italics text is instructions for the interviewer.
- *{VIP}* indicates questions that are particularly important and represent specific boxes in the analysis flow chart.

2.2 SAMPLE DATA

(NOTE: Projects are the survey unit, so each project to be interviewed separately. Thus, use separate form for each Project, even if the same interviewee is associated with multiple projects).

Contact Name _____ Interviewer Initials _____

Firm Name _____ Survey Date _____

Address _____ Sample ID # _____

Phone Number _____ Project ID #_____

Project Completion Date_____

Equipment installed: _____

Customer involved: _____

3. INFORMATION FROM UTILITY STAFF AND RECORDS

3.1. Project Briefing Information – Union/EGD sales/marketing staff input:

3.1.1. Month/year of initial EGD/Union Gas involvement with the project or its precursors

3.1.1a Month_____
3.1.1b Year_____

3.1.2. General context of EGD/Union Gas relationship with Channel/Business Partner:

a. Historical education effort with customer on efficiency opportunities & Enbridge/Union Gas programs (high, medium, low level of effort) :

_____

_____

b. Facility energy audits performed (steam traps, boilers, etc)

_____

_____

c. Distribution and merchant services support provided (general credibility & relationship building)

d. Other (describe)

3.1.3. Services provided to Channel/Business Partner in project-related contacts:

a. Gas bill histories (usage, cost) _____

b. Approximate number of project-related contacts with customer _____

c. General information on program _____

_____

d. Project-specific technical information or analysis: technical/engineering, financial, vendor/technology alternatives, etc.

_____

e. Project/technology recommendations

_____

f. Other (describe) _____

_____

3.1.4. Channel/Business Partner involvement with customer project:

a. General context of Channel/Business Partner involvement with project or its precursors

b. Extent of Channel/Business Partner use of Union Gas program & other needed information, Union Gas technical services or other support

c. Type of service & information support given customer generally and project specifically by Channel/Business Partner (engineering/financial analysis of alternatives, project engineering, project construction, ongoing Maintenance/Repair/Operations support, other/describe)

d. Low/medium/high intensity of support by Channel/Business Partner to customer generally and project specifically

e. Low/medium/high effect of on project's efficiency level

2.4 PRELIMINARY CONCERNS

[If they express hesitation, use an appropriate combination of the following].
Confidentiality. We are an independent research firm and will not report your individual responses in any way that would reveal your identity. Your response will only be presented in aggregate along with responses from other survey participants.
Security. Your responses will not affect your ability to participate in the program in the future. All responses are your opinion and there are no wrong answers.
Sales concern. I am not selling anything. I simply want to understand what factors were important to your company when deciding to install energy efficient equipment with assistance from this program.
Contact. For Union, the Channel Partners would have been notified by phone call or email from their Account Manager. If they have any questions, it is their Union Gas Account Manager they can call.
The Enbridge Industrial contact is Peter Goldman at 416-495-6348 or Stefan Surdu at 416-495-5917 or your Enbridge Energy Solutions Consultant/Union representative.

2.5 INTRODUCTION

A1. What is your primary line of business?

1. Consulting engineer
2. Manufacturer
3. Distributor or equipment sales
4. Installation contractor
5. Property manager
6. Other. A1b. Please specify.

_____

2.6 CONFIRMATION OF EQUIPMENT INSTALLED

B1. *Prior to the interview, review program records for the project or projects. In Table 1 below under "Program Records," check off each measure category for which energy efficient equipment was installed.*

B2. Just to make sure that we're talking about the same project, I show that your company designed and specified/supplied/installed *[list major equipment or equipment categories]* at *[end use customer}***. To your recollection, was all this work completed?**
[Check off each category for which respondent recalls installing equipment. If information is not available from program records, ask the respondent to recall what measures were undertaken].

B3. Do you recall if Union Gas/Enbridge provided financial assistance for installing this equipment?

1. Yes 2. No -8. Do not know -9. Refused

[Ask of only those checked in B2. Check off each category for which respondent recalls that Union Gas/Enbridge provided financial assistance].

B3a. *[If yes, for Union Only]* **Who received the incentive, your company or the customer?**

1. Your Company
2. The Customer
-8. Do not know
-9. Refused

B3b. Approximately how much was the incentive as a percent of the total project cost?

*[Ask of only those checked in B3].*_____*%*

-8. Do not know
-9. Refused

[Ask of only those checked in B2. Check off each category for which respondent recalls that Union Gas/Enbridge provided technical assistance for the measure].

B4. Did your company receive any technical or marketing assistance from Union Gas/Enbridge staff?

1. Yes 2. No -8. Do not know -9. Refused

B4a. *[If Yes]* Please describe.

_____

_____

B5. Was the customer aware that Union/Enbridge was involved with the project?

1. Yes 2. No -8. Do not know -9. Refused

Table 1. Equipment in program records and recalled by respondent

			[Check if Yes]				
Measure Category	**B1.** Program Records	**B2.** Respondent Recollection	**B3.** Union /Enbridge Financial Assistance	**B3a.** Trade ally received incentive	**B3b.** Incentive as % of Project Cost	**B4.** Union /Enbridge Technical or Marketing Assistance	**Notes/Caveats**
a. Machine/Process	❑	❑	❑	❑	%	❑	
b. HVAC (incl. furnaces, all boilers, A/Cs, chillers, EMS, etc.)	❑	❑	❑	❑	%	❑	
c. Lighting	❑	❑	❑	❑	%	❑	
d Controls (boiler controls, variable frequency drive controls	❑	❑	❑	❑	%	❑	
e. Building envelope (incl. insulation, windows)	❑	❑	❑	❑	%	❑	
f. Domestic hot water	❑	❑	❑	❑	%	❑	
g. Refrigeration	❑	❑	❑	❑	%	❑	
h. Agriculture	❑	❑	❑	❑	%	❑	
i. Converted equipment from electricity to gas (fuel substitution)	❑	❑	❑	❑	%	❑	
j. Other: _____	❑	❑	❑	❑	%	❑	

2.7 SET THE CONTEXT

C1. Do you recall receiving energy efficiency information and/or training in any of the following areas that was sponsored or delivered by Union Gas/Enbridge?

1. Yes 2. No -8. Do not know -9. Refused

		Yes	No	Do not know	Refused
C1a.	General energy efficiency information	☐	☐	☐	☐
C1b.	Energy audits	☐	☐	☐	☐
C1c.	Technology seminars	☐	☐	☐	☐
C1d.	Program information	☐	☐	☐	☐
C1e.	Specific project identification	☐	☐	☐	☐
C1f.	Training or workshops	☐	☐	☐	☐
C1g.	Software e.g., Cumulative Sum of Differences (CUSUM)	☐	☐	☐	☐
C1h.	Lunch & Learns	☐	☐	☐	☐

2.8 FREE RIDERSHIP BATTERY

2.8.1 Program Influences

[Ask Questions in this section for all the equipment installed in aggregate].

I'm going to ask a few more questions about the influence of Enbridge/Union Gas on your customer's decisions to install high efficiency equipment.

D1. On a scale of 1 to 5, where 1 = "not at all important" and 5 = "very important"… Please indicate how important each of the following aspects of your experience with [Enbridge/Union] were in the decision to install energy efficient equipment for your customer at this facility? *{VIP}*

D1a. Financial assistance 1 2 3 4 5 -8 DK -9 Refused

D1b. Project technical assistance 1 2 3 4 5 -8 DK -9 Refused

D1c. Your ongoing relationship with the utility 1 2 3 4 5 -8 DK -9 Refused
(Providing impartial advice and facilitating unbiased contacts, e.g., business partners)

D1d. Utility education activities 1 2 3 4 5 -8 DK -9 Refused
(e.g., case studies, best practice information, training, seminars, conferences, trade shows)

D1e. Marketing assistance 1 2 3 4 5 -8 DK -9 Refused
(e.g., lead generation, printed material)

D2. Did the assistance you received from [Enbridge/Union] in any way influence the <u>type</u> or <u>efficiency level</u> of the equipment, the <u>amount</u> of high efficiency equipment that was installed or efficient features that were added or process changes that were implemented?

1 Yes »» *Continue to Question D2a*
2 No (all the same equipment would have been installed at the same high efficiencies) »» *Skip to Question D3*
-8 Don't know »» *Skip to Question D3*
-9 Refused »» *Skip to Question D3*

D2a. In what ways did the [Enbridge/Union] assistance change the plans or in any other way influence the decision to install energy efficient equipment? Be sure to identify specific equipment.
[Probe for whether the contractor added efficient features to make a more efficient system].

D2b. ***[Based on response to D2a, fill in a "1 to 5"score indicating the extent to which the program influenced the decision to install energy efficient equipment. DO NOT ASK RESPONDENT DIRECTLY. "1" indicates that the program had no influence; "5" indicates that the program was the primary reason that energy efficient equipment was installed].*** **{VIP}**

(No program influence) 1 2 3 4 5 (Program was primary influence)
-8 Don't know -9 Refused

D3. Did this customer have specific plans in place to install <u>any</u> of the *[list all relevant measurecategories]* **equipment prior to contacting your company regarding this project?**

1 Yes **»»** *Continue to Question D3a*
2 No **»»** *Skip to Next Section*
-8 Don't know **»»** *Skip to Next Section*
-9 Refused **»»** *Skip to Next Section*

D3a. Please describe the plans to install the equipment prior to contacting you.
[Interviewer note: the goal here is to understand the plans that were in place before being influenced by the trade ally. Had they already planned to install all the measures and at the same level of efficiency and with all the energy saving features? Probe for equipment type, timing, quantity, and efficiency, as well as prior budgeting. Attempt to elicit responses that will provide answers for the "likelihood" or "share of savings" questions (E2a and E2b)].

D3b. *[Based on responses to D3a, fill in a "1 to 5" score indicating the extent to which end user was already planning to install the energy efficient equipment prior to contact with the trade ally. DO NOT ASK RESPONDENT DIRECTLY. "1" indicates that respondent had no plans at all; "5" indicates that respondent had documented plans and had budgeted for all of the efficient equipment].*
{VIP}

(No plans) 1 2 3 4 5 (Documented plans/budget)
-8 Don't know -9 Refused

D4. *[Enbridge only]* **Enbridge offers a higher incentive if three or more measures are implemented.**
Did this higher incentive figure in the decision process?
1 Yes »» *Continue to Question D4a*
2 No »» *Skip to Next Section*
-8 Don't know »» *Skip to Next Section*
-9 Refused »» *Skip to Next Section*

D4a. How?

_____

_____

_____

D4b. *[Based on responses to D4a, fill in a "1 to 5"score indicating how much influence the higher incentive had on the decision. DO NOT ASK RESPONDENT DIRECTLY].* ***{VIP}***

(No influence) 1 2 3 4 5 (Critical Influence)
-8 Don't know -9 Refused

2.8.2 Direct Decision Making Questions

[Fill in Table 2 for most of these questions].
[Ask the following questions for each measure category checked under Question B2 in Table 1 above. If previous open-ended questions have provided the necessary information, interviewer may skip the question/measure category. By the end of the interview, interviewer should be able to populate Table 2 below with EITHER a "likelihood" OR a "share of equipment" OR both, for each relevant measure category].

Let me ask about the _____*[MEASURE CATEGORY]***.**
E1. Did the *[Enbridge/Union]* assistance in any way change the timing of the installation?
1. Yes 2. No -8. Do not know -9. Refused

E1a. *[If Yes]* **Was the equipment installed earlier or later than first planned?**
1. Earlier
2. Later

E1b. *[If Yes to E1]* When would it have been installed without the program assistance? ***{VIP}***
E1bM. ___ Month
E1bY. ___ Year
-7 Never -8. Do not know -9. Refused

Based on earlier responses, ask either the "likelihood" question below or the "share of equipment" question, whichever is more appropriate. For example, if respondent installed a single chiller, then the "likelihood" question may be most appropriate; if they installed multiple measures of various types/sizes, then the "share of equipment" may be more appropriate. Some respondents may be able to offer valid responses to both questions If you are uncertain, ask both questions. If respondent can provide a response to each, then record both responses.

E2a. ***[Likelihood]*** **What is the likelihood that you would have installed the same or similar** _____ ***[MEASURE CATEGORY]*** **of the same level of energy efficiency or with the same features that affect the overall system efficiency if it had not been for the assistance from [Enbridge/Union]?**
{VIP}

1 Definitely would NOT have installed equipment of the same level of energy efficiency
2 Definitely WOULD have installed equipment of the same level of energy efficiency anyway
3 MAY HAVE installed equipment of the same level of energy efficiency, even without the program

E2a2. About what percent likelihood? _____%

-8 Don't know
-9 Refused

E2b. ***[Share of equipment]*** **What share of the** _____ ***[MEASURE CATEGORY]*** **would you have installed anyway at the same level of energy efficiency if it had not been for the assistance from [Enbridge/Union]?** ***{VIP}***
[If necessary, or if the flow of the interview dictates, you may derive this value by asking 1) the share of equipment that would have been installed (at any efficiency) and 2) the share of installed equipment that would have been high efficiency. The value in the table below for Question E2b would be the product of these two values].

