

**October 15, 2007**

**REQUEST FOR PROPOSALS FROM COMPANIES WISHING TO BECOME SERVICE ORGANIZATIONS TO DELIVER NATURAL RESOURCES CANADA'S (NRCan's) RESIDENTIAL ENERGY ASSESSMENT SERVICE FOR EXISTING HOUSING UNDER THE ecoENERGY RETROFIT – HOMES INITIATIVE**

**ELECTRONIC SUBMISSION MUST REACH NRCAN BY 2PM (EST) on NOVEMBER 30, 2007**

**NOTICE: Submissions received incomplete or after the deadline will be deemed non-compliant.**

The ecoENERGY Retrofit - Homes program encourages the existing low-rise housing sector in Canada to become more energy efficient, reduce emissions produced through energy use and contribute to clean air, water and energy and a healthy environment for Canadians. EcoENERGY will provide property owners with the information they need to make good home energy retrofit decisions and will reward energy and water saving measures with a grant. EcoENERGY offers a professional evaluation by a qualified energy advisor through the residential energy assessment service.

NRCan's role in the implementation and delivery of this residential energy assessment service is to coordinate the administration at the national level and advise and support service organizations in the field. One of NRCan's responsibilities in this role is to recruit service organizations to implement and deliver this residential energy assessment service.

Before service organizations start to deliver the residential energy assessment service, they shall be in possession of a license agreement with NRCan to conduct this service.

This announcement is seeking proposals from organizations who wish to become service organizations (for an overview of the role and responsibilities of a service organization see Annex “A”):

The following information is required from interested organizations as a first step in being considered for a licence agreement with NRCan to conduct the residential energy assessment service on existing housing:

- 1) A brief description of your organization’s activities or business lines and how delivering ecoENERGY Retrofit – Homes fits with your activities;
- 2) Specify the region, city, province, territory etc. in which the organization wishes to conduct the residential energy assessment service;
- 3) Specify the organizations’ planned capacity to deliver the residential energy assessment service by identifying the number of potential energy advisor candidates (for an overview of the roles and responsibilities of an energy advisor see Annex “B”). The organization must pre-assess all candidates to determine whether candidates have the necessary education, experience, knowledge and skills in the areas listed below before considering them for employment.
  - 3.1 college or university diplomas, or training in a relevant field;
  - 3.2 relevant experience, such as home or fire safety inspections or energy evaluations;
  - 3.3 membership in good standing with a professional designation in a relevant field;
  - 3.4 In addition to the above, energy advisor candidates must have, as a minimum, knowledge and skills in the following areas:

**Knowledge of**

- 3.4.1 construction practices for existing low-rise housing (specific to the candidate’s region);
- 3.4.2 energy-efficient renovation practices (insulation, air/vapour barrier detailing, etc.);
- 3.4.3 residential building materials (insulation types, windows, sealants, air, moisture and vapour barriers, etc);
- 3.4.4 residential heating, ventilation and air conditioning systems;

- Skills in**
- 3.4.5 building science, including the principles of the “house as a system”; and
  - 3.4.6 basic arithmetic and geometry.
  - 3.4.7 the use of computers, modems, the Internet and e-mail; and
  - 3.4.8 good client relations (professionalism, courtesy, dependability, timeliness, good writing and oral skills);
- 4) Confirm that the organization will provide, or ensure that each energy advisor has as a minimum the following systems and equipment:
    - a PC with 300 megahertz (mHz) or higher processor clock speed recommended; 233 mHz minimum required (single or dual processor system);
    - Intel® Pentium/Celeron® family, or AMD K6/Athlon/Duron family, or compatible processor recommended;
    - 128 megabytes (MB) of RAM or higher recommended (64 MB minimum supported; may limit performance);
    - MS Windows XP (Home or Professional), Windows 2000 or better (supports retired MS Windows 98/ME);
    - 50 MB of available hard disk space required for software installation (each house file is 5 – 20 kilobytes);
    - Super VGA (800 x 600) or higher resolution video adapter and monitor;
    - CD-ROM or DVD drive;
    - Internet access via dial-up or high-speed DSL/cable
    - keyboard and Microsoft mouse or compatible pointing device;
    - a blower door (see Annex “C” for Technical Specifications)
    - a digital camera
    - a watt meter
    - access to a colour printer
  - 5) Clearly outline how the organization’s business systems will deliver on the training and quality assurance requirements as specified in Annex “A”, Attachment 1 and 2.
  - 6) Clearly demonstrate that the organization has the systems in place to deliver data to NRCAN as outlined in Annex “A”, Section 1.6.5.
  - 7) Specify that the organization carries valid liability insurance at a level necessary to meet its own protection and to ensure compliance with required federal, provincial or municipal law; and
  - 8) Certify that the organization has read, understood and will comply,

