

Return Bids to :	Title – Sujet			
Retourner Les Soumissions à : Natural Resources Canada	Renewable Energy Integration and Essential Reliability Services			
Len.Pizzi@canada.ca	Solicitation No. – No de l'invitationDateNRCan-5000027413December 6, 2016			
Request for Proposal (RFP) Demande de proposition (DDP)	Requisition Reference No Nº de la 136116			
Proposal To: Natural Resources Canada We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the	Solicitation Closes – L'invitation prend fin at – à 09:00 AM EST on – le December 28, 2016			
goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.	Address Enquiries to: - Adresse tout	tes questions à	:	
Proposition à: Ressources Naturelles Canada Nous offrons par la présente de vendre à Sa Majesté la	<u>len.pizzi@canada.ca</u> Telephone No. – No de telephone	Fax No. – No.	de Fax	
Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).	(905) 645-0676	(905) 645	-0831	
	Destination – of Goods and Services Destination – des biens et services:	:		
Comments – Commentaires	Natural Resources Canada 580 Booth Street Ottawa, ON K1A 0E4			
Issuing Office – Bureau de distribution				
Finance and Procurement Management Branch Natural Resources Canada 183 Longwood Road South Hamilton, ON	Security – Sécurité There is no security require requirement.	ments asso	ociated with this	
L8P 0A5	Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur			
	Telephone No.:- No. de téléphone:			
	Facsimile No.: - No. de télécopieur: Name and Title of person authorized print) Nom et titre de la personne autorisé l'entrepreneur (taper ou écrire en ca	e à signer au no	om du fournisseur/de	
	Signature	Date		



TABLE OF CONTENTS

PART 1	- GENERAL INFORMATION	3
1.1 1.2	INTRODUCTION	
1.2	DEBRIEFINGS	
PART 2	- BIDDER INSTRUCTIONS	4
2.1 2.2 2.3 2.4 2.5	STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS SUBMISSION OF BIDS ENQUIRIES - BID SOLICITATION APPLICABLE LAWS IMPROVEMENT OF REQUIREMENT DURING SOLICITATION PERIOD	4 5 5
PART 3	- BID PREPARATION INSTRUCTIONS	6
3.1	BID PREPARATION INSTRUCTIONS	6
PART 4	- EVALUATION PROCEDURES AND BASIS OF SELECTION	7
4.1 4.2	EVALUATION PROCEDURES	
PART 5	- CERTIFICATIONS AND ADDITIONAL INFORMATION	9
PART 6	- SECURITY REQUIREMENTS	14
6.1	SECURITY REQUIREMENTS	14
PART 7	- RESULTING CONTRACT CLAUSES	15
7.1	STATEMENT OF WORK	15
7.1 7.2	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS	.15 .15
7.1 7.2 7.3	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION	.15 .15 .15
7.1 7.2 7.3 7.4	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS	.15 .15 .15 .16
7.1 7.2 7.3	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT	.15 .15 .15 .16 .16
7.1 7.2 7.3 7.4 7.5 7.6 7.7	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS	15 15 16 16 16
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8	STATEMENT OF WORKSTANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT	15 15 16 16 16 17
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS	.15 .15 .16 .16 .16 .17 .17
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS	15 15 16 16 16 17 17 17
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS APPLICABLE LAWS	15 15 16 16 16 17 17 17 18 18
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS	15 15 16 16 16 17 17 17 18 18
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS APPLICABLE LAWS PRIORITY OF DOCUMENTS FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR) INSURANCE	15 15 16 16 16 17 17 17 18 18 18 18 18
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS APPLICABLE LAWS PRIORITY OF DOCUMENTS FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR)	15 15 16 16 16 17 17 17 18 18 18 18 18
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14 7.15 ANNEX	STATEMENT OF WORK. STANDARD CLAUSES AND CONDITIONS. DISPUTE RESOLUTION. SECURITY REQUIREMENTS . TERM OF CONTRACT AUTHORITIES . PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS . PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS . PAYMENT . INVOICING INSTRUCTIONS . CERTIFICATIONS . APPLICABLE LAWS . PRIORITY OF DOCUMENTS . FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR) . INSURANCE . CONTRACT ADMINISTRATION . *A" - STATEMENT OF WORK.	15 15 16 16 17 17 17 18 18 18 18 18 18 19 20
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14 7.15 ANNEX	STATEMENT OF WORK STANDARD CLAUSES AND CONDITIONS DISPUTE RESOLUTION SECURITY REQUIREMENTS TERM OF CONTRACT AUTHORITIES PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS PAYMENT INVOICING INSTRUCTIONS CERTIFICATIONS APPLICABLE LAWS PRIORITY OF DOCUMENTS FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR) INSURANCE CONTRACT ADMINISTRATION	15 15 16 16 17 17 17 18 18 18 18 18 18 19 20
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14 7.15 ANNEX APPEN	STATEMENT OF WORK. STANDARD CLAUSES AND CONDITIONS. DISPUTE RESOLUTION. SECURITY REQUIREMENTS . TERM OF CONTRACT AUTHORITIES . PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS . PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS . PAYMENT . INVOICING INSTRUCTIONS . CERTIFICATIONS . APPLICABLE LAWS . PRIORITY OF DOCUMENTS . FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR) . INSURANCE . CONTRACT ADMINISTRATION . *A" - STATEMENT OF WORK.	15 15 16 16 16 17 17 17 17 18 18 18 18 18 19 20 26 27

PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 Security Requirements: includes specific requirements that must be addressed by bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work and the Basis of Payment.

The Appendixes include the Evaluation Criteria and the Financial Proposal Form.

1.2 Summary

By means of the RFP, NRCan is seeking proposals from bidders for....

1.2.1 The objective of this contract is to prepare a Paper on renewable energy integration and essential reliability services (ERS) that will provide policy makers and regulators with an overview of the ERS needed to maintain a reliable bulk electric system, the generation sources that provide these services, and the challenges of integrating renewable and non-renewable generation in a reliable mix. The final document will be made publicly available through Natural Resources Canada.

The Paper will also provide the basis for the subsequent development of shorter, 1-page fact sheets by the FPT EWG, related to electric reliability and written in layman's terms for public dissemination.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the <u>Standard Acquisition Clauses and Conditions Manual</u> (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The <u>2003</u> (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation with the modifications to the text below. If there is a conflict between the provisions of 2003 and this document, this document prevails.

- In the complete text content (except Section 3) Delete: Public Works and Government Services Canada" and Insert: "Natural Resources Canada." Delete: "PWGSC" and Insert: "NRCan"
- Section 2: Delete: "Suppliers are required to" and Insert: "It is suggested that suppliers"
- Subsection 1 of Section 8:
 Delete: Unless specified otherwise in the bid solicitation, bids may be submitted by facsimile. The only acceptable facsimile number for responses to bid solicitations issued by PWGSC headquarters is 819-997-9776 or, if applicable, the facsimile number identified in the bid solicitation. The facsimile number for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation
- Under Subsection 2 of Section 20: Not applicable

2.2 Submission of Bids

It is the Bidders responsibility to ensure that proposals are sent to the following e-mail address, by the time and date indicated on page 1 of this RFP document:

len.pizzi@canada.ca

IMPORTANT

It is requested that you write the following information in "Subject" of the e-mail: NRCan-5000027413 and Renewable Energy Integration and Essential Reliability Services

The address above is reserved for the submission of your proposal. No other communication should be sent to that address.

Due to the nature of the bid solicitation, bids transmitted by mail or facsimile to NRCan will not be accepted.

NRCan will not assume responsibility for proposals directed to any other location.

The onus is on the Bidder to ensure that the proposal is submitted correctly to the above address. Not complying with the above instructions may result in NRCan's inability to ascertain reception date and/or to consider the bid prior to contract award. Therefore, NRCan reserves the right to reject any proposal not complying with these instructions.

Natural Resources Ressources naturelles Canada Canada

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least five (5) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.



PART 3 - BID PREPARATION INSTRUCTIONS

3.1 **Bid Preparation Instructions**

Canada

Canada requests that Bidders provide their bid in separately bound sections as follows:

- Section I: Technical Bid (1 electronic copy)
- Section II: Financial Bid (1 electronic copy) in a separate file and document
- Section III: Certifications (1 electronic copy)
- Section IV: Additional Information (1 electronic copy)

Prices should appear in the financial bid only. No prices should be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

(a) use 8.5 x 11 inch (216 mm x 279 mm) format;

(b) use a numbering system that corresponds to the bid solicitation.

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication. Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Financial Proposal Form in Appendix "2". The total amount of Applicable Taxes must be shown separately.

Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.



PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada and one or more Canadian province(s) will evaluate the bids.

4.1.1 Technical Evaluation

Mandatory and point rated technical evaluation criteria are included in Appendix "1" – Evaluation Criteria.