-8 Don't know
-9 Refused

Table 2. Equipment

[Fill in EITHER the "likelihood" value OR the "share of equipment" value OR both values for each relevant measure category.
If respondents ask for the timeframe, use the timeframe specified above in Question E1a.
Then enter the appropriate free ridership value (E2c), which will be one of the following, depending on the nature of the project and the responses:

1) *The single value for "likelihood" or "share of equipment" if only one is entered;*
2) *If value provided for both, enter either Likelihood or Share value, whichever best represents the appropriate value*
3) *The product of the two, if appropriate (e.g., if there is a 50% likelihood that 75% of the equipment would have been installed, and respondent definitely wouldn't have done the final 25%)*

Measure Category	E1. Change when the equipment was installed?	E1a. Forward or Slow	E1b. When would it have been installed?	E2a. Likelihood that energy efficient equipment...		E2b. Share of energy efficient equipment that... ...would have been installed without the program	E2c. *[Entered by interviewer]* Free Ridership Value
a. Machine/Process	Y N DK R	F S	Months Yrs	%	and/or	%	%
b. HVAC (incl. furnaces, all boilers, A/Cs, chillers, EMS, etc.)	Y N DK R	F S	Months Yrs	%	and/or	%	%
c. Lighting	Y N DK R	F S					
d Controls (boiler controls, variable frequency drive controls	Y N DK R	F S	Months Yrs	%	and/or	%	%
e. Building envelope (incl. insulation, windows)	Y N DK R	F S	Months Yrs	%	and/or	%	%
f. Domestic hot water	Y N DK R	F S	Months Yrs	%	and/or	%	%
g. Refrigeration	Y N DK R	F S	Months Yrs	%	and/or	%	%
h. Agriculture	Y N DK R	F S	Months Yrs	%	and/or	%	%
i. Converted equipment from electricity to gas (fuel substitution)	Y N DK R	F S	Months Yrs	%	and/or	%	%
j. Other: _____	Y N DK R	F S	Months Yrs	%	and/or	%	%

E2d. *[Additional notes/caveats (e.g., explaining how/why free ridership value was chosen, if necessary)]*

_____

E3. Overall, across all equipment, that is the entire project, how much of these extra energy savings would have been achieved anyway, even without the assistance from [Enbridge/Union]. Please provide a lower and upper bound, and then your best estimate. {VIP}

[If needed for clarification:] **For example, 50% means that half of the extra savings from the energy efficient equipment would have been achieved anyway. Remember, I'm asking only about the extra savings from installing energy efficient equipment instead of standard equipment.**

E3A. Lower bound »» _____ % E3B. Upper bound »» _____ % E3C. Best estimate »» _____ %

2.9 PARTICIPANT INSIDE SPILLOVER

G1. Did the assistance from [Enbridge/Union] in any way influence you to help the customer install additional energy efficient equipment *at the same site* **that did not get reported to the program** (i.e., *equipment that would not have been installed without the influence of the program)***?**

1 Yes **»»** Continue to Question G2
2 No **»»** Skip to next section
-8 Don't know **»»** Skip to next section
-9 Refused **»»** Skip to next section

G2. [*If G1 = "yes"]* **What year did this equipment get installed?**
-8 Don't know
-9 Refused

G3. *[If G1 = "yes"]* **Please briefly describe how the program assistance from [Enbridge/Union] influenced the decisions to install additional energy efficient equipment at the same site.**
[Identify the types of equipment affected].

G4. Would you estimate the energy savings from this additional equipment to be less than, similar to, or more than the savings from the energy efficient equipment from the original project?

1 Less than the original project **»»**
G4a. About what percentage of the savings from the original project?
____*% [Enter a number less than 100%]*
2 About the same savings
2 More than the original project **»»**
G4b. About what percentage of the savings from the original project?
____*% [Enter a number greater than 100%]*
-8 Don't know
-9 Refused

G5. What share of the savings from this additional equipment can reasonably be attributed to the influence of the assistance from [Enbridge/Union]?

_____% *[100% or less]*

-8 Don't know

-9 Refused

[Interviewer may be able to complete this based on response to G3, or at least use G3 to check for consistency. Probe if inconsistent to ensure that respondent is correctly interpreting the question].

2.10 PARTICIPANT OUTSIDE SPILLOVER

H1. Did the assistance from [Enbridge/Union] in any way influence you to help the company to install any additional energy efficient equipment *at other jobs or facilities in Union Gas/Enbridge's Service Territory* beyond what they would have done otherwise?

[Don't include projects that participated in another Union/Enbridge program].

1 Yes »»

2 H1a. How many other facilities were influenced (that did not participate in Union Gas/Enbridge programs)? _____ **(**-8 Don't know, -9 Refused)

2 No »» Skip to next section

-8 Don't know »» Skip to next section

-9 Refused »» Skip to next section

H2. *[If H1 = "yes"]* **Please briefly describe how the assistance has influenced the decisions to install this equipment. (Probe to identify the types of equipment affected).**

_____

_____

H3. On average, would you estimate the energy savings from these other non-program projects to be less than, similar to, or more than the savings from the energy efficient equipment from the program-supported project that we've been discussing?

[E.g., if the same equipment was implemented in a facility twice as big, then savings would be200%. Be sure to emphasize that this is savings "on average" not in aggregate across the many buildings that might be affected].

1. Less than the Custom Projects project

H3A. About what percentage of the savings from the Custom Projects project?

____**% *[Enter a number less than 100%]***

2. About the same savings

3. More than the Custom Projects project

H3B. About what percentage of the savings from the Custom Projects project?

____**% *[Enter a number greater than 100%]***

-8 Don't know

-9 Refused

H4. What share of the savings from energy efficient equipment at these facilities can reasonably be attributed to the influence of the assistance from [Enbridge/Union]?

[Interviewer may be able to complete this based on response to H2, or at least use H2 to check for consistency. Probe if inconsistent to ensure that respondent is correctly interpreting thequestion].

_____% [100% or less]
-8 Don't know
-9 Refused

2.11 CLOSING

Those are all the questions I had.

Z9. Do you have any final comments you would like to make?

Thank you very much for your time!

Z10. Record all additional or supporting comments here.

2. CUSTOM PROJECTS AUDIT-ONLY SURVEY

2.1 CONVENTIONS

- Blue text is spoken.
- Italics text is instructions for the interviewer.
- Arial, bold font in brackets is skip instructions **[skip instructions]**
- Underlined in brackets are data from the sample: [sample data]

2.2 INTERVIEWER DATA

Interviewer ID
Survey Date
Survey Duration

2.3 SAMPLE DATA

Sample ID #
Contact Name
Contact Title
Contact Phone Number
Firm Name
Address
Company Phone Number
Audit Date
Recommended measure description (up to 5 per customer)
Recommended measure estimated gas savings (up to 5 per customer)

2.4 RECALL AUDIT, IDENTIFY RESPONDENT

[Enbridge] **According to our records, you had an energy or HVAC audit conducted by a third party professional that was co-funded by Enbridge Gas Distribution on [date].**

[Union] **According to our records, you had a boiler audit or feasibility study conducted with financial assistance provided by Union Gas on [date].**

1. Do you recall receiving that audit?

1. Yes..... 2. No -8. Do not know ..... -9. Refused

2. [If not Yes] **Can you suggest someone else at your company who might be familiar with the audit?**

1. Yes..... 2. No -8. Do not know ..... -9. Refused

If yes, get name and phone. Ask to speak with this person. Start again at the beginning.

2.5 MEASURE-SPECIFIC QUESTIONS

[The interviewer will repeat these questions for each audit recommendations (limit of 5 recommendations)].

3. The audit recommended that you implement [recommendation]. Do you recall that recommendation?

1. Yes..... 2. No -8. Do not know ..... -9. Refused

4. Has it been installed or implemented?

1. Yes..... 2. No
3. Partial ..... 4. Caveat
-8. Do not now..... -9. Refused

Partial = Some of the recommended equipment was installed but not all.
Caveat = Installed something related to the recommendation but not the exact thing recommended

[If Q4=3]

5. What percent of the items recommended or equipment did you install?

Enter percents as whole numbers, thus 90% would be entered as "90" NOT "0.9".

-8 Don't know..... -9 Refused

[If Q4=4]

6. The audit estimated that this item [or the actual equipment] would save [savings] cubic meters of gas. What percent of that estimated savings do you think you achieved?

Enter percents as whole numbers, thus 90% would be entered as "90" NOT "0.9".

-8 Don't know..... -9 Refused

[If not installed (Q4=2, -8, -9)]

6A. Why have you not implemented this recommendation yet?

1. We plan to but have not yet
2. Do not have the money
3. We do not have that equipment any more

4. Other
6AOther. **[Capture verbatim]**
-8 Don't know
-9 Refused

[If not installed (Q4=2, -8, -9), skip to the next recommendation. If last recommendation, skip to the next section].

7. When was it installed?
Record month and year installed
-8 Don't know..... -9 Refused

8. On a scale of 1 to 5 where 1 is "no influence" and 5 is "a great deal of influence", how much influence did the audit have in your decision to implement this item?
1 2 3 4 5 ..... -8 Don't know -9 Refused

9. What share of the savings from this item can reasonably be attributed to the influence of the audit?
Enter percents as whole numbers, thus 90% would be entered as "90" NOT "0.9".
-8 Don't know..... -9 Refused

2.6 FIRMOGRAPHICS

Now I have just a few questions about your company.

Z1. Approximately how large is the facility that received the audit? (square feet)?

1.	Up to 5,000	6.	50,001 to 100,000
2.	5,001 to 10,000	7.	100,001 to 200,000
3.	10,001 to 15,000	8.	200,001 to 500,000
4.	15,001 to 25,000	9.	Over 500,000
5.	25,001 to 50,000	-8	Do not know
		-9	Refused

Z2. Is the facility you work in independent, or part of a larger organization?
1. Independent
2. Part of a larger company
3. Other

Z3 Other. [Capture verbatim]
-8. Don't know
-9. Refused

Z3. Approximately how many full time employees or full time equivalents does your organization have at your locations in Ontario?

1.	Fewer than 5		
2.	5 to 9	5.	50 to 99
3.	10 to 19	6.	100 to 249
4.	20 to 49	7.	250 or More
		-8	Do not know
		-9	Refused

Those are all the questions I had. Thank you very much for your time!

3. CUSTOM PROJECTS NONPARTICIPANT SPILLOVER SURVEY

3.1 CONVENTIONS

- . Blue text is spoken.
- . Italics text is instructions for the interviewer.
- Arial, bold font in brackets is skip instructions: **[skip instructions]**
- Underlined in brackets are data from the sample: [sample data]

3.2 INTERVIEWER DATA

Interviewer ID
Survey Date
Survey Duration

3.3 SAMPLE DATA

Sample ID # (Per Sample File)
Contact Name
Contact Title
Contact Phone Number
Firm Name
Address
Company Phone Number
Dwtp Code Desc (Per Sample File)
Utility (Enbridge / Union Gas – Per Sample File)

3.4 QUALIFY RESPONDENT, EXPLAIN PURPOSE

Find someone knowledgeable about the company's buildings and equipment.

Q1. May I speak with the plant engineer or facilities manager?

1 Yes **[CONTINUE WITH INTRODUCTION]**
-8 Do Not Know **[PROMPT WITH DESCRIPTION OF APPROPRIATE CONTACT]**
-9 Refused **[THANK AND TERMINATE]**

DESCRIPTION OF APPROPRIATE CONTACT (If necessary):
I would like to speak with someone who is accountable for energy efficiency or who is responsible for your building's operation and is knowledgeable about your company's energy-using equipment, like space and water heating, ventilation, and industrial processes.

INTRODUCTION - Once you have the person on the phone (or if needed to find the person) say **I am calling on behalf of [Enbridge/Union Gas] to ask some questions about your plant or building operation and equipment to help [Enbridge/Union Gas] improve their energy efficiency programs.**

If necessary:
Confidentiality: **We will not report your individual answers to [Enbridge/Union Gas]. We only report results aggregated across all the respondents.**
Record
Q2. Name
Q3. Phone number

3.5 PARTICIPATION SCREENING

P1. Have you heard of [Enbridge/Union Gas'] energy efficiency program?

1 Yes **[SKIP TO P3]**
2 No
-8 Don't Know
-9 Refused

P2. The energy efficiency program is designed to provide incentives and technical assistance for implementing projects that save energy. Does that sound familiar?

1 Yes
2 No **[THANK AND TERMINATE]**
-8 Don't Know **[THANK AND TERMINATE]**
-9 Refused **[THANK AND TERMINATE]**

P3. Have you received financial incentives through the program to make energy efficiency improvements or conduct an energy audit?

1 Yes **[THANK AND TERMINATE]**
2 No
-8 Don't Know
-9 Refused

P4. Have you had contact with [Enbridge/Union Gas'] energy efficiency program through a Trade show, attending a workshop or receiving a publication?

1 Yes
2 No
-8 Don't Know
-9 Refused

3.6 EQUIPMENT SCREENING

S1. Have you modified or installed any of the following types of equipment since the beginning of 2005?

Read each option.

Equipment	Yes	No	Don't Know	Refused
a. Space Heating	1	2	-8	-9
b. Water Heating	1	2	-8	-9
c. Steam generation	1	2	-8	-9
d. Other kind of heating	1	2	-8	-9
e. Ventilation	1	2	-8	-9
f. Industrial process improvements	1	2	-8	-9
g. Building controls	1	2	-8	-9

[IF 'NO, DK or RF' TO ALL IN S1, THANK AND TERMINATE]
[FOR EACH 'YES' IN S1 ASK]

S2. When did you make that change?

Record month and year.

Equipment	Month	Year	Don't Know	Refused
a. Space Heating	-- --	-- -- -- --	-8	-9
b. Water Heating	-- --	-- -- -- --	-8	-9
c. Steam generation	-- --	-- -- -- --	-8	-9
d. Other kind of heating	-- --	-- -- -- --	-8	-9
e. Ventilation	-- --	-- -- -- --	-8	-9
f. Industrial process improvements	-- --	-- -- -- --	-8	-9
g. Building controls	-- --	-- -- -- --	-8	-9

3.7 PROGRAM INFLUENCE

[FOR EACH 'YES' IN S1 ASK]

G1. On a scale of 1 to 5 where 1 is "no influence" and 5 is "a great deal of influence", how much influence did the [Enbridge/Union Gas] energy efficiency program have in your decision to install or modify your [Equipment]?

Equipment	No Influence				Great Deal of Influence	Don't Know	Refused
a. Space Heating	1	2	3	4	5	-8	-9
b. Water Heating	1	2	3	4	5	-8	-9
c. Steam generation	1	2	3	4	5	-8	-9
d. Other kind of heating	1	2	3	4	5	-8	-9
e. Ventilation	1	2	3	4	5	-8	-9
f. Industrial process improvements	1	2	3	4	5	-8	-9
g. Building controls	1	2	3	4	5	-8	-9

[FOR EACH 'YES' IN S1 ASK]

G2. What share of the savings from this change can reasonably be attributed to the influence of the [Enbridge/Union Gas] energy efficiency program?

Enter percents as whole numbers, thus 90% would be entered as "90" NOT "0.9".

Equipment	%	Don't Know	Refused
a. Space Heating	-- -- --	-8	-9
b. Water Heating	-- -- --	-8	-9
c. Steam generation	-- -- --	-8	-9
d. Other kind of heating	-- -- --	-8	-9
e. Ventilation	-- -- --	-8	-9
f. Industrial process improvements	-- -- --	-8	-9
g. Building controls	-- -- --	-8	-9

[FOR EACH 'YES' IN S1 ASK]

G3. On a scale of 1 to 5 where 1 is "no influence" and 5 is "a great deal of influence", how much influence did your suppliers or contractors have in your decision to install or modify your [Equipment]?