at all times, with the code of ethics (see Annex “D”). **Please note, that violation of the code of ethics will lead to immediate license termination.**

9) Provide a minimum of three references in relation to customer service

## ANNEX “A”

### ROLES AND RESPONSIBILITIES OF SERVICE ORGANIZATIONS

A service organization is any organization whose role, under a license agreement with NRCan, is to implement and deliver the service at the local or regional level. A service organization that is authorized to deliver the service for existing houses is not automatically authorized to deliver any service for new houses, and vice versa.

Before service organizations start to deliver the service, they shall be in possession of a duly executed license agreement with NRCan. The roles and responsibilities of service organizations are as follows:

- 1.1 manage the business relationship with the personnel (the “energy advisor”) providing the service to the public. An energy advisor shall perform the residential energy assessment. The advisor must, in the judgement of the service organization, meet the pre-requisites as noted in clauses 3.1 to 3.4.8, above and be trained to meet the requirements for the delivery of the service (see Annex “A”, Attachment 1).
- 1.2 ensure that all freelance and subcontracted personnel who work as energy advisors in the delivery of the service on their behalf adhere to the requirements of the service organization’s license through a separate agreement which is attached to the license agreement.
- 1.3 ensure that it has a service agreement with each energy advisor that is a subcontractor to the service organization before that energy advisor offers the service to the public.
- 1.4 comply with all applicable laws, ordinances, rules, regulations and codes in the provinces or territories of Canada in which they do business.
- 1.5 carry valid liability insurance at a level necessary to meet its own protection and to ensure compliance with required federal, provincial or municipal law. Any insurance secured is to the benefit and protection of the Licensee and shall not be deemed to release or diminish its liability in any manner.
- 1.6 coordinate and implement the service at the local or regional level by
  - 1.6.1 guaranteeing the integrity and administration of the service at the local or regional level;
  - 1.6.2 recruiting qualified energy advisors and respecting their recognized certification and decertification by:

- 1.6.2.1 identifying, recruiting, and qualifying energy advisors (see Annex “A”, Attachment 1);
  - 1.6.2.2 when requesting that NRCan activate newly trained energy advisors, providing NRCan with:
    - complete name, address and contact information for the energy advisor
    - written notification about whether the advisor is an employee or a subcontractor
    - a copy of a completed agreement (format is attached as a Schedule to the License Agreement), if the advisor is a subcontractor thereby ensuring that subcontractors’ liability insurance meets the requirements
  - 1.6.2.3 providing update training sessions to all active energy advisors and informing NRCan of the date and location of the training at least 45 days in advance;
  - 1.6.2.4 ensuring that each energy advisor actively working for the service organization receives an ID card that indicates, at least, the advisor’s name and the name and contact address and telephone number of the service organization for which the energy advisor acts;
  - 1.6.2.5 providing NRCan with an updated list of their qualified energy advisors, including the advisers’ two-digit identification numbers, within seven working days of an advisor being added to or removed from active service with their organization
- 1.6.3 identifying the individual(s) who will be responsible for training and mentoring energy advisors for their organization. NRCan will provide Train-the-Trainer sessions. Unsuccessful candidates will not be given further consideration for a license. Training and mentoring activities will include:
- 1.6.3.1 providing training to energy advisors (including update training); and
  - 1.6.3.2 the supervision of house assessments and the review of house files.
- 1.6.4 conveying to all energy advisors, in a timely manner, any updates from NRCan on the energy assessment procedures. These updates must be incorporated in all future energy advisor workshops organized by the service organization.