4.1.2 Financial Evaluation

Mandatory financial evaluation criteria are included in Appendix "1" – Evaluation Criteria.

4.2 Basis of Selection

4.2.1 Highest Combined Rating of Technical Merit and Price

- 1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet all mandatory criteria; and
 - c. obtain the required minimum of 14 points specified for criterion number R3 for the technical evaluation, and
 - obtain the required minimum of 33 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 50 points.
- 2. Bids not meeting (a) or (b) or (c) and (d) will be declared non-responsive.
- 3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70% for the technical merit and 30% for the price.
- 4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 70%.
- 5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%.
- 6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.



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7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equal 135 and the lowest evaluated price is \$45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)				
		Bidder 1	Bidder 2	Bidder 3
Overall Techn	ical Score	115/135	89/135	92/135
Bid Evaluated	Price	\$55,000.00	\$50,000.00	\$45,000.00
	Technical Merit Score	115/135 x 60 = 51.11	89/135 x 60 = 39.56	92/135 x 60 = 40.89
Calculations	Pricing Score	45/55 x 40 = 32.73	45/50 x 40 = 36.00	45/45 x 40 = 40.00
Combined Ra	ting	83.84	75.56	80.89
Overall Rating	J	1st	3rd	2nd



Canada

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 **Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 **Declaration of Convicted Offences**

In accordance with the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ciif/politique-policy-eng.html), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 **Certifications Precedent to Contract Award and Additional Information**

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – List of Names

In accordance with the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ciif/politique-policy-eng.html), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

- Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder or, in the case of a private company, the owners of the company.
- Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).
- Bidders bidding as partnerships do not need to provide lists of names.

Name of Bidder: ____

OR

Name of each member of the joint venture:



Natural Resources Ressources naturelles Canada Canada

Member 1:	
Member 2:	
Member 3:	
Member 4:	

Identification of the administrators/owners:

SURNAME	NAME	TITLE

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "<u>FCP Limited Eligibility to Bid</u>" list at the time of contract award.

5.2.3 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.



5.2.4 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

5.2.5 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Definitions

For the purposes of this clause,"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or

d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c. C-17, the *Defence Services Pension Continuation Act*, 1970, c. D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c. R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c. R-11, the *Members of Parliament Retiring Allowances Act*, R.S. 1985, c. M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? Yes () No ()

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:



- a. name of former public servant;___
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** () **No** ()

If so, the Bidder must provide the following information:

a.	name of former public servant;
b.	conditions of the lump sum payment incentive;
C.	date of termination of employment;
d.	amount of lump sum payment;
e.	rate of pay on which lump sum payment is based;
f.	period of lump sum payment including:

- - start date ______
 end date ______
 - and number of weeks

g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

Professional fees	Amount

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

5.2.6 Aboriginal Designation

Who is eligible?

- a) An Aboriginal business, which can be:
 - i. a band as defined by the Indian Act
 - ii. a sole proprietorship
 - iii. a limited company
 - iv. a co-operative
 - v. a partnership



vi. a not-for-profit organization

in which Aboriginal persons have at least 51 percent ownership and control,

OR

b. A joint venture consisting of two or more Aboriginal businesses or an Aboriginal business and a non-Aboriginal business(es), provided that the Aboriginal business(es) has at least 51 percent ownership and control of the joint venture.

When an Aboriginal business has six or more full-time employees at the date of submitting the bid, at least thirty-three percent of them must be Aboriginal persons, and this ratio must be maintained throughout the duration of the contract.

The bidder must certify in its submitted bid that it is an Aboriginal business or a joint venture constituted as described above.

□ Our Company is <u>NOT an Aboriginal Firm</u>, as identified above.

□ Our Company is an Aboriginal Firm, as identified above. The supplier must complete the certificate in the appropriate clause below.

SACC Manual clauses <u>A3000T</u>, <u>A3001T</u>, <u>M3030T</u>, <u>M9030T</u>, <u>S3035T</u> and <u>S3036T</u> contain a certification that suppliers must complete and submit with their bid/offer/arrangement. Failure by suppliers to submit this completed certification form with their bids/offers/arrangements will render the bid/offer/arrangement non-responsive.



PART 6 - SECURITY REQUIREMENTS

6.1 Security Requirements

There is no security requirement applicable to this Contract.

PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

7.1 Statement of Work

Canada

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A" and the Contractor's technical bid entitled _____, dated _____. (to be completed at contract award)

7.2 **Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (https://buyandsell.gc.ca/policy-and-guidelines/standardacquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

7.2.1 **General Conditions**

2010B (2016-04-04), General Conditions - Professional Services - Medium Complexity, apply to and form part of the Contract.

As applicable, replace references to Public Works and Government Services Canada (PWGSC) with Natural Resources Canada (NRCan).

7.3 **Dispute Resolution**

Mediation

If a dispute arising from this contract cannot be settled amicably through negotiation, then the parties agree in good faith to submit the dispute to mediation as administered by the Arbitration and Mediation Institute of Canada Inc. (AMIC). The parties acknowledge receipt of the rules of AMIC. The cost of mediation shall be borne equally by the parties.

Arbitration

If the parties cannot resolve the dispute through mediation within sixty (60) days, the parties agree to submit the dispute to arbitration pursuant to the Commercial Arbitration Act (Canada). The party requesting such arbitration shall do so by written notice to the other party/parties. The cost of the arbitration and fees of the arbitrator shall be borne equally by the parties. The arbitration shall take place in the city where the contractor carries on business before a single arbitrator to be chosen jointly by the parties. If the parties cannot agree on the choice of arbitrator within thirty (30) days of written notice to submit the dispute to arbitration, each party will choose a representative who will select the arbitrator. The parties may determine the procedure to be followed by the arbitrator in conducting the proceedings, or may ask the arbitrator to do so. The arbitrator shall issue a written award within thirty (30) days of hearing the parties. The award may be entered in any court having jurisdiction and enforced as a judgment of that court.

Meaning of "Dispute"

The parties agree that the word "dispute" in this clause refers to a dispute of fact or of law, other than a dispute of public law.

The parties understand that the Procurement Ombudsman appointed pursuant to Subsection 22.1(1) of the Department of Public Works and Government Services Act will, on request or consent of the parties to participate in an alternative dispute resolution process to resolve any dispute between the parties



respecting the interpretation or application of a term and condition of this contract and their consent to bear the cost of such process, provide to the parties a proposal for an alternative dispute resolution process to resolve their dispute. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by e-mail at <u>boa.opo@boa.opo.gc.ca</u>.

7.4 Security Requirements

7.4.1 There is no security requirement applicable to this Contract.

7.5 Term of Contract

7.5.1 Period of the Contract

The period of the Contract is from date of Contract to April 28, 2017 inclusive.

7.6 Authorities

7.6.1 Contracting Authority

The Contracting Authority for the Contract is:

Name:	Len Pizzi
Title:	Procurement Officer
Organization:	Natural Resources Canada
Address:	183 Longwood Road South, Hamilton, ON, L8P 0A5
Telephone:	(905) 645-0676
Facsimile:	(905) 645-0831
E-mail address:	len.pizzi@canada.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

7.6.2 Project Authority (to be provided at contract award)

The Project Authority for the Contract is:

Name:
Title:
Organization:
Address:
Telephone:
Facsimile:
E-mail address:

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.6.3 Contractor's Representative (to be provided at contract award)

Name:



Title: Organization: Address: Telephone: Facsimile: E-mail address

7.7 **Proactive Disclosure of Contracts with Former Public Servants**

By providing information on its status, with respect to being a former public servant in receipt of a <u>Public</u> <u>Service Superannuation Act</u> (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with <u>Contracting Policy Notice: 2012-2</u> of the Treasury Board Secretariat of Canada.

7.8 Payment

7.8.1 Basis of Payment – Firm Price, Firm Unit Price(S) or Firm Lot Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex "___" for a cost of \$ _____. Customs duties are included *and* Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.8.2 Method of Payment

Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

- a. an accurate and complete claim for payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.9 Invoicing Instructions

Invoices shall be submitted using one of the following methods:

<u>E-mail:</u>

NRCan.invoice_imaging-service_dimagerie_des_factures.RNCan@canada.ca

Note:

Attach "PDF" file. No other formats will be accepted

Fax:

Local NCR region: 613-947-0987 Toll-free: 1-877-947-0987

Note:

OR



Use highest quality settings available.

Please do not submit invoices using more than one method as this will not expedite payment.