Equipment	No Influence				Great Deal of Influence	Don't Know	Refused
a. Space Heating	1	2	3	4	5	-8	-9
b. Water Heating	1	2	3	4	5	-8	-9
c. Steam generation	1	2	3	4	5	-8	-9
d. Other kind of heating	1	2	3	4	5	-8	-9
e. Ventilation	1	2	3	4	5	-8	-9
f. Industrial process improvements	1	2	3	4	5	-8	-9
g. Building controls	1	2	3	4	5	-8	-9

3.8 FOLLOW-UP CALL OK?

[IF P4 > 2 OR P5 > 30% FOR ANY MEASURE FROM S1 THEN CONTINUE. ELSE, TERMINATE]

F1. We want to have one of our engineers ask you some technical questions about the equipment changes you made. Will that be OK?

1 Yes **[VERIFY/COLLECT CONTACT INFORMATION]**
2 No **[THANK AND TERMINATE]**
-8 Don't Know **[THANK AND TERMINATE]**
-9 Refused **[THANK AND TERMINATE]**

May I verify your:

F2. Name _____ [PRE-FILL WITH INFO FROM Q2]

F3. Phone number _____ [PRE-FILL WITH INFO FROM Q3]

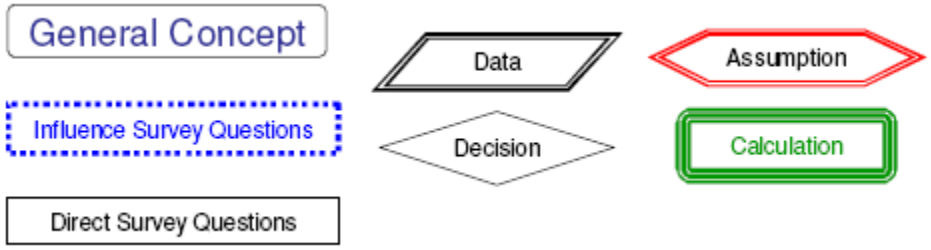
F4. Email Address _____

Those are all the questions I had. Thank you very much for your time!

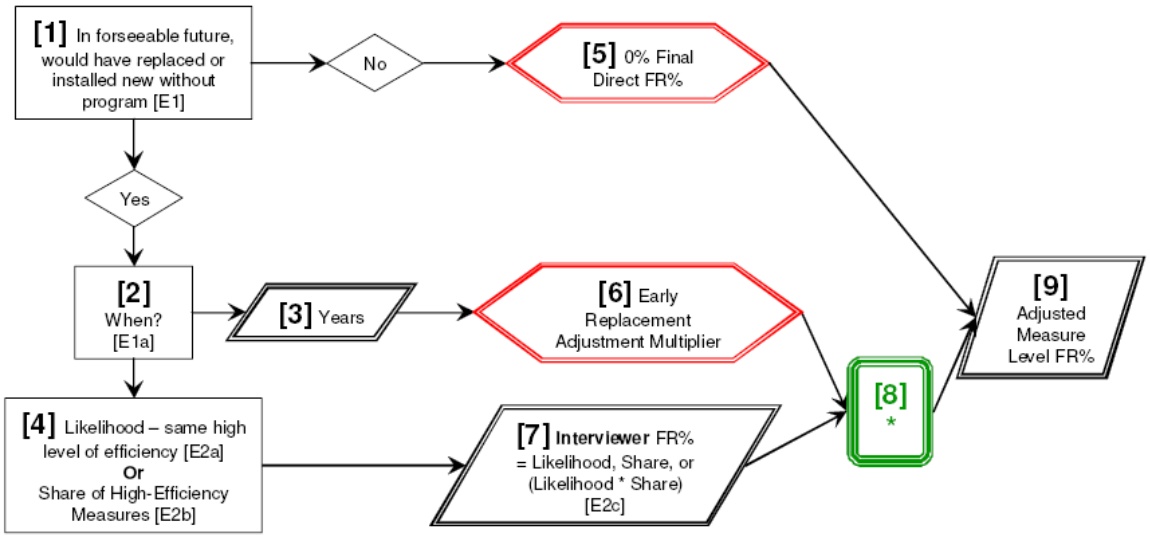
Annexe B

Méthodologie pour les opportunistes
Enbridge & Union Gas
Custom projects attribution study par Summit Blue Consulting

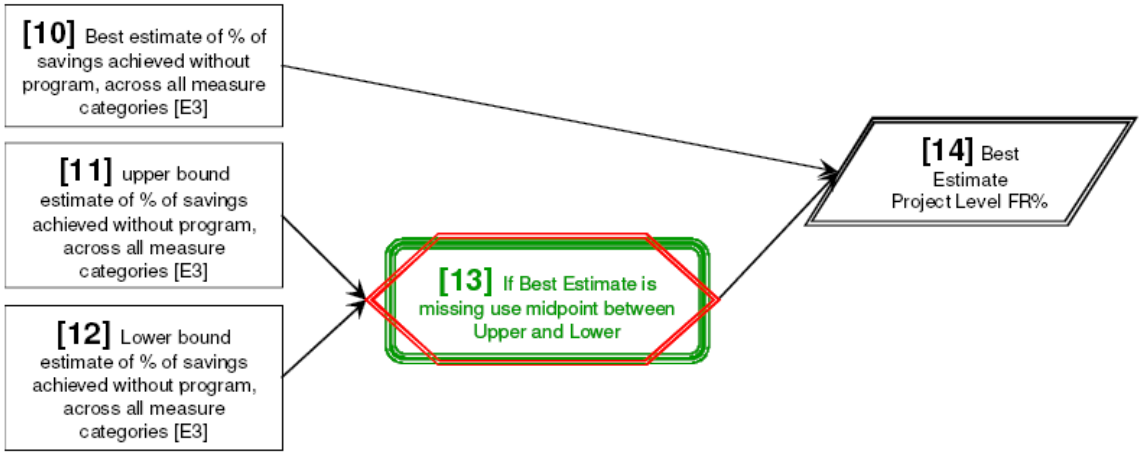
Key to symbols in the analysis diagrams



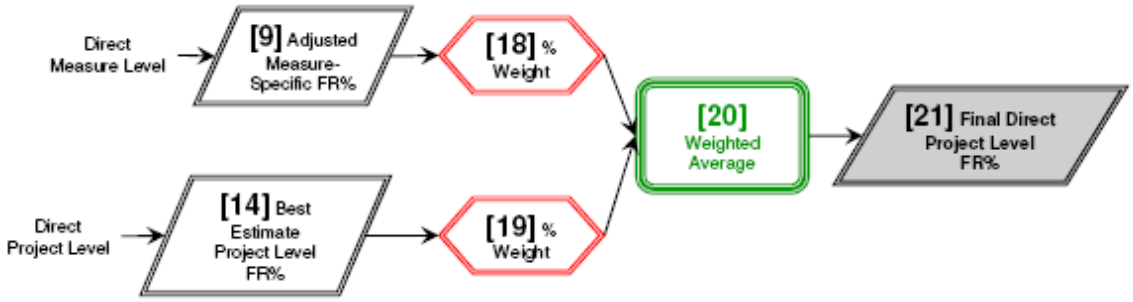
Free Ridership Analysis – Direct, Measure Level



Free Ridership Analysis – Direct, Project Level

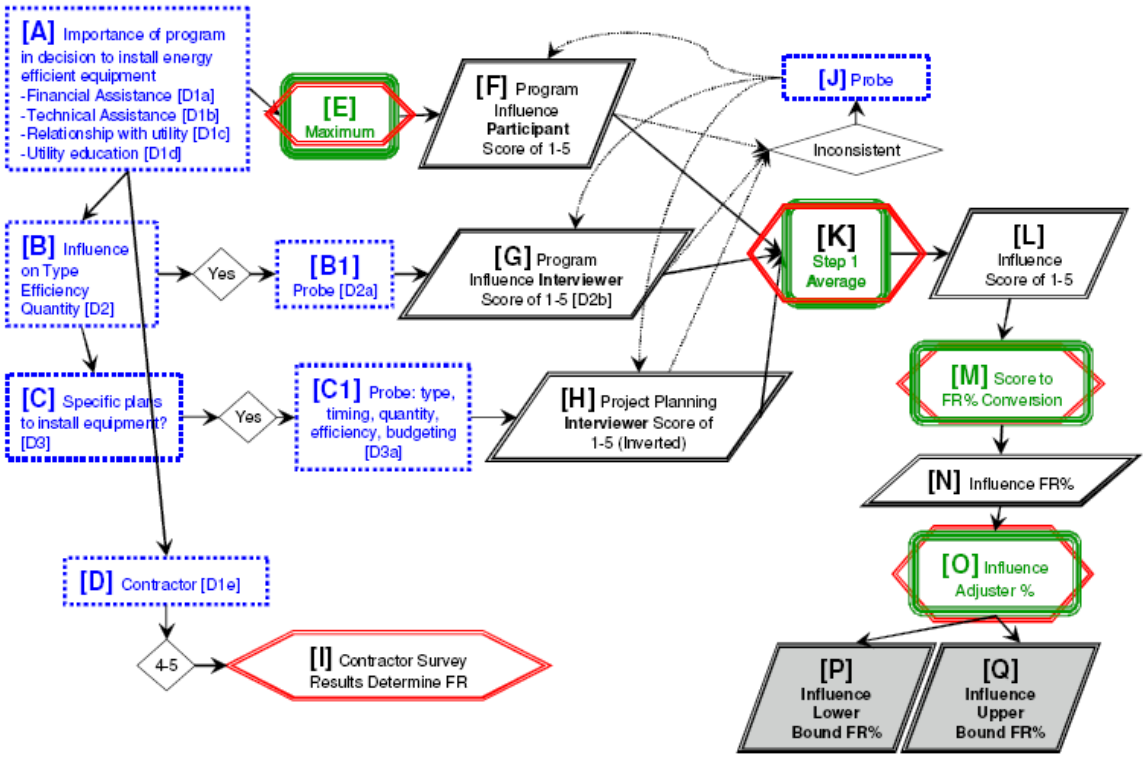


Free Ridership Analysis – Direct, Project Level

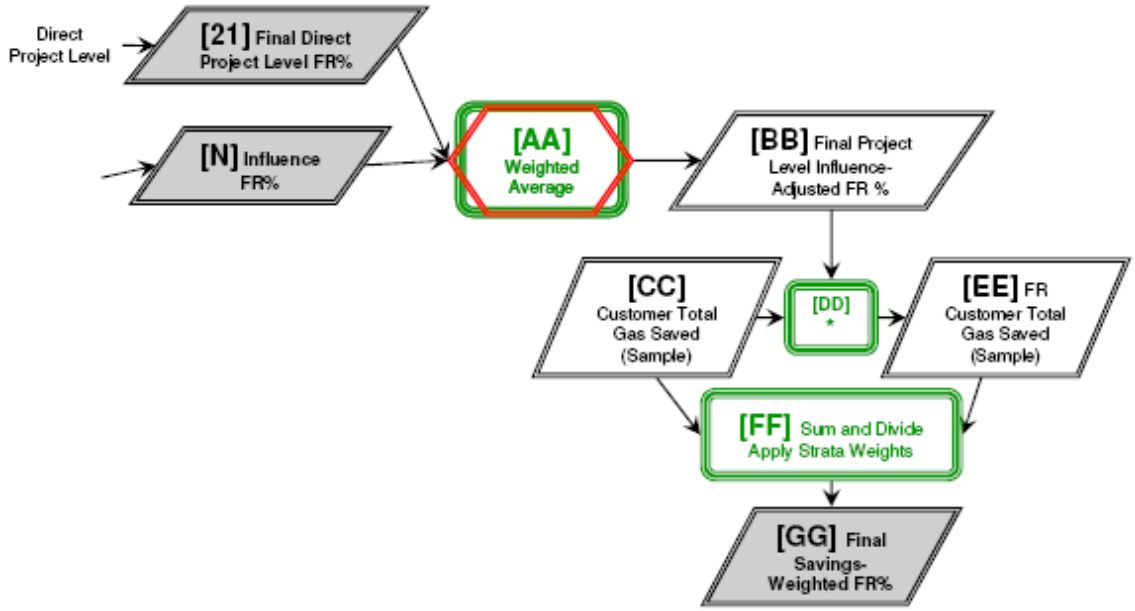


Changes: Measure-specific gas savings values were not available so [9] fed straight through to [18].

Free Ridership Analysis – Program Influence, Project Level



Free Ridership Analysis – Combined Direct and Program Influence Results



Changes: Because [21] was almost always significantly different from [N], the influence upper [Q] and lower bounds [P] had to be very wide to incorporate [21], which gave too much weight to [N]. It was decided that more appropriate approach was to average [21] and [N]

Annexe C

Questionnaires
Manitoba Hydro

Program: **Power Smart New Homes**

Q1. IF MB Hydro's Power Smart New Home Program had not existed, what type of house would you have built

1. Standard Home
2. R-2000 Home
3. Energy Efficienct Home

Q2. To what degree did MB Hydro's Power Smart New Home Program affect your decision regarding what type of home you built?

1. Strongly affected
2. Somewhat affected
3. Did not affect
4. Do not know

Program: **Home Insulation Program**

Q1. If MB Hydro's Home Insulation Rebate Progrma had not existed what level of insulation would you have installed?

1. Less than was installed
2. None
3. The same level that was installed
4. Do not know

Q2. To what degree, if any, did MB Hydro's Home Insulation Rebate Program affect your decision regarding the level of insulation to be installed for this project?

1. Strongly affected
2. Did not affect
3. Somewhat affected
4. Do not know

Program: **Residential High Efficiency Furnaces**

Q1. If MB Hydro's Residential High Efficiency Natural Gas Furnace and Boiler Replacement Rebate Program had not existed, what type of furnace/boiler would you have installed?

1. Mid-Efficient
2. High Efficient
3. None
4. Do not know

Q2. To what degree, if any, did MB Hydro's Residential High Efficiency Natural Gas Furnace and Boiler Replacement Rebate Program affect your decision regarding the type of furnace/boiler to be installed for this project?

1. Strongly affected
2. Somewhat affected
3. Did not affect
4. Do not know

Program: **Programmable Thermostats**

1. Please select the statement that ***best*** applies to your situation:
   - Without this promotion I would not have replaced my thermostat
   - I was thinking about replacing my thermostat, but this promotion made me decide to replace it earlier than planned
   - I was going to replace my thermostat anyways

Program: **Commercial HVAC**

Q1. To what degree, if any, did MB Hydro affect your decision to install energy efficient HVAC technology?

1. Strongly affected
2. Somewhat affected
3. Did not affect
4. Do not know

Program: **Commercial Rinse and Save**

Q1. How much did MB Hydro, or your installer, as a representative of MB Hydro, affect your decision to install an energy efficient spray valve?