- 1.6.5 providing house assessment files to NRCan for the database via an electronic mailbot; and
- 1.6.5.1 maintaining the printed/written records and/or soft-copy electronic files produced in the course of their service delivery for the duration of their agreement plus two years for the purposes of NRCan’s quality assurance file review. Files shall be maintained by the service organization for a period of no less than three years from the date the assessment was performed. Printed/written records and/or soft-copy electronic files include, but are not limited to, the following:
- soft-copy files of HOT2000
  - either hard or soft copies of documentation (e.g. data collection forms and sketches) used or created at the time of the performance of the assessment
  - printouts of blower door tests
  - notes concerning assumptions about parameters that were not visible (where they differ from the standard defaults)
  - either hard or soft copies of the report, including all of the recommendations supplied to the owner
  - the owner’s written approval confirming that the data may be transmitted electronically to NRCan
- 1.6.6 reporting immediately to NRCan when an energy advisor has recognized a serious problem in the home and when the service organization has decided not to issue a label;
- 1.6.7 maintaining energy-advisor-performance quality assurance processes as per the quality assurance requirements set out in Annex “A”, Attachment 2 of this document;
- 1.6.8 ensuring the appropriate maintenance of blower door equipment as recommended by the blower door manufacturer and
- 1.6.8.1 On request, owners of the blower door equipment (i.e. service organizations or their subcontractors) are required to produce documentation that certifies that equipment and software used to provide the service is in proper operating condition in accordance with the most recent manufacturer’s recommendations/specifications, and has been serviced and periodically calibrated as required.

- 1.6.9 complying with the federal *Personal Information Protection and Electronic Documents Act* , or in the province of Quebec, the *Act Respecting the Protection of Personal Information in the Private Sector*; and
- 1.6.10 ensuring that the report and EnerGuide label are delivered to the owner within 14 days of the completion of the home visit.



## ANNEX “A” – ATTACHMENT 1

### **RECRUITMENT, QUALIFICATION AND TRAINING OF ENERGY ADVISORS**

#### 1. Recruitment and Qualifications of Energy Advisors

Service organizations are responsible for recruiting and selecting candidates to become energy advisors. The following qualifications may be considered in the selection of energy advisor candidates:

- college or university diplomas, or training in a relevant field;
- relevant experience, such as home or fire safety inspections or energy evaluations;
- membership in good standing with a professional designation in a relevant field.

In addition to the above, the following must be clearly demonstrated by each advisor:

Energy advisor candidates must have, as a minimum, knowledge and skills in the following areas:

#### **Knowledge of**

- 1.1 construction practices for existing low-rise housing (specific to the candidate’s region);
- 1.2 energy-efficient renovation practices (insulation, air/vapour barrier detailing, etc.);
- 1.3 residential building materials (insulation types, windows, sealants, air, moisture and vapour barriers, etc);
- 1.4 residential heating, ventilation and air conditioning systems;
- 1.5 building science, including the principles of the “house as a system”; and
- 1.6 basic arithmetic and geometry.

#### **Skills in**

- 1.7 the use of computers, modems, the Internet and e-mail; and
- 1.8 good client relations (professionalism, courtesy, dependability,

timeliness, good writing and oral skills).

Service organizations must pre-assess all candidates to determine whether candidates have the necessary knowledge and skills in the areas listed above prior to attending energy advisor training.

If an energy advisor candidate lacks some of the knowledge and/or skills listed above, the service organization may, at its discretion, consider providing personalized supplementary training or suggest that the candidate attend appropriate courses in order to acquire the necessary knowledge and/or skills prior to attending any energy advisor training, without it being construed as an offer of employment.

## 2. Training of Energy Advisors

### 2.1 Selection of Instructor to Train Energy Advisors

Service organizations are responsible for recruiting and selecting an individual(s) who will act as an instructor(s) and who will be responsible for training, supervising and mentoring energy advisors for their organization. Their CV must be provided and demonstrate the requirements listed below.

Instructors employed or contracted by service organizations must have, as a minimum, the mandatory knowledge and skills listed in section 1, above, in addition to the following:

- 2.1.1 experience as an instructor;
- 2.1.2 advanced level skills in the use of computers, modems, the Internet and e-mail; and
- 2.1.3 knowledge of indoor air quality concepts (spillage-susceptible equipment, depressurization issues, etc.)

After a license agreement is signed with a service organization, NRCan will arrange for an instructor to deliver a train-the-trainer workshop to the individual(s) selected to be an instructor(s) by the service organization.