Program: **Commercial Building Envelope**

Q1. How much did MB Hydro influence your decision?

1. Strongly affected
2. Somewhat affected
3. Did not affect
4. Do not know

Q2. If MB Hydro's incentive had not been available, would you have installed?

a) Same level of efficiency

b) Less Efficient

c) Don't Know

d) None

Program: **Industrial Natural Gas Optimization**

1. Did the Program's technical support and/or financial incentives influence your decision to implement the energy efficient measures in this Project?
a) Yes
b) No

2. If Yes, what do you think you would have done if the Program had not existed? Would you have...
a) implemented these measures at a later date? Yes No
b) implemented fewer measures at this time *(if multiple measures)*? Yes No
c) implemented less efficient measures at this time? Yes No

Annexe D

Détail Power Smart Silver level
Manitoba Hydro

Power Smart Silver level includes:

- R-50 attic insulation with raised heel truss;
- R-20 foundation insulation;
- ENERGY STAR programmable thermostat;
- High efficiency natural gas furnace, electric furnace or geothermal heat pump;
- Air tightness of 2 ACH/hr;
- Low flow shower head;
- Energy efficient lighting (preferred option) or choose one:
  - ECM (electrically commutated motor);
  - HRV (heat recovery ventilation);
  - Permanently wired car plug timer;
  - Electric hot water tank (min 2" insulation).
- Gas fireplace with electronic ignition (preferred option) or choose one:
  - ECM (electrically commutated motor);
  - HRV (heat recovery ventilation);
  - Electric hot water tank (min 2" insulation);
  - Energy efficient lighting in every room.

Source: http://www.hydro.mb.ca/your_home/new_home_levels.shtml

Annexe E

Questionnaire
Terasen Gas

Survey Questions

Note: This survey was administered to both participants and non-participants.

Terasen Gas
High Efficiency Furnace Rebate Program Evaluation

Q2. How old was the old furnace when it was replaced?

Years _____
Don't know _____

Q3. Was the old furnace still working and producing heat at the time it was replaced?

Yes _____
No _____
Don't know _____

Now I would like to ask about the efficiency of your new furnace.

- A high efficiency furnace has a minimum efficiency of 90% or more. It is characterized by venting the exhaust through the side of the house rather than through the roof. High efficiency furnaces are usually designated as ENERGY STAR qualified.
- A standard efficiency furnace has an efficiency rating of between 55% and 85%. It is characterized by venting the exhaust through the roof in a flue or chimney.

Q4. Was the new furnace a standard efficiency or a high efficiency unit?

(Note to interviewer, some respondents may refer to a standard efficiency furnace as a mid-efficiency unit). (IF RESPONDENT IS PROGRAM PARTICIPANT THE ANSWER SHOULD AUTOMATICALLY BE HIGH EFFICIENCY. IF NOT PROBE by reviewing the definitions of standard and high efficiency furnace.)

Standard efficiency _____
High efficiency _____
Don't know _____

Q5. Was the old furnace that was replaced a standard efficiency furnace or a high efficiency furnace?

Standard efficiency _____
High efficiency _____
Don't know _____

Q8. Does your new furnace have a variable speed fan motor? Furnaces equipped with these motors use less electricity but typically cost more than furnaces with standard motors. They can operate over a range of speeds when providing heat or circulating air. (NOTE: standard furnace motors (called PSC motors) typically operate at only one or two fixed speeds).

Yes: _____
No: _____
Don't know: _____

Q11a. Prior to installing this furnace, were you aware of, or were you considering, the purchase of, a variable speed furnace motor?

Aware of: _____
Considering purchase: _____
No: _____
Don't know: _____

NO/NOT AWARE/DK: SKIP TO Q13a

Q11b. How did you become aware of a variable speed furnace motor? (DO NOT READ – CHECK ALL THAT APPLY)

Contractor ____
Terasen Gas ____
BC Hydro ____
Power Smart ____
Other (RECORD) ____

Q17a-1. NON-PARTICIPANTS: Why did you not participate in the Terasen program? (DO NOT READ – CHECK ALL THAT APPLY)

Furnace did not qualify for rebate ____
Had planned to / didn't get around to it ____
Not worth the effort / Didn't want to bother ____
Rebate too small ____
Didn't know how to apply ____
Tried to – rebate application was rejected ____
Contractor was not registered with program ____
Other (SPECIFY) _____ ____

Q20. On a scale of one to five, where one is not at all important and five is very important, how important was the Terasen Gas incentive in your choice of a high efficiency furnace?

1 2 3 4 5 Don't know

Q34. Did you replace the furnace earlier than planned because of the availability of the rebate?

Yes ____ (CONTINUE WITH Q35)
No ____ (End)
Don't know ____ (End)

Q35. How many years earlier than planned did you replace the furnace because of the availability of the rebate?

Years _____
Don't know _____

Trade Ally Survey

Q2. We are interested in understanding the role of high efficiency furnaces in the market in BC and the impact of Terasen Gas' High Efficiency Furnace program. High efficiency furnaces have a AFUE rating of 90% or better. Terasen's furnace program ran from October 2005 to the end of March 2007.

About what percentage of your replacement furnace sales and installations were high efficiency before, during and since the program terminated at the end of March 2007? (PROBE: IF THE RESPONDENT SAYS "DON'T KNOW" INDICATE THAT AN ESTIMATE IS ALL WE ARE LOOKING FOR)

Before Program _____%
During Program _____%
After Program _____%
Don' know _____

Q3. We are also interested in the impact of the program on the sale of furnaces with variable speed blower motors. These motors may also be referred to as "ECM" motors. About what percentage of your furnace replacement sales and installations before, during and after the Terasen program included variable speed blower motors? (PROBE: IF THE RESPONDENT SAYS "DON'T KNOW" INDICATE THAT AN ESTIMATE IS ALL WE ARE LOOKING FOR)

Before Program _____%
During Program _____%
After Program _____%
Don't know _____

Q4. Unused

Now we would like to understand if the Terasen Gas incentive program encouraged customers to replace furnaces earlier than they would otherwise do so.

Q5a. About what percentage of the furnaces you replaced between October 2005 and March 2007 were eligible for a rebate from Terasen Gas or its partners?

Percentage ____ %
Don't know ____

Q6. What was the average remaining length of life of those furnaces that were replaced while still operational?

Years _____
Don't know _____

Q16. On a scale of one to five, where one is not at all important and five is very important, how important was the rebate in your customers' choice of furnace efficiency?

1 2 3 4 5 Don't know

Q20. The program included an additional incentive for the purchase of a furnace with an energy efficient variable speed blower motor. On a scale of one to five, where one is not at all important and five is very important, how important was the $ 100 incentive in your customers' choice of furnace blower motor efficiency?

1 2 3 4 5 Don't know

Annexe F

Méthodologie pour les opportunistes
Terasen Gas

Free Riders (Customer Survey)

To assess the degree of free riders, participants were asked to rate the importance of the Terasen financial incentive in their decision to purchase a high efficiency furnace or boiler using a scale of one to five where one meant “not at all important” and five meant “very important”. The results are summarized in Exhibit 1. To determine the importance of the program, a weighted average of the importance scores was calculated. The weights were selected to give the most weight to those indicating the incentive was very important (weight of 1.0) and the least weight to those who indicated it was not at all important (weight of 0). The weighted average of the importance scores was 0.57, meaning the free rider rate is 43% (calculated as 1 - Weighted Average Score).

Exhibit 1: Calculation of Free Riders – Influence of Overall Incentive on Participants

	Very Important (5)	(4)	(3)	(2)	Not at all Important (1)	DK/NR	Total	Free Rider Rate
Distribution of Responses (n=100)	26%	27%	17%	10%	13%	7%	100%	-
Weight	1	.75	.50	.25	0	0	-	-
Product	0.26	0.20	0.09	0.03	0.00	0.00	0.57	0.43

A similar weighting scheme was used with the importance ratings given to the role of the $100 incentive in the choice of a furnace with a variable speed blower motor (Exhibit 2). The free rider rate in this case was 43%, as well.

Exhibit 2: Influence of the VSM Incentive on Participant’s Choice of a VSM-equipped Furnace

	Very Important (5)	(4)	(3)	(2)	Not at all Important (1)	DK/NR	Total	Free Rider Rate
Distribution of Responses (n=69)	26%	26%	16%	13%	7%	12%	100%	-
Weight	1	.75	.5	.25	0	0	-	-
Product	0.26	0.20	0.08	0.03	0.00	0.00	0.57	0.43.

Free Riders (Trade Ally Survey)

Trade allies were asked to rate the importance of the Terasen rebate in their customers’ choice of furnace efficiency on a five point scale, where five represented “very important” and one was “not at all important”. Trade allies gave an average importance rating of 3.7 out of 5.0.

Exhibit 3 uses weights to derive the trade ally based estimate of free riders. A weight of 1 is given to the highest score, 0.75 to the next, 0.5 to the next, and so on. Weights of zero were assigned to an importance score of 1 or DK/NR. Using this method, 66% of trade allies felt the rebate influenced their customers’ choice of furnace efficiency, implying a free rider rate of 33%.

Exhibit 3: Trade Ally Estimate of Free Riders – Influence of Overall Incentive

	Very Important (5)	(4)	(3)	(2)	Not at all Important (1)	DK/NR	Total	Free Rider Rate
Distribution of Responses (n=50)	34%	24%	20%	14%	4%	4%	100%	-
Weight	1	.75	.50	.25	0	0	-	-
Product	0.34	0.18	0.10	0.04	0.00	0.00	0.66	0.33

Trade allies were next asked to rate the importance of the $100 rebate that was offered to customers who purchased a VSM-equipped furnace. Trade allies gave an average importance score of 3.2 out of 5.0. Using weights identical to those used with the previous question, it is estimated that 53% of customers receiving the VSM rebate would not have purchased the VSM-equipped furnace if the rebate had not been available (Exhibit 4). This suggests a free rider rate for the VSM incentive of 47%.

Exhibit 4: Trade Ally Estimate of Free Riders – Influence of VSM Incentive on Blower Motor Choice

	Very Important (5)	(4)	(3)	(2)	Not at all Important (1)	DK/NR	Total	Free Rider Rate
Distribution of Responses (n=50)	20%	26%	18%	18%	16%	2%	100%	-
Weight	1	.75	.5	.25	0	0	-	-
Product	0.20	0.20	0.09	0.05	0.00	0.00	0.53	0.47

The next section compares and discusses the relative merits of the free rider estimates derived from trade ally data versus those derived from the customer survey. Based on that discussion, the decision was made to use the customer survey based free rider estimates in the calculation of program impact

Free Riders – High Efficiency furnaces

The results from the participant and trade ally surveys provided two estimates of the free rider rate for high efficiency furnaces rebated under the Terasen program, with the participant survey suggesting 43% and the trade ally survey suggesting 33%. The relatively high proportion (58%) of non-participants who installed a high efficiency furnace but were unaware of Terasen's heating upgrade program (Exhibit 4) suggests that the free rider rate is probably closer to that estimated using participant survey data. The non-participant data should be interpreted with caution, as there is evidence that some have difficulty in accurately identifying the efficiency level of their furnace.

Exhibit 4: Non-Participant Furnace Efficiency Choice by Awareness of Terasen's Program

	Total	Aware	Unaware & DK/NR
Base (n)	*100*	*48*	*52*
Standard Efficiency	9%	48%	31%
High Efficiency	48%	8%	58%
DK/NR	13%	15%	12%
Total	100%	100%	100%

Totals may not sum due to rounding

Free Riders – Variable speed drives

The free rider rate for variable speed drives represents the proportion of participants who received the $100 incentive for purchasing a VSM-equipped furnace but would have purchased a VSM-equipped furnace without the incentive. Again, the participant and trade ally surveys provided two estimates of the free rider rate for VSMs. The participant survey suggested a free rider rate of 43% while the trade ally survey suggested a slightly higher rate of 47%. Which estimate is closer to the true rate is subject to interpretation.

The relatively high estimates are consistent with evidence that suggests the incentive was less instrumental in the decision to purchase than, for example, the potential to save energy or the recommendation of the furnace dealer/contractor. The customer survey indicates that 34% of participants and 36% of non-participants who purchased a VSM-equipped furnace indicated they were aware of VSMs or considering the purchase of VSMs prior to purchasing their furnace. These households are most likely to be classed as potential free riders. However, awareness, while fundamental to the consideration of a VSM in the first place, doesn't necessarily ensure the choice of VSM-equipped furnace in the final decision by the consumer.

Exhibit 5 looks at the issue from the non-participant's perspective. The data suggest that 53% of non-participants who were unaware of Terasen's Heating System Upgrade Program purchased a furnace with a VSM. While this lends support to the use of the trade ally estimate, the free rider estimate of 43% derived from the participant survey will be used for determination of net impact because it was derived in a manner consistent with the free rider rate for high efficiency furnaces in general.

Exhibit 5: Non-Participant Blower Motor Choice by Awareness of Terasen's Program

	Total	Aware	Unaware & DK/NR
Base (n)	*70*	*32*	*38*
PSC	44%	1%	7%
VSM	6%	9%	53%
Total	100%	100%	100%

Annexe G

Méthodologie pour les bénévoles
Terasen Gas

Spillover

For the furnace program evaluations, spillover was defined as the additional savings that result from encouraging customers to upgrade their furnace earlier than they otherwise would have.

The situation is that, by regulation, a customer can only install a mid efficiency furnace (~80% AFUE) or an ENERGY STAR furnace (>90% AFUE). When a customer upgrades from a standard efficiency furnace (~70% AFUE) to a high efficiency furnace, the program can only take credit for the savings that result from moving from a mid efficient furnace to an ENERGY STAR furnace. If the customer had replaced the furnace without the program, a mid-efficiency furnace would have been installed. Hence the savings resulting from moving from a standard efficiency furnace to a mid-efficiency furnace accrue to the regulations while the savings resulting from moving from a mid-efficiency furnace to a high efficiency furnace accrue to the program (subject to netting of free riders and spillover).

However, if the program induces the customer to install the ENERGY STAR furnace earlier than they would otherwise have done, then the program can take credit for the savings between the standard efficiency furnace and the mid-efficiency furnace for the period of time that the furnace was installed earlier than it would have been done in the absence of the program. This period of "early install" is assessed by determining, on average, how long the participants installed the furnace early and subtract it from how long non-participants installed the furnace early. Contractor questions on the remaining life of the furnace are used as a validity check. This additional energy savings has been classed as spillover in these evaluations.

In the Terasen evaluations, no attempt has been made to estimate a share of the non-participants purchase of ENERGY STAR programs that could be attributed to the program. While some jurisdictions may do this, Terasen has avoided the attempt as the results would be hard to substantiate. The furnace is a significant financial investment, and the incentives were of a significant amount that few if any people would be influenced by the program but then not apply for the incentives.

There are several reasons why households replace their old furnaces. Some furnaces cease working and require expensive repairs, while others are diagnosed as needing expensive repairs in the not-so-distant future. Some households will choose to replace their older, inefficient furnaces to realize energy savings or to improve the comfort in the home. However, change-outs such as these typically occur only when the furnace is nearing the end of its useful life Finally, some households made the decision to replace their furnace earlier than planned because of the availability of incentives, such as those offered through the Terasen Heating System Upgrade Program. The energy savings realized from advancing the decision to replace the furnace that

can be attributed to Terasen's program are termed spillover savings. They are calculated by taking the difference in the efficiency levels of the replaced furnace and the new furnace, and multiplying the savings by the average number of years of advancement.

Spillover savings for Terasen's 2005-07 Heating System Upgrade Program were determined by querying participants about the operational status of their old furnace at the time of replacement, and then asking them whether the program caused them to advance their decision to replace the furnace. Finally, those participants who answered in the affirmative to both questions were asked to indicate by how many years they advanced their decision.

The customer survey found that 91% of participants' furnaces and 77% of non-participants' furnaces were still working and producing heat when replaced. The average age of the furnace at the time of replacement for participants was 24.1 years versus 24.7 years. These statistics confirm that participants were more likely to replace their furnaces prior to failure, and at an earlier age. Thirty percent (30%) of participants confirmed that they replaced their furnaces earlier than planned because of the availability of the rebate. They indicated an average advancement of 2.3 years.

Annexe H

Questionnaire
Union Gas

Introduction
Hello, my name is [interviewer name], and I'm calling on behalf of Union Gas regarding [**quantity**] low flow pre-rinse spray nozzle that your business received around [**date**] free of charge [**from your Union Gas account manager/installed by Ecolab].** [IF ECOLAB INSTALLATION: These low-flow spray nozzles were provided free of charge through the Union Gas Energy Savings Program.]

May I speak with **[named respondent**]?
1 Yes
2 Not available [IF R NOT AVAILABLE, ASK FOR BEST TIME TO REACH R AND SCHEDULE CALL BACK]

I'm with PA Consulting Group, an independent research firm. We have been hired to talk with some businesses that received these low flow pre-rinse spray nozzles. I'm not selling anything; I'd just like to ask your opinion about [the/these] low-flow spray nozzles. I'd like to assure you that your responses will be kept confidential and your name will not be revealed to anyone.

(**Why are you conducting this study**: Studies like this help Union Gas and its partners better understand customers' awareness of and interest in energy programs and services.

(**Timing**: This survey should take about 10 minutes of your time. Is this a good time for us to speak with you? *IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070*)

A: Draft Participant Survey…

(NOTE: For all questions, "don't know" and "refused" will be coded if offered as a response.)

Verification of receipt and installation

S1 According to the records I have, your business received [**quantity**] low flow pre-rinse spray nozzle(s) around [**date**] free of charge [**from your Union Gas account manager/ installed by Ecolab].** Is this correct?
1 Yes (SKIP TO S4)
2 No, wrong quantity (SKIP TO S3)
3 No, did not receive any
D DON'T KNOW
R REFUSED

S2 Is there someone else at your business we could speak to who might remember receiving the [**quantity**] low flow pre-rinse spray nozzle(s)?
1 Yes GET CONTACT NAME AND CALL BACK OR TRANSFER AND RESTART
2 No THANK AND TERMINATE

S3 (IF QUANTITY IS INCORRECT IN S1) How many did you receive?
_____

S4 Were you involved in the decision to accept [**this/these**] low-flow pre-rinse spray nozzle(s) for this business?
1 Yes
2 No GET CONTACT NAME AND CALL BACK OR TRANSFER AND RESTART

S5a (IF ECOLAB) Did the representative from Ecolab install the nozzle(s) or leave [**it/them**] with you to install?
1 Auditor installed
2 Left with me to install
D DON'T KNOW
R REFUSED

S5b (IF ECOLAB) Before today, were you aware that the low-flow spray nozzle(s) were provided to Ecolab as part of a Union Gas program?

1 Yes
2 No
D DON'T KNOW
R REFUSED

S6 (IF QUANTITY=1) Is the low-flow spray nozzle currently installed at your business at (**location**)? (RECORD ONE NUMBER)

1 Yes (SKIP TO S13)
2 No
D DON'T KNOW (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)
R REFUSED (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)

S7 (IF QUANTITY=1 AND S6=NO) Which of the following best describes what happened to this low-flow spray nozzle? (READ LIST AND RECORD ONE RESPONSE)

1 It is installed at some other location (SKIP TO S9)
2 It was installed at your business but is now permanently removed (example: broke, don't like, etc.) (SKIP TO S10)
3 It is in storage (SKIP TO S12)
4 It was sold or given away (SKIP TO S9)
5 Something else (SPECIFY)
D DON'T KNOW
R REFUSED

S8 (IF QUANTITY>1) Now, I would like to understand what you did with the [**quantity**] low-flow spray nozzles**.** (READ LIST, RECORD NUMBER)

a____ How many are currently installed at your business
(IF RESPONSE=QUANTITY, SKIP TO F1)
b____ How many are installed at some other location?
c____ How many were installed at your business but are now permanently removed (example: broke, don't like, etc.)?
d____ How many are in storage?
e____ How many were sold or given away?
f____ Something else? (SPECIFY)

S9a (ASK IF S6=1 or S8a>0) I'd like you to think about how much these low-flow spray nozzle(s) are used each day you are open.

D DON'T KNOW
R REFUSED
(IF ONE NOZZLE) In total, how many minutes or hours of the day is this low-flow spray nozzle used for pre-rinsing? PROBE: Your best estimate is fine.
____ minutes OR ____ hours
(IF MULTIPLE NOZZLES)) In total, how many minutes or hours of the day is **[the first/the second/the third/the fourth]** low-flow spray nozzle used for pre-rinsing? RECORD RESPONSE FOR EACH NOZZLE. PROBE: Your best estimate is fine.
____ minutes OR ____ hours

S9b (ASK IF S7=1, S=5, S8b>0, S8e>0) [**Is the/Are these**] low-flow spray nozzle(s) located in Union Gas's service territory?

1 Yes
2 No
D DON'T KNOW
R REFUSED
Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A NOZZLE AFTER INSTALLED, S7=2 or S8c>0)

S10 Now let's talk about [**quantity]** low-flow spray nozzle(s) you said [**was/were**] installed but have since been removed. Why was it removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

1 Equipment failed
2 Didn't clean properly
3 Wrong size—too small or too large
4 Low water flow
5 Other, Specify:_____
D DON'T KNOW
R REFUSED

S11 What did you replace the low-flow spray nozzle(s) with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

1 With a new low-flow spray nozzle(s)
2 With a less efficient spray nozzle
3 Re-installed old spray nozzle
4 Other, Specify: _____
D DON'T KNOW
R REFUSED

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE, S7=3 or S8d>0)

S12 When do you think you will install the low-flow spray nozzle(s)? Will you likely install it within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

1 Within the next 3 months
2 3 to 6 months from now
3 6 to 12 months from now
4 More than a year from now
5 Never
D DON'T KNOW
R REFUSED

Context and Free Ridership

NOTE: THESE QUESTIONS ARE ONLY ASKED IF THE SPRAY NOZZLE IS INSTALLED AND IN USE

F1 What factors motivated you to have the low-flow spray nozzle(s) installed? (DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?)

1 It was free
2 Wanted to save energy
3 Wanted to save water
4 Wanted to reduce costs (energy or water)
5 Because of past experience with another Union Gas program
6 Because the Union Gas account manager recommended it
7 Because the Ecolab representative recommended it
8 Environmental concerns
9 Old nozzle didn't work properly
10 Other (SPECIFY)
D DON'T KNOW
R REFUSED

F2 Is this the first time that you have used a low-flow spray nozzle at your business?

1 Yes
2 No
D DON'T KNOW
R REFUSED

F3 At the time that you first heard about the free low-flow spray nozzle, had you . . . ? (READ LIST)

a. Already been thinking about purchasing a new spray nozzle? 1 Yes 2 No DK R
b. Already begun collecting information about spray nozzles? 1 Yes 2 No DK R
c. Already decided to buy a spray nozzle? 1 Yes 2 No DK R
d. (DON'T READ) Other (SPECIFY) 1 Yes 2 No DK R

F3b Did the low-flow spray nozzle(s) replace existing spray nozzles?

1 Yes
2 No (SKIP TO F4)
D DON'T KNOW (SKIP TO F4)
R REFUSED (SKIP TO F4)

F3c How would you describe the working condition of the old spray nozzle(s). Was it/Were they in good, fair, poor, or non-working condition?

1 Good
2 Fair
3 Poor
4 Non-working
D DON'T KNOW
R REFUSED

F3d [Was the/Were any of the] old spray nozzle(s) low-flow?

1 Yes
2 No
D DON'T KNOW
R REFUSED

F4 The value of the spray nozzles is around $250 Canadian. If the low-flow spray nozzle(s) had not been provided free of charge [**by Union Gas/ and installed by the Ecolab representative**], would you have purchased any spray nozzles at the same time on your own?

1 Yes (SKIP TO F6)
2 No
D DON'T KNOW (SKIP TO F6)
R REFUSED (SKIP TO F6)

F5 Would you have purchased and installed it at a later time?

1 Yes
2 No (SKIP TO F7)
D DON'T KNOW (SKIP TO F6)
R REFUSED (SKIP TO F6)

F5b How much later would you have purchased and installed any spray nozzles?

_____ Years (AND/OR) _____Months
D DON'T KNOW
R REFUSED

F6 [IF QUANTITY > 1] If the low-flow spray nozzle(s) had not been provided free or charge [**by Union Gas/by the Ecolab representative**], would you have purchased and installed the same quantity as what you received through the program?

1 Yes (SKIP TO F7)
2 No
D DON'T KNOW (SKIP TO F7)
R REFUSED (SKIP TO F7)

F6b How many/much would you have purchased and installed without the program?

_____ (RECORD NUMBER)
D DON'T KNOW
R REFUSED

F7 Prior to hearing from [**the Union Gas account manager/the Ecolab representative**], did you know that pre-rinse spray nozzles came in low-flow models?

1 Yes
2 No
D DON'T KNOW
R REFUSED

F8 If the low-flow spray nozzle(s) had not been provided free of charge [**by Union Gas/and installed by the Ecolab representative**], would you have purchased a standard pre-rinse spray nozzle or the same low-flow model as what you received through the program?

1 Standard model
2 Same low-flow model
D DON'T KNOW
R REFUSED

F9 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same low-flow spray nozzle(s) within a year if you had not received it free of charge from [**Union Gas/Union Gas and the Ecolab representative**]?

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW
R REFUSED

F10 Please tell me in your own words what influence, if any, [**Union Gas/Union Gas and the Ecolab representative**] had on your decision to install the low-flow spray nozzle(s) at the time you did? (RECORD VERBATIM RESPONSE BELOW)

_____

Like Spillover

LS1 Since you received the free low-flow spray nozzle(s), have you purchased and installed any additional low-flow spray nozzles on your own without any assistance from [**Union Gas/Union Gas or Ecolab**] either at this facility or at other locations served by Union Gas?

1 Yes, only at this location
2 Yes, only at other locations
3 Yes, at this facility and other locations
4 No (SKIP TO RR1)
D DON'T KNOW (SKIP TO RR1)
R REFUSED (SKIP TO RR1)

LS2 How many low-flow spray nozzles did you purchase on your own? (PROBE: Was this installed at [**address**] or some other location served by Union Gas?)

_____ at this address
_____ at another facility
D DON'T KNOW
R REFUSED

LS3 What is the gallons per minute flow rate on [**this/these**] low-flow spray nozzle(s)? (RECORD GPM FOR EACH NOZZLE)

_____ gpm
D DON'T KNOW
R REFUSED

LS4 (IF DON'T KNOW OR REFUSED TO LS3) How do you know that the spray nozzle(s) you purchased [**is/are**] a low-flow model? (RECORD VERBATIM)

_____

LS5 I'm going to read a statement about the low-flow spray nozzle(s) that you purchased on your own, without any assistance from [**Union Gas/Union Gas or Ecolab**]. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement. My experience with the low-flow spray nozzle I received through the Union Gas program influenced my decision to install more low-flow spray nozzles on my own.

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW
R REFUSED

LS6 Why did you purchase [**this/these**] low-flow spray nozzle(s) without any financial assistance from [**Union Gas/Union Gas or Ecolab**]? (DO NOT READ; INDICATE ALL THAT APPLY)

1 Takes too long to get
2 No time to participate, needed equipment immediately
3 Thought the offer had ended
4 Nobody told me I could get any assistance
5 Other (SPECIFY) _____
D DON'T KNOW
R REFUSED

Other Recommended Measures and Non-like Spillover

RR1 Did the [**Union Gas account manager/Ecolab representative**] recommend other energy efficient appliances or equipment you could install at this location to make it more energy efficient?

1 Yes
2 No (SKIP TO ST1)
D DON'T KNOW (SKIP TO ST1)
R REFUSED (SKIP TO ST1)

RR2 What recommendations did they make? (PROBE: ANYTHING ELSE?)

_____
D DON'T KNOW
R REFUSED

RR3 Have you installed any of the energy saving appliances or equipment that they recommended?

1 Yes
2 No [SKIP TO ST1]
D DON'T KNOW [SKIP TO ST1]
R REFUSED [SKIP TO ST1]

RR4 What have you installed? [RECORD ALL THAT APPLY]

_____
D DON'T KNOW
R REFUSED
(REPEAT RR5-RR10 FOR EACH MEASURE INSTALLED IN RR4)

RR5 (REPEAT QUESTION FOR EACH INSTALLED MEASURE) Is the new [**installed equipment**] energy efficient?

1 Yes
2 No (SKIP TO RR7)
D DK (SKIP TO RR7)
R REFUSED (SKIP TO RR7)

RR6 (REPEAT QUESTION FOR EACH INSTALLED MEASURE IF RR5=1) How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

_____

RR7 (ASK FOR EACH MEASURE INSTALLED) Did you receive a rebate for this **[installed measure**] through a Union Gas program?