### 2.2 Energy advisor training

- 2.2.1 NRCan will provide the energy advisor training material at time of training.
- 2.2.2 The energy advisor workshop material shall include information that builds on the existing knowledge of the trainees and be based on the information in the NRCan *Energy Advisor Workshop Kit*. By the end of the workshop, successful energy advisor candidates will have a functional knowledge of:

- 2.2.2.1 the energy assessment service;
  - 2.2.2.2 the roles and responsibilities described in this document;
  - 2.2.2.3 NRCan's energy efficiency assessment procedures;
  - 2.2.2.4 the use of the HOT2000 energy simulation software;
  - 2.2.2.5 the use of the blower door and other tools required to perform the energy assessment;
  - 2.2.2.6 indoor air quality concepts (spillage-susceptible equipment, depressurization issues, etc.); and
  - 2.2.2.7 hands-on experience performing energy efficiency assessments obtained during at least two (2) on-site pre-retrofit evaluations.
- 2.2.3 Energy advisor trainees shall, after the completion of an energy advisor workshop, be subject to a probationary field training period before becoming eligible for certification.
- 2.2.4 Field training will require the candidate to perform the following energy evaluations, for which the house data and electronic house files are evaluated by the instructor:
- 2.2.4.1 a minimum of five unsupervised evaluations; and
  - 2.2.4.2 a minimum of two additional energy assessments in the presence of the instructor.
- 2.2.5 All of the evaluations conducted during the probationary field training period must be pre-retrofit evaluations. Also, it is preferable that the two supervised evaluations be conducted at the end of the field training period.
- 2.2.6 Immediately after attending an energy advisor workshop and prior to the field training identified in section 2.2.4, energy advisor trainees must successfully write an energy advisor exam that will be administered by NRCan.



## ANNEX “A” – ATTACHMENT 2

### QUALITY ASSURANCE REQUIREMENTS

1. The service organization’s quality assurance program shall be documented and shall include details on four main sections:
  - 1.1 confirmation that house assessments are performed by knowledgeable energy advisors;
  - 1.2 procedure(s) are in place to ensure the quality of the assessment itself (i.e. assure proper data collection including pictures, and assure the correct performance of the air tightness (blower door) test, the provision of appropriate upgrade recommendations and the maintenance of consistent and appropriate on-site assessment procedures);
  - 1.3 process(es) are in place to ensure that customers are satisfied with the service and that the assessment process complies with the objectives and administrative procedures; and
  - 1.4 procedure(s) are in place to request from NRCan the de-certification of energy advisors, if and when necessary.
2. Service organizations shall collect and maintain sufficient data from their energy advisors to ensure that the quality of all ratings can be verified through the following:
  - 2.1 a formal evaluation process for new, current and reinstated advisors;
  - 2.2 field assessments of the energy advisor’s work;
  - 2.3 a periodic peer review of the energy advisor’s work;
  - 2.4 a survey of customer satisfaction with the energy advisor’s performance; and
  - 2.5 a review of data and file management as noted in the following section, 3.
3. Service organizations must design a file management system to ensure that procedures and procedural change notices are communicated and implemented as directed by NRCan.
4. Service organizations must submit written reports to NRCan on their organization’s quality assurance procedures every six months, or at a more frequent interval at

NRCan's request. Reports shall include:

- 4.1 a description of the quality assurance performed during the specified period;
- 4.2 a description of the quality assurance performed on each energy advisor who is new to the program and therefore undergoing more rigorous quality assurance;
- 4.3 the number of quality assurance reviews completed during the specified period;
- 4.4 an explanation of any problems encountered; and
- 4.5 an account of remedial actions taken and the results of remedial actions.

## ANNEX “B”

### **ROLES AND RESPONSIBILITIES OF ENERGY ADVISORS**

Energy advisors who are subcontractors to the service organization shall have in place a service agreement with the service organization. This service agreement shall be in place before the energy advisor begins to offer the service to the public.

The role of energy advisors is to perform the on-site assessments and recommend energy efficiency improvements to the owner, however an energy advisor certified to perform the assessment service for existing houses is not automatically certified to perform the assessment service for new houses.