1 Yes
2 No (SKIP TO NEXT INSTALLED MEASURE)
D DON'T KNOW (SKIP TO NEXT INSTALLED MEASURE)
R REFUSED (SKIP TO NEXT INSTALLED MEASURE)

RR8 (ASK FOR EACH MEASURE INSTALLED) Did you install this **[installed measure]** as a direct result of the [**Union Gas account manager's/Ecolab representative's**] recommendation or are you doing this for some other reason?

1 Because of manager/representative's recommendation
2 For some other reason (SPECIFY)
D DON'T KNOW
R REFUSED

RR9 (ASK IF INSTALLED EQUIPMENT IN RR4 AND DID NOT RECEIVE REBATE THROUGH UNION GAS) I'm going to read a statement about the **[installed measure]** that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement. My experience with the free low-flow spray nozzle and the recommendations of [**Union Gas/Ecolab**] influenced my decision to purchase the energy efficient **[installed measure]** on my own.

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW
R REFUSED

RR10 (ASK IF INSTALLED EQUIPMENT IN RR4 AND DID NOT RECEIVE REBATE THROUGH UNION GAS) Why did you purchase this **[installed measure]** without any financial assistance through a Union Gas program? (DO NOT READ; INDICATE ALL THAT APPLY)

1 Too much paperwork
2 Takes too long to get approval
3 No time to participate, needed equipment immediately
4 The program had ended
5 The equipment would not qualify (PROBE: WHY NOT?) _____
6 The amount of the rebate wasn't important enough
7 Didn't know about any program or assistance
8 Other (SPECIFY) _____
D DON'T KNOW
R REFUSED

Satisfaction

ST1 On a scale of 0 to 10, with 0 being not at all satisfied and 10 being extremely satisfied, how satisfied are you with the low-flow spray rinse nozzle that you received?

_____
DK DON'T KNOW
R REFUSED

ST2 Why did you rate your satisfaction as a [**fill with number from ST1**]? [RECORD RESPONSE]

_____

Building Characteristics

B1 Which of the following best describes the ownership of your company? Is it a . . . ?

1 Corporate Chain with Multiple Locations
2 Business Franchise with Multiple Locations
3 Independent Food Service Business with One Location
4 Independent Food Service Business with Several Locations
5 Other (specify: _____)
D DON'T KNOW
R REFUSED

B2 How would you describe your organization?3 PROBE: Is it a . . . ? (READ LIST)

1 Catering
2 Church
3 Education/school
4 Fast food
5 Food service
6 Full service restaurant
7 Grocery
8 Healthcare
9 Hotel/Motel
10 Institution
11 LTC
12 Other (SPECIFY)
13 Recreation
14 Retail
D DON'T KNOW
R REFUSED

B3 (IF B1=MULTIPLE LOCATIONS) About how many other locations are there?

_____
D DON'T KNOW
R REFUSED

B4 What times of the day are you open to the public at [**address**]? (CODE IN MILITARY TIME)

0000 to 0000 Closed
0000 to 2400 Open 24 hours
8888 to 8888 Hours vary
D DON'T KNOW
R REFUSED
Monday _____ to _____
Tuesday _____ to _____
Wednesday _____ to _____
Thursday _____ to _____
Friday _____ to _____
Saturday _____ to _____
Sunday _____ to _____

B4b How many days of the year are you open to the public?

_____days
D DON'T KNOW
R REFUSED

B5 How many meals do you prepare in a typical day?

_____ meals
D DON'T KNOW
R REFUSED

B5 How many full time and part time employees do you employ at [**address**]?

_____ full time
_____ part time

B6 Including the pre-rinse spray nozzles that you received from [**Union Gas/Ecolab**], how many total spray nozzles do you use at this location for pre-rinsing?

_____
D DON'T KNOW
R REFUSED

B6b And how many sinks do you use for pre-rinsing?

_____

B7 Does your organization have written specifications or guidelines for new equipment in terms of efficiency levels?

1 Yes
2 No
D DON'T KNOW
R REFUSED

B8 Compared to other food service providers similar to yours, would you consider yourself to be small, medium, or large in terms of revenues

1 Small
2 Medium
3 Large

B9 What is your title?

1 Owner/operator
2 President
3 Manager
4 Chef
5 Other

Thank you for your time. Do you have any final comments or questions?

RECORD GENDER:

1 Male
2 Female

Annexe I

Questionnaire complet
(Méthodologie standardisée)
Consortium d'utilités américaines

APPENDIX F: PARTICIPANT FREE-RIDERSHIP AND "LIKE" SPILLOVER QUESTIONS AND NON-PARTICIPANT SPILLOVER QUESTIONS

(NOTE: ALL VARIABLES IN [BRACKETS] SHOULD BE AUTOMATICALLY FILLED IN BY THE CATI SYSTEM BASED ON INFORMATION FROM THE PROGRAM DATABASE AND/OR RESPONSES TO QUESTIONS.)

F.1 DETAILED FREE-RIDERSHIP AND "LIKE" SPILLOVER QUESTIONS – PROGRAM PARTICIPANTS

F.1.1 INTRODUCTION

I1 Hello, my name is _____, and I'm calling on behalf of [sponsor]. May I speak with [contact name]? Are you the person at your firm who was most involved in making the decision to install equipment through the [program] in [time period] at [address]? (NOTE: IF R SAYS THEY WERE ONE OF SEVERAL PEOPLE, PROBE TO ENSURE THEY WERE A PRIMARY DECISION MAKER)

1 Yes
2 No
-9 REFUSES (PROBE IF NO OR REFUSES: Who at your company did make the decision to install this equipment through the program?) UNABLE TO IDENTIFY DECISION-MAKER, THANK AND END INTERVIEW)

I2 Do you work directly for [company] or are you a contractor who provides design and/or installation services for [company]?

1 Employee (CONTINUE WITH PARTICIPANT SURVEY)
2 Vendor/Contractor (SWITCH TO DESIGNER/VENDOR SURVEY)

I'm with [data collection firm], an independent research firm. We have been hired to follow-up with customers who participated in this program to learn about their experiences. I'm not selling anything; I'd just like to ask you about the equipment you installed at [service address].

I'd also like to assure you that your responses will be kept confidential by [sponsor] and that this should take less than 15 minutes, depending on the amount of equipment installed through the program.

(WHY ARE YOU CONDUCTING THIS STUDY: Studies like this help [sponsor] adjust their programs to better meet customers' needs.)

(TIMING: This survey should take less than 10 to 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT [TOLL-FREE NUMBER].)

(SALES CONCERN: You should have received a letter from [sponsor] explaining the purpose of this call. I want to assure you that I am not selling anything; I simply want to understand what factors were important to your company when deciding to purchase new equipment through this program. Your responses will be kept confidential by our firm and [sponsor]. If you would like to talk with someone from [sponsor], you can call [sponsor contact] at [phone number].)

F.1.2 IDENTIFICATION OF DECISION-MAKER

For the next set of questions, I'd like to review the equipment you installed through [program].

R1 Do you recall installing [measure 1 description] through the [program] in [time period]?

1 Yes
2 No
3 This equipment was never installed (DO NOT ASK FR/SO FOR THIS MEASURE)
-8 DON'T KNOW (PROBE IF NO OR DK: This [measure 1 description] included [fill with detailed description provided by Sponsor.] Is there someone else at your facility who would be more familiar with this equipment?)

R2 Do you recall installing [measure 2 description] through the [program] in [time period]?

1 Yes
2 No
3 This equipment was never installed (DO NOT ASK FR/SO FOR THIS MEASURE)
-8 DON'T KNOW (PROBE IF NO OR DK: This [measure 2 description] included [fill with detailed description provided by Sponsor.] Is there someone else at your facility who would be more familiar with this equipment?)

(Q1-S4 WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

(IF TWO MEASURES: First, I'd like to ask you some questions about your decision to install [measure 1 description]. Then, I'll repeat these questions for [measure 2 description].)

(IF TWO MEASURES, BEFORE SECOND ITERATION: Now, I'd like to ask you some questions about your decision to install [measure 2 description].)

Q1 Were you involved in the decision-making process at the design stage when the [measure # description] was specified and agreed upon for this facility?

1 Yes
2 No---------->(PROBE IF NO: At what point in the process did you become involved and what was your role?)

Timing:_____

Role:_____
(IF THIS PERSON IS CLEARLY NOT THE DECISION-MAKER, SKIP TO Q4)

Q2 (ONCE DECISION MAKER IS IDENTIFIED) Some companies work with a design professional, project architect, engineer, equipment contractor, or a utility account manager as part of the project design phase. Who do you feel was most responsible for recommending or specifying the exact type of high efficiency [measure # description] to install through the [program]. (PROBE: Was it someone within your firm; an outside Design Professional, contractor, or a manufacturer's representative; or a utility account manager with whom you worked?) (INDICATE ALL THAT APPLY)

1 Someone in my firm
2 Design Professional
3 Contractor
4 Manufacturer's Rep
5 Utility account manager
-8 DON'T KNOW
-9 REFUSES

Q3 (IF Q2 IS SOMEONE OTHER THAN A PERSON AT THE COMPANY) On a scale of 1 to 5, with 1 being no influence and 5 being a great deal of influence, how much influence did this person have on your company's decision to install high efficiency equipment so that it would qualify for the program? _____
(NOTE: IF Q3 GE 4 ASK Q4; ELSE SKIP TO P1)

Q4 We would like to talk to the person who was most influential in recommending or specifying the energy efficient [measure # description] to install through the program. (PROBE: This individual may be the project architect, engineer, equipment contractor, or the utility account manager.) Could you give me the name and telephone number of this person?

1 Yes---------->Contact name: _____
Title: _____
Company name: _____
Address: _____
Phone number: ( )_____
2 No, refused to give this information
3 No, no outside advisor involved
-8 DON'T KNOW INFORMATION
(NOTE: THE INTERVIEW SHOULD BE CONTINUED WITH THE RESPONDENT, ALTHOUGH EVERY ATTEMPT SHOULD BE MADE TO REACH THIS OTHER PERSON TO VERIFY THAT THEY WERE THE DECISION-MAKER AND TO COMPLETE THE SURVEY WITH THEM. IF A COMPLETED SURVEY IS OBTAINED FROM THIS OTHER PERSON, THEIR RESPONSES WILL BE USED FOR THE FREE-RIDER ESTIMATES.)

(IF TWO MEASURES: CONTINUE TO PROJECT OVERVIEW, FR & SO BEFORE REPEATING Q1-Q4.)

PROJECT OVERVIEW

(P1-P4B WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

P1 (IF RECEIVED TA FOR MEASURE #) [Sponsor] paid [X%] of the [measure # technical assessment cost] that it cost to conduct a Technical Assessment Study at your facility to determine the cost-effectiveness of installing [measure # description]. If the utility had not paid a portion of the cost, would your company have paid about [measure # technical assessment cost] to have a similar Technical Assessment Study done within one year of when the study took place?

1 Yes
2 No
-8 DON'T KNOW

P2 What factors motivated your firm to install this [measure # description] through the [program] in [time period]? (DO NOT READ; INDICATE ALL THAT APPLY)

1 To reduce maintenance costs
2 To reduce initial purchase costs
3 The program incentive
4 The technical assistance offered
5 To reduce energy bills/save money
6 To reduce efficiency/save energy
7 Took the advice of my installer/designer/contractor/utility rep
8 Needed to replace non-working equipment
9 Because of my past program participation
10 Other _____
-8 DON'T KNOW
-9 REFUSES

P3 Did your firm have specific plans set aside to install any of this equipment before you talked with anyone about the program?

1 Yes
2 Yes, but don't remember specifics (SKIP TO F1)
3 No (SKIP TO F1)
-8 DON'T KNOW (SKIP TO F1)
-9 REFUSES (SKIP TO F1)
P3b (IF YES) What plans existed? (Probe for timing, quantity and efficiency)
Timing:_____
Quantity:_____
Efficiency:_____
Other:_____

P4 (IF P3=YES) Was it necessary to change the type or efficiency level of equipment in your plans in order to qualify for the [program]?

1 Yes
2 Yes, but don't remember specifics (SKIP TO F1)
3 No (SKIP TO F1)
-8 DON'T KNOW (SKIP TO F1)
-9 REFUSES (SKIP TO F1)

P4b (IF YES) What changes were necessary? (PROBE FOR TIMING, QUANTITY AND EFFICIENCY)

Timing:_____
Quantity:_____
Efficiency:_____
Other:_____

(IF TWO MEASURES: CONTINUE TO FR & SO BEFORE REPEATING PROJECT OVERVIEW.)

F.1.3 FREE-RIDERSHIP QUESTIONS
(F1-F11c WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

According to our records, the total cost for all [measure # description] installed was about [measure # total project cost]. [Sponsor] paid about [measure # sponsor contribution] of the total cost of this equipment.

[NON-TECHNICAL ASSESSMENT: You might also have received some technical assistance from a utility rep, engineer, or equipment vendor.]

[TECHNICAL ASSESSMENT: The program also contributed toward the cost of a Technical Assessment Study.]

F1 If [sponsor] had not paid a portion of the equipment cost or provided any technical assistance or education through the [program], would your company have purchased any [measure # description] within one year of when it was installed?

1 Yes
2 No (SKIP TO F8)
-8 DON'T KNOW (SKIP TO F8)

F2 Without the program [contribution/incentive/rebate], technical assistance, or education, would your company have purchased the exact same quantity of [measure # description] within one year?

1 Yes (SKIP TO F3)
2 No
-8 DON'T KNOW

F2b What percent of this [measure # description] do you think your company would have purchased on its own within one year? (PROBE: Would you have purchased about one-fourth (25%), one-half (50%), three fourths (75%) of what you installed through the program?)

_____%
-8 DON'T KNOW

F3 You said your company would have installed at least some [measure # description] on its own if the program had not been available. What percent of this equipment would have been of the same efficiency or higher efficiency as what was installed through the program? (PROBE: Would about one-fourth (25%), one-half (50%), three fourths (75%) been of equal efficiency?)

_____% (IF RESPONSE NE 100% OR F2 NE 1 SKIP TO F10)
-8 DON'T KNOW

(NOTE: IF F1=1 AND F2=1 AND F3=100%, ASK F4-F7)

F4 Now I want to focus on what it would have cost your company to install this equipment on its own without the program. Do you think your company would have paid the additional [measure # sponsor contribution], on top of the amount you already paid, to install the same quantity and efficiency of [measure # description] within one year?

1 Yes (SKIP TO F8)
2 No
-8 DON'T KNOW

F5 How would you have adjusted your purchase to accommodate the fact that you wouldn't have paid all of the costs? Would you have purchased less equipment, lower efficiency equipment, or done something else? (INDICATE ALL THAT APPLY—ASK BOTH F7 AND F8 IF APPROPRIATE)

1 Purchased less equipment (ASK F6)
2 Purchased lower efficiency of equipment (ASK F7)
3 Done something else (SPECIFY AND SKIP TO F10)
-8 DON'T KNOW (SKIP TO F10)

F6 What percent of the [measure # description] do you think your company would have purchased on its own at that same time? (PROBE: Would you have purchased about one-fourth (25%), one-half (50%), three fourths (75%) of what you installed through the program?)

_____% (IF F5=2, SKIP TO F7; ELSE SKIP TO F10)
-8 DON'T KNOW

F7 What percent of the [measure # description] that your company would have purchased on its own would have been of a lower efficiency than what was installed through the program? (PROBE: Would about one-fourth (25%), one-half (50%), three fourths (75%) been of lower efficiency?)

_____% (SKIP TO F10)
-8 DON'T KNOW (SKIP TO F10)

F.1.4 CONSISTENCY QUESTIONS

(NOTE: ASK F8 IF (F1=2 OR F1=-8) OR IF (F1=1 AND F2=1 AND F3=100% AND F4=1); ELSE SKIP TO F10)

F8 Was the information or advice you received from a contractor, design team, utility rep, or an engineer a crucial factor in your decision to install this high efficiency equipment through the program at the time you did?

0 NA, none received
1 Yes
2 No
-8 DON'T KNOW

(NOTE: ASK F9 IF ((F1=2 OR F1=-8) AND ((P3=1 AND P4=3) OR F8=2)) OR IF ((F1=1 AND F2=1 AND F3=100% AND F4=1) AND (P3=3 OR (P3=1 AND P4=1) OR F8=1)); ELSE SKIP TO F10)

F9 I'd like to better understand your purchase decision. Maybe you could just describe in your own words what impact, if any, the program had on your decision to install the energy efficient [measure # description] at the time you did? (RECORD VERBATIM THE CLARIFICATION—PROBE AS NEEDED TO UNDERSTAND REASON)

(NOTE: IF TWO MEASURES: ASK F10 ONLY AFTER FIRST MEASURE; ON SECOND MEASURE ASK F11a-F11c IF F10=1)

F10 Did your company participate in any of [sponsor's] energy efficiency programs before you installed energy efficient equipment around [date]?

1 Yes
2 No (SKIP TO NEXT SECTION)
-8 DON'T KNOW (SKIP TO NEXT SECTION)

F11a I'm going to read you 3 statements. For each statement, please tell me whether you agree or disagree that this statement applies to your company. There are no right or wrong answers; we just want your honest opinion.

The energy savings performance of equipment installed through the [program] in earlier years was a primary reason why we decided to install energy efficient [measure # description] through the program in [year].

0 Disagree
1 Agree

Because of our previous experience with the performance of energy efficient equipment installed through the [program], and what we learned by participating in the program…

F11b … we asked our contractor to look into energy efficient options for [measure # description] when developing project plans in [year].

0 Disagree
1 Agree

F11c … we took into account the cost-effectiveness of energy efficient [measure # description] when evaluating different options in [year].

0 Disagree
1 Agree

F.1.5 PARTICIPANT "LIKE" SPILLOVER
(S1-S4 WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

S1 Now I'd like you to think of the time since you participated in the [program] in [time period]. Has your company purchased and installed any [measure # description] on its own for this or other facilities served by [sponsor]?

1 Yes
2 No (SKIP TO END OF SECTION)
-8 DON'T KNOW (SKIP TO END OF SECTION)

S1b Was this equipment of the same efficiency level or a higher level of efficiency as the equipment you installed through the program?

1 Yes
2 No (SKIP TO END OF SECTION)
-8 DON'T KNOW (SKIP TO END OF SECTION)

S2 About how much energy efficient [measure # description] did your company purchase on its own since participating in this program in [time period]? (PROBE: We're looking for a percent compared to the amount installed through the program. For example, was it about one-fourth of what you installed through the program, one-half of what you installed through the program, the same amount as you installed through the program, twice as much as what you installed through the program, or some other amount?)

_____%
-8 DON'T KNOW

S3 Did … influence your decision to install some or all this efficient [measure # description] on your own?

a. A recommendation by the contractor or designer who you worked with under the [program] 1 Yes 2 No
b. Your experience with the energy efficient equipment installed through the [program] 1 Yes 2 No
c. Your participation in any past program offered by [retail company] 1 Yes 2 No

S4 Why didn't you purchase this [equipment] through a [sponsor] program? (DO NOT READ; INDICATE ALL THAT APPLY)

1 Too much paperwork
2 Cost savings not worth the effort of applying
3 Takes too long for approval
4 The equipment would not qualify _Why not?_____
5 Vendor does not participate in program
6 Outside [retail company] service territory
7 No time – needed equipment immediately
8 Thought the program ended
9 Didn’t know the equipment qualified under another program
10 Just didn’t think of it
11 Unable to get rebate (unsure why)
12 Other (SPECIFY) -8 DON'T KNOW

(IF TWO MEASURES: RETURN TO Q1; ELSE CONTINUE TO NEXT SECTION.)
This concludes the FR & SO survey. If sponsor adds additional questions, such as program satisfaction or firmographics, they should be inserted here.

F.2 DETAILED FREE-RIDERSHIP AND NON-PARTICIPANT SPILLOVER QUESTIONS - PROGRAM DESIGNER/VENDORS

F.2.1 INTRODUCTION

I1 (IF CALLING A DESIGNER/VENDOR RECOMMENDED BY PROGRAM PARTICIPANT WHO SAID THE DESIGNER/VENDOR WAS MOST KNOWLEDGEABLE ABOUT THE DECISION) Hello, my name is _____, and I'm calling on behalf of [sponsor]. May I speak with [contact name]? Are you the person most familiar with the work your firm completed for [company] at [service address] as part of [sponsor's] [program] in [time period]? (NOTE: IF RESPONDENT SAYS THEY WERE ONE OF SEVERAL PEOPLE, PROBE TO ENSURE THEY WERE THE PRIMARY DECISION MAKER)

1 Yes
2 No---->(PROBE: Who at your company should I speak with about your work for [company]?)
3 NA, no work through program---->(THANK AND END INTERVIEW)

I2 (IF CALLING A DESIGNER/VENDOR SAMPLED ONLY FOR THE NONPARTICIPANT SPILLOVER) Hello, my name is _____, and I'm calling on behalf of [sponsor]. May I speak with [contact name]? Are you the person most familiar with the work your firm has completed as part of [sponsor's] [programs] in [time period]? (NOTE: IF RESPONDENT SAYS THEY WERE ONE OF SEVERAL PEOPLE, PROBE TO ENSURE THEY ARE THE MOST KNOWLEDGEABLE)

1 Yes
2 No---->(PROBE: Who at your company should I speak with about your work for [company]?)
3 NA, no work through program---->(THANK AND END INTERVIEW)

I'm with [data collection firm], an independent research firm. We have been hired to talk with some of the design professionals and contractors who were involved with the [program] in [time period]. I'm not selling anything; I'd just like to ask you about the types of equipment that have been recommended, sold, or installed by your firm through this program in [time period].

I'd also like to assure you that your responses will be kept confidential by [sponsor] and that this should take less than 15 minutes.

(WHY ARE YOU CONDUCTING THIS STUDY: Studies like this help [sponsor] adjust their programs to better meet customers' needs.)

(TIMING: This survey should take less than 10 to 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT [TOLL-FREE NUMBER].)

(SALES CONCERN: I want to assure you that I am not selling anything; I simply want to understand what factors are important to your company when recommending or specifying new equipment. Your responses will be kept confidential by our firm and [sponsor]. If you would like to talk with someone from [sponsor], you can call [sponsor contact] at [phone number].)

(IF CALLING A DESIGNER/VENDOR RECOMMENDED BY PROGRAM PARTICIPANT,

CONTINUE WITH FREE-RIDERSHIP; ELSE SKIP TO NON-PARTICIPANT SPILLOVER.)

FREE-RIDERSHIP—DESIGNER/VENDOR QUESTIONS

(NOTE THAT THIS SECTION IS A PARALLEL VERSION OF THE PARTICIPANT FR SURVEY. THE PARALLEL QUESTIONS ARE NUMBERED THE SAME. QUESTIONS FROM THE PARTICIPANT FR SURVEY THAT ARE INAPPROPRIATE FOR DESIGNERS/VENDORS HAVE BEEN OMITTED.)

F.2.2 IDENTIFICATION OF DECISION-MAKER

For the next set of questions, I'd like to review the equipment you recommended or specified through [program] for [company].

R1 Do you recall recommending or specifying [measure 1 description] for [company] at [service address] through the [program] in [time period]?

1 Yes
2 No
3 This equipment was never installed (DO NOT ASK FR FOR THIS MEASURE)
DON'T KNOW (PROBE IF NO OR DK: This [measure 1 description] included [fill with detailed description provided by Sponsor.] Is there someone else in your firm who would be more familiar with this project?)

R2 Do you recall recommending or specifying [measure 2 description] for [company] at [service address] through the [program] in [time period]?

1 Yes
2 No
3 This equipment was never installed (DO NOT ASK FR FOR THIS MEASURE)
-8 DON'T KNOW (PROBE IF NO OR DK: This [measure 2 description] included [fill with detailed description provided by Sponsor.] Is there someone else in your firm who would be more familiar with this project?)

(Q1-F10 WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

(IF TWO MEASURES: First, I'd like to ask you some questions about your decision to recommend/specify [measure 1 description]. Then, I'll repeat these questions for [measure 2 description].)

(IF TWO MEASURES, BEFORE SECOND ITERATION: Now, I'd like to ask you some questions about your decision to recommend/specify [measure 2 description].)

Q1 Were you involved at the design stage when the [measure # description] was specified and agreed upon for this facility?

1 Yes
2 No---------->(PROBE IF NO: At what point in the process did you become involved and what was your role?)

Timing:_____

Role:_____

(IF THIS PERSON IS CLEARLY NOT THE DECISION-MAKER, ASK FOR SOMEONE ELSE IN COMPANY; ELSE SKIP TO NON-PARTICIPANT SPILLOVER)

Q3 On a scale of 1 to 5, with 1 being no influence and 5 being a great deal of influence, how much influence did your firm have on specifying the efficiency levels or features of [measure # description] so that it would qualify for the program? _____

(NOTE: IF Q3 < 4 AND NO OTHER MEASURE, SKIP TO NON-PARTICIPANT SPILLOVER; ELSE SKIP TO P1)

(IF TWO MEASURES: CONTINUE TO PROJECT OVERVIEW & FR BEFORE REPEATING Q1-Q4.)

F.2.3 PROJECT OVERVIEW

(P1-P4B WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

The next set of questions ask about what you think your company would have recommended or specified for [company] if the utility had not offered the [program] in [time period].

P1 (IF RECEIVED TA FOR MEASURE #) [Sponsor] paid [X%] of the [measure # technical assessment cost] that it cost to conduct a Technical Assessment Study at [company] to determine the cost-effectiveness of installing [measure # description]. If the utility had not paid a portion of the cost, do you think [company] would have paid about [measure # technical assessment cost] to have a similar Technical Assessment Study done within one year of when the study took place?

1 Yes
2 No
-8 DON'T KNOW

P3 As far as you know, did [company] have specific plans to install this [measure # description] before they learned about the program?[24]

1 Yes
2 Yes, but don't remember specifics (SKIP TO F1)
3 No (SKIP TO F1)
-8 DON'T KNOW (SKIP TO F1)
-9 REFUSES (SKIP TO F1)

P3b (IF YES) What plans existed? (Probe for timing, quantity and efficiency)

Timing:_____
Quantity:_____
Efficiency:_____
Other:_____

P4 (IF P3=YES) Was it necessary to change the type or efficiency level of equipment in order to qualify for the [program]?

1 Yes
2 Yes, but don't remember specifics (SKIP TO F1)
3 No (SKIP TO F1)
-8 DON'T KNOW (SKIP TO F1)
-9 REFUSES (SKIP TO F1)

P4b (IF YES) What changes were necessary? (PROBE FOR TIMING, QUANTITY AND EFFICIENCY)

Timing:_____
Quantity:_____
Efficiency:_____
Other:_____

(IF TWO MEASURES: CONTINUE TO FR BEFORE REPEATING PROJECT OVERVIEW.)

F.2.4 FREE-RIDERSHIP QUESTIONS
(F1-F10 WILL BE ASKED OF EACH MEASURE CATEGORY RECALLED.)

According to our records, the total project cost for all [measure # description] installed was about [measure # total project cost]. [Sponsor] paid about [measure # sponsor contribution] of the total cost of this equipment.

[TECHNICAL ASSESSMENT: The program also contributed toward the cost of a Technical Assessment Study.]

F1 Would your company have recommended or specified any [measure # description] to [company] within one year of when it was installed if they had not been able to receive this utility [contribution/incentive/rebate] or any technical assistance or education through the [program]?

1 Yes
2 No (SKIP TO F8)
-8 DON'T KNOW (SKIP TO F8)

F2 Without the program [contribution/incentive/rebate], technical assistance or education, would your company have recommended or specified the exact same quantity of [measure # description] for [company] within one year?

1 Yes (SKIP TO F3)
2 No
-8 DON'T KNOW

F2b What percent of this [measure # description] do you think your company would have recommended/specified? (PROBE: Would you have recommended/specified about one-fourth (25%), one-half (50%), three fourths (75%) of what you installed through the program?)

_____%
-8 DON'T KNOW

F3 You said you would have recommended/specified at least some [measure # description] for [company] if the program had not been available. What percent of this equipment that you would have recommended/specified would have been of the same efficiency or higher efficiency as what was installed through the program? (PROBE: Would about one-fourth (25%), one-half (50%), three fourths (75%) been of equal efficiency?)

_____% (IF RESPONSE NE 100% OR F2 NE 1 SKIP TO F10)
-8 DON'T KNOW

(NOTE: IF F1=1 AND F2=1 AND F3=100%, ASK F4-F7)

F4 Now I want to focus on what it would have cost [company] to install this equipment on its own without the program. Do you think [company] would have paid the additional [measure # sponsor contribution], on top of the amount they already paid, to install the same quantity and efficiency of [measure # description] within one year?