Energy advisors are responsible to NRCan, through their service organization, for the following:

- 1.1 acquiring the necessary knowledge to conduct a residential energy assessment service;
- 1.2 conducting themselves in a professional and courteous manner while offering this service to clients by:
  - 1.2.1 keeping up to date on, and using in the delivery of the service, the most recent version of HOT2000;
  - 1.2.2 scheduling assessments within a reasonable time after the request for the service (specifically, within 4 weeks);
  - 1.2.3 showing owners their energy advisor ID card when they arrive for a home visit;
  - 1.2.4 informing owners when they can expect to receive a report and label (specifically, within 14 days of the date of the assessment) and ensuring that the deadlines are met;
  - 1.2.5 preparing and presenting a written report and label that is clear and technically accurate and that complies with all the requirements cited in the materials noted in this document;
  - 1.2.6 bringing with them, all tools necessary to perform an energy assessment. These include, at a minimum but not limited to, flashlights, face masks, tape measures, thermometer, compass, household tool kit, blower door, digital camera and ladder;
  - 1.2.7 maintaining good client relations;

- 1.2.8 possessing (or be provided access to by their service organization):
- a computer with a 300 megahertz (MHz) or higher processor clock speed recommended; 233 MHz minimum required (single or dual processor system); \*Intel Pentium/Celeron family, or AMD K6/Athlon/Duron family, or compatible processor recommended
  - 128 megabytes (MB) of RAM or higher recommended (64 MB minimum supported)
  - MS Windows XP (home or professional), Windows 2000 or better
  - 50 MB of available hard disk space
  - Super VGA (800 x 600) or higher-resolution video adapter and monitor
  - CD-ROM or DVD drive
  - Internet access via dial-up or high speed DSL/cable
  - keyboard and Microsoft mouse or compatible pointing device
  - inlet or laser printer (colour)
  - digital camera
  - watt meter
- 1.2.9 conducting energy efficiency assessments in accordance with NRCan's protocol and procedures, which includes collecting energy performance data, conducting the blower door test for every house and taking pictures of the home;
- 1.2.10 affixing the initial File Identifier label to the electrical panel of the home and recommending to the owner that they affix the EnerGuide Rating label next to it, upon receipt;
- 1.2.11 preparing and delivering to the owner the reports and labels;
- 1.2.12 where appropriate, encouraging the display of the label by requesting that owners permit them to apply it to existing electrical boxes or some appropriate place in the home;
- 1.2.13 reporting the discovery of a serious condition in a home immediately to their service organization, by



- 1.2.13.1 consulting with the service organization on an appropriate response to the owner, if necessary; and
- 1.2.13.2 informing the owner either that the label will be withheld until the problem is remedied or that the label will be issued, but with a warning noted.
- 1.2.14 submitting to their service organization sufficient data in printed/written hard copy and/or electronic soft copy to ensure that the quality of all assessments can be verified through the service organization's and NRCan's quality assurance procedures. These include, but are not limited to, the following:
  - 1.2.14.1 soft-copy files of HOT2000;
  - 1.2.14.2 hard copies of all site-visit data-collection forms and photographs taken in the course of the assessment;
  - 1.2.14.3 printouts from the blower door test;
  - 1.2.14.4 notes concerning any assumptions made;
  - 1.2.14.5 either hard or soft copies of the report, including all of the results and recommendations that were supplied to the owner; and
  - 1.2.14.6 appropriate forms signed by the owner, authorizing data transfer to NRCan.
- 1.3 supporting owners in the completion of the recommended improvements by:
  - 1.3.1 providing documents that are relevant to the energy upgrade recommendations that have been made;
  - 1.3.2 recommending to install compact fluorescent light bulbs, Energy Star® appliances or water saving devices if opportunities for the replacement of these are identified during the course of the assessment. If such opportunities are identified, the advisor must inform the owner of them, and inform the owner that improved performance resulting from these replacements will not be recorded in the calculation of the EnerGuide rating;
  - 1.3.3 reminding them that they must call for a second assessment after renovation work is completed to confirm improvements in energy efficiency and allow for the sign off of the grant application form;

- 1.3.4 recommending to consult an expert when problems unrelated to energy efficiency have been noticed; and
- 1.3.5 providing information about professional building service associations for specialized advice.