1 Yes (SKIP TO F8)
2 No
-8 DON'T KNOW

F5 How do you think [company] would have adjusted their purchase to accommodate the fact that they wouldn't have paid all of the costs? Would they have purchased less equipment, lower efficiency equipment, or done something else? (INDICATE ALL THAT APPLY—ASK BOTH F7 AND F8 IF APPROPRIATE)

1 Purchased less equipment (ASK F6)
2 Purchased lower efficiency of equipment (ASK F7)
3 Done something else (SPECIFY AND SKIP TO F10)
-8 DON'T KNOW (SKIP TO F10)

F6 What percent of the [measure # description] do you think [company] would have purchased on its own at that same time? (PROBE: Would they have purchased about one-fourth (25%), one-half (50%), three fourths (75%) of what they installed through the program?)

_____% (IF F5=2, SKIP TO F7; ELSE SKIP TO F10)
-8 DON'T KNOW

F7 What percent of the [measure # description] that [company] would have purchased on its own would have been of a lower efficiency than what was installed through the program? (PROBE: Would about one-fourth (25%), one-half (50%), three fourths (75%) been of lower efficiency?)

_____% (SKIP TO F10)
-8 DON'T KNOW (SKIP TO F10)

F.2.5 CONSISTENCY QUESTIONS

(NOTE: ASK F8 IF (F1=2 OR F1=-8) OR IF (F1=1 AND F2=1 AND F3=100% AND F4=1); ELSE SKIP TO F10)

F8 Was the technical assistance or advice you or another designer/vendor provided to [company] a crucial factor in their decision to install this high efficiency equipment through the program at the time they did?

0 NA, none received
1 Yes
2 No
-8 DON'T KNOW

(NOTE: ASK F9 IF ((F1=2 OR F1=-8) AND ((P3=1 AND P4=3) OR F8=2)) OR IF ((F1=1 AND F2=1 AND F3=100% AND F4=1) AND (P3=3 OR (P3=1 AND P4=1) OR F8=1)); ELSE SKIP TO F10)

F9 I'd like to better understand [company's] purchase decision. Maybe you could just describe in your own words what impact, if any, the program had on the installation of energy efficient [measure # description]? (RECORD VERBATIM THE CLARIFICATION—PROBE AS NEEDED TO UNDERSTAND REASON)

F10 On a scale of 1 to 5, with 1 being 'not at all important and 5 being 'very important', how important was your previous experience with a [sponsor] program when making the decision to recommend or install [measure # description] for this customer?

_____
-8 DON'T KNOW
-9 NA – No previous program experience

(IF TWO MEASURES: RETURN TO Q1; ELSE CONTINUE TO NON-PARTICIPANT SO.)

F.2.6 NON-PARTICIPANT SPILLOVER—DESIGNER/VENDOR QUESTIONS

(ASK NP1 FOR EVERY MEASURE CATEGORY IN PROGRAM BEFORE ASKING NP2-NP8.)

NP1 What types of equipment did your firm specify, sell, and/or install in Massachusetts to customers of [sponsor] in [time period]? Did you specify, sell, and/or install [ask of all measure categories in the program]?

1 Yes
2 No
-8 DON'T KNOW

(NP2-NP8 WILL BE ASKED FOR EACH MEASURE WHERE NP1=1)

NP2 What percent of all the [measure category] would have been eligible for the [program]? (IF DK, "What percent of the equipment your firm specified and/or installed in these types of projects would have been of the same level or a higher efficiency level as the equipment installed through these programs?")

_____%

NP3 (IF NP2 >0%) What percent of the program-eligible [measure category] did <u>not</u> receive an incentive through the [program]?

_____%

ASK NP4-NP8 OF EACH MEASURE WHERE NP3 > 0%)

NP4 In [time period], you mentioned that about [___%] of the [measure category] you specified and/or installed would have been eligible for an incentive through the [program], but did not receive an incentive. What are the main reasons why your firm did not request a customer incentive from the utility for this energy saving equipment you specified/installed outside the program? (DO NOT READ—INDICATE ALL THAT APPLY; PROBE, WHAT ELSE?)

1 not worth the paperwork for our firm to help the customer apply for the incentive
2 customer did not want the hassle of applying for the incentive
3 takes too long for approval
4 reached the maximum amount I could install through the program
5 the equipment would not qualify _Why not?_____
6 vendor does not participate in program
7 outside [retail company] service territory
8 no time – needed equipment immediately
9 thought the program ended
10 didn't know the equipment qualified under another program
11 just didn't think of it
12 unable to get rebate (unsure why)
13 other (SPECIFY)
-8 DON'T KNOW

NP5 I'm going to read you 3 statements. For each statement, please tell me whether you agree or disagree that this statement applies to your company. There are no right or wrong answers; we just want your honest opinion.

Our past experience specifying or installing [measure category] through the program has convinced us that this equipment is cost effective or beneficial even without a program incentive.

0 Disagree
1 Agree

Because of our previous experience with the performance of energy efficient equipment installed through the [program], and what we learned through the program…

NP6 …we are better able to identify opportunities to improve the energy efficiency of [measure category].

0 Disagree
1 Agree

NP7 …we are more likely to discuss energy efficient options with all of our customers when developing project plans for [measure category].

0 Disagree
1 Agree

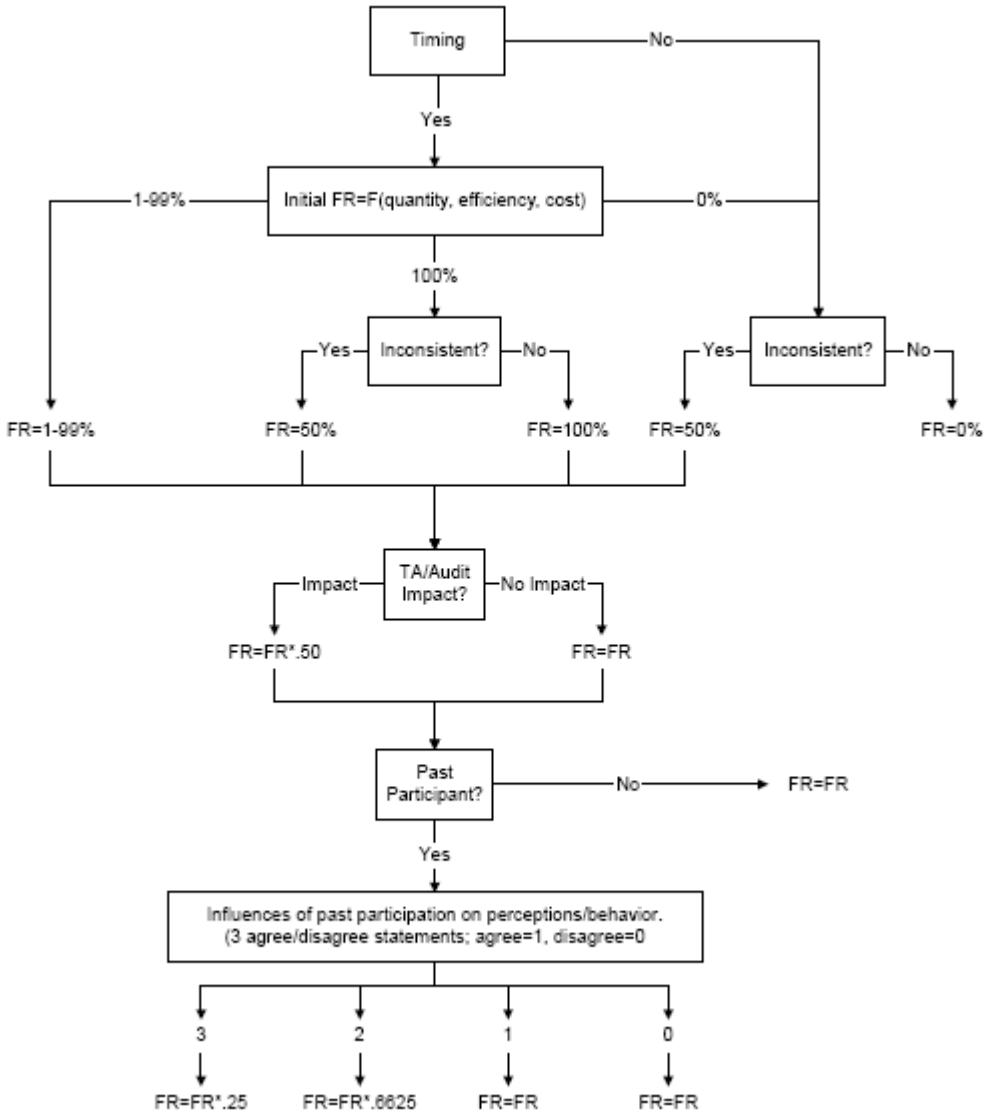
(IF ((NP5=0 AND NP6=0 AND NP7=0 AND NP4=5) OR (NP5=1 AND NP6=1 AND NP7=1 AND NP4 NE 5)) SKIP TO END; ELSE ASK NP8)

NP8 Maybe you could just describe in your own words what impact, if any, the [program] had on your decision to specify or install energy efficient [measure # description] outside of the program? (RECORD VERBATIM THE CLARIFICATION—PROBE IF DOESN'T MAKE SENSE; DO NOT CODE RESPONSES)

_____

Annexe J

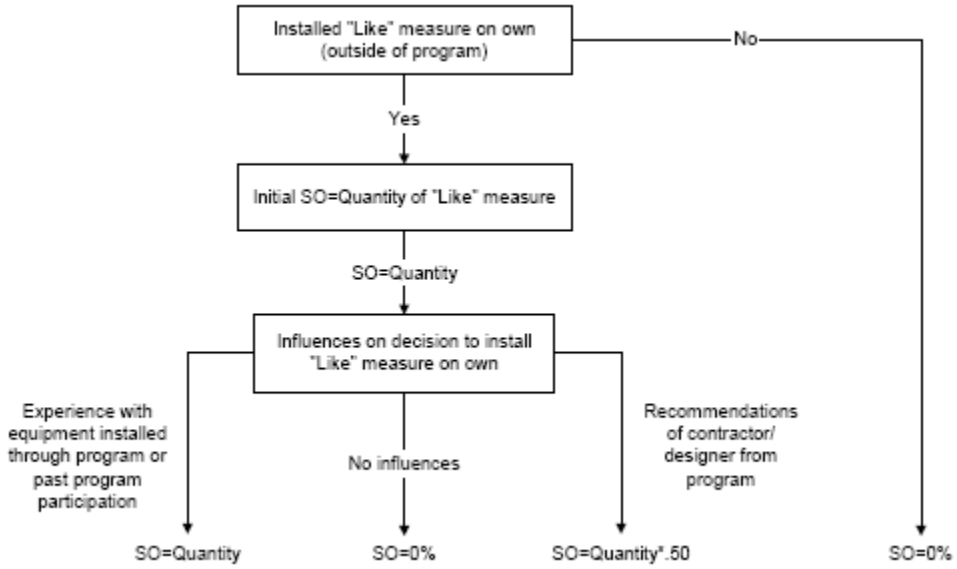
Schéma méthodologique des opportunistes
(Méthodologie standardisée)
Consortium d'utilités américaines



FR = Free rider

Annexe K

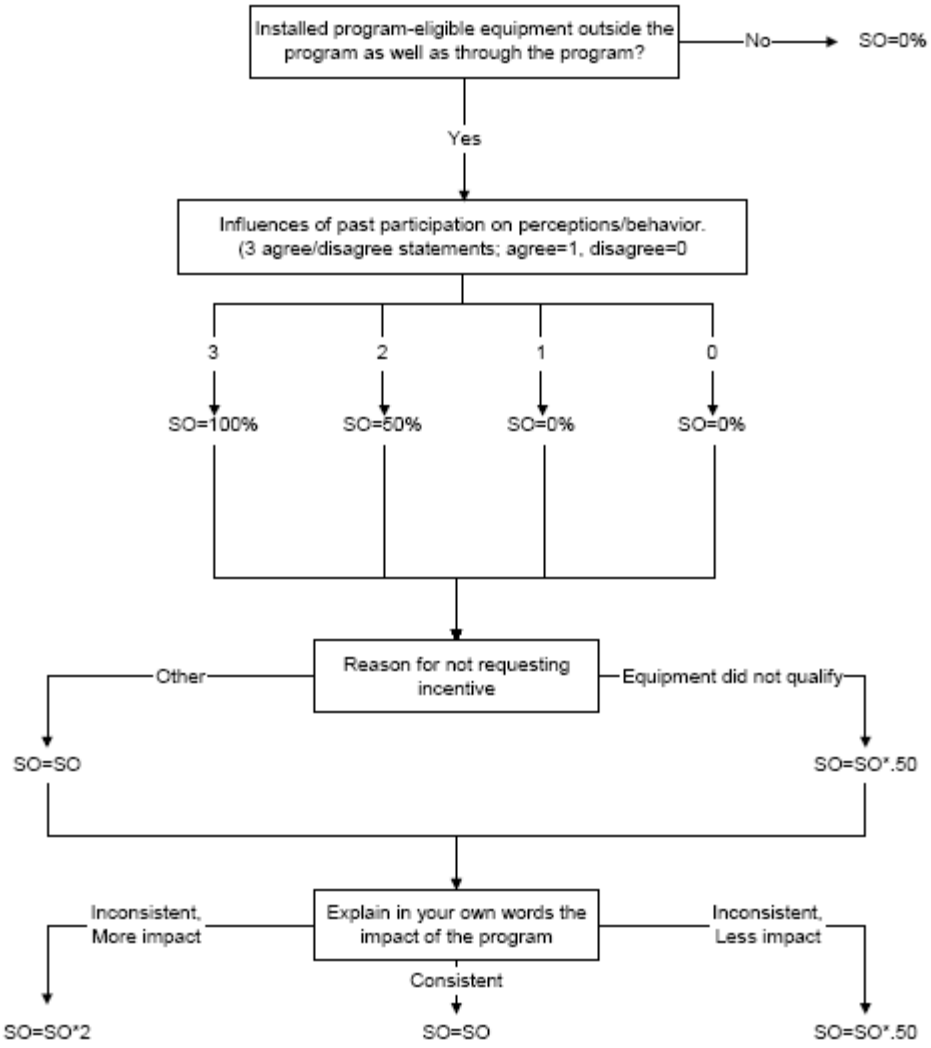
Schéma méthodologique de l'effet d'entraînement
(Méthodologie standardisée)
Consortium d'utilités américaines



SO = Participant spillover

Annexe L

Schéma méthodologique des bénévoles non participant
(Méthodologie standardisée)
Consortium d'utilités américaines



SO = Spillover