## ANNEX “C”

### Technical Specifications for Blower Doors

Component	Specifications
Fan	<ul style="list-style-type: none"> <li>• Variable speed control (solid-state control)</li> <li>• Must operate on 110 to 125 vac/60Hz supply Minimum flow at maximum fan speed to be at least 2501 L/s (6300 CFM) at 50 Pa pressure difference</li> <li>• Must be able to both pressurize and depressurize the house Calibration curves and test verification certificate must be included with each fan</li> </ul>
Door Frame	<ul style="list-style-type: none"> <li>• Width: adjustable from 81.3 cm to 99 cm (32 inches to 39 inches) to fit a wide variety of doors or a suitably close range</li> <li>• Height: adjustable from 129.5 cm to 221 cm (51 inches to 87 inches) or a suitably close range</li> <li>• Door frame edge seal: flexible gasket or inflatable edge seal</li> <li>• Door frame material: wood, aluminum or metal</li> <li>• Door frame cover: nylon bag or moulded plastic or fibreglass</li> </ul>
Pressure and fan flow gauges	<ul style="list-style-type: none"> <li>• Analogue gauges (Dwyer Magnahelic) for measuring the building pressure and flow (one for low flow and second for high flow) or digital pressure gauge for simultaneous or switchable display of pressure and airflow readings</li> <li>• Pressure gauge unit: Pa</li> <li>• Pressure range: 0 to 60 Pa (suggested for building pressure)</li> <li>• Measurement resolution: 1 Pa for analogue gauges; 0.1 Pa for digital micro-manometers</li> <li>• Wind damping should be built into pressure gauge or available as add-on</li> <li>• Calibration of pressure measurement as per CGSB Standard No. 149.10-M86</li> <li>• Flow measurement unit L/s or CFM</li> <li>• Flow measurement resolution: 1/100 times the reading</li> <li>• Flow range: capable of measuring a minimum airflow of 30 L/s (63 CFM) within its operating range</li> <li>• Calibration of flow measurement as per CGSB Standard No. 149.10-M86</li> </ul>
Calculation procedures	<ul style="list-style-type: none"> <li>• Calculation software based on current calibration data for blower door selected to determine airtightness results. Data analysis procedure and reporting must meet requirements set in CGSB Standard No. 149.10-M86</li> <li>• Calibration characteristics and technical manuals</li> </ul>

## ANNEX “D”

### Code of Ethics

- 1.0 All Licensees of the Residential Energy Assessment service and their energy advisors shall follow Natural Resources Canada’s Code of Ethics, by:
  - 1.1 exercising their duties with integrity, fairness and impartiality and shall not be influenced by conflicting interests;
  - 1.2 upholding, maintaining and, wherever possible, improving the professional integrity, reputation and conduct of the energy assessment in accordance with the following practices but shall not be limited to these practices, as follows:
    - 1.2.1 express opinion based on accurate knowledge and experience;
    - 1.2.2 always act in good faith;
    - 1.2.3 always ensure that commissions for retrofit services and materials are neither accepted nor offered;
    - 1.2.4 always ensure that unlawful activities do not occur from any aspect of the energy assessment.
  - 1.3 if the Service Organization or Energy Advisor is in another field of business, the homeowner shall be advised of this fact prior to booking an appointment for an energy assessment. In addition, the homeowner shall also be advised that any interest in that business will not affect the results of the energy assessment. If there are any doubts on the part of the homeowner, the service organization should provide the homeowner with the opportunity to book an assessment with another firm;
  - 1.4 respecting the principle of “house-as-a-system” and make recommendations that do not endanger the health of the home’s occupants or jeopardize the structural integrity of the house;
  - 1.5 basing all statements made in the context of the NRCan’s residential energy assessment service on facts supported by the energy efficiency evaluation or by research performed by a recognized professional source;
  - 1.6 not collecting any personal information other than that required for the energy assessment evaluations and not disclosing information from any energy assessment except as required for quality assurance purposes unless with the customer’s written prior informed consent. Disclosure to a third party for another purpose related to the energy assessment is permitted where such disclosure is advantageous to the customer, provided that the customer’s informed and written consent is obtained prior to the

disclosure.

- 1.7 recommending that clients obtain more than one bid prior to selecting a contractor to undertake the recommended energy efficiency improvements; and
- 1.8 recognizing and giving credit to NRCan for proprietary work developed by the Government of Canada.