Invoices and all documents relating to a contract must be submitted on the Contractor's own form and shall bear the following reference numbers: Contract number: _____

Invoicing Instructions to suppliers: http://www.nrcan.gc.ca/procurement/3485

7.10 Certifications

7.10.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

7.11 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

7.12 **Priority of Documents**

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the general conditions **2010B**, General Conditions Professional Services Medium Complexity (2016-04-04);
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment; and
- (e) the Contractor's bid dated _____

7.13 Foreign Nationals (Canadian Contractor **OR** Foreign Contractor)

SACC Manual clause <u>A2000C</u> (2006-06-16) Foreign Nationals (Canadian Contractor)

OR

SACC Manual clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)

7.14 Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.



7.15 Contract Administration

The parties understand that the Procurement Ombudsman appointed pursuant to Subsection 22.1(1) of the *Department of Public Works and Government Services Act* will review a complaint filed by [*the supplier <u>or</u> the contractor <u>or</u> the name of the entity awarded this contract*] respecting administration of this contract if the requirements of Subsection 22.2(1) of the *Department of Public Works and Government Services Act* and Sections 15 and 16 of the *Procurement Ombudsman Regulations* have been met, and the interpretation and application of the terms and conditions and the scope of the work of this contract are not in dispute. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by e-mail at <u>boa.opo@boa.opo.gc.ca</u>.



ANNEX "A" - STATEMENT OF WORK

SW.1.0 TITLE

Renewable Energy Integration and Essential Reliability Services - An Overview

SW.2.0 BACKGROUND

In Canada, provinces and territories are moving towards increased deployment of renewable energy sources¹ and setting ambitious targets to reduce greenhouse gas emissions to address climate change. As a result, the percentage of electricity generated from non-emitting and renewable energy sources is anticipated to continue to increase. As the generation resource mix evolves, it will be important to understand how this may affect the ability to continue to efficiently and reliably meet electricity demands.

The Federal Provincial Territorial Electricity Working Group (FPT EWG) was established after the 2003 Blackout which affected jurisdictions in Canada and the United States. It has a mandate to continue to advance collaboration across jurisdictions in Canada to support North American electric reliability and address pan-Canadian electricity matters through a range of activities. These include regular meetings with the North American Electric Reliability Corporation (NERC), the Federal Energy Regulatory Commission in the United States, and work in support of Canada's annual Energy and Mines Ministers' Conference.

One of the principle challenges in operating an electricity system is ensuring that the demand for electricity is always exactly equal to the supply, at a consistent voltage and frequency. There may be an expectation that the electricity grid can rapidly switch to renewables to address environmental concerns. Maintaining a balance between demand and generation, particularly during periods of rapidly increasing and decreasing demand, however, requires electric reliability services. These services largely focus on managing frequency, demand ramping capabilities, and voltage control, among others. Electricity sources vary in terms of the reliability services they may provide and while renewable generation has a lot of advantages, these sources may not necessarily provide essential reliability services in the same way as, for example, hydro and thermal generation. As the resource mix evolves, these services will also need to be considered.

Considerable work is being done in this area², and a strong technical background is generally required to have a working understanding of these services and the challenges of maintaining reliability. There are resources which summarize or provide an overview of electric reliability services³; however, they do not include an analysis of the service(s) provided by generation source.

An overview of how various conventional, variable and distributed energy resources, and associated nongenerating technologies (such as power electronics and mechanical or chemical storage) or other approaches may contribute to electric reliability, and an appreciation of electric reliability considerations generally, will provide the basis for informed discussions and policy and regulatory decision making. The FPT EWG is therefore interested in the preparation of a Paper that will provide a basic overview of essential reliability services needed to maintain a reliable bulk electric system, the generation sources that may provide these services, and the considerations and challenges to be faced in integrating renewable and non-renewable generation.

¹ Canada's Renewable Power Landscape, 2015, National Energy Board <u>http://www.neb-one.gc.ca/nrg/sttstc/lctrct/rprt/2016cndrnwblpwr/2016cndrnwblpwr-eng.pdf</u>

² Essential Reliability Services Task Force Measures Framework Report, November 2015, NERC <u>http://www.nerc.com/comm/Other/essntlrlbltysrvcstskfrcDL/ERSTF%20Framework%20Report%20-</u>%20Final.pdf

³ The Basics of Essential Reliability Services <u>https://vimeopro.com/nerclearning/erstf-1</u> and WIEB Technical Background Webinars <u>http://westernenergyboard.org/ver-checklist/reliability/</u>



The FPT EWG is seeking an informative overview document, provided in English, by the end of April, 2017, that is non-technical in nature and of reasonable length (e.g. on the order of 30-35 pages).

SW.3.0 OBJECTIVES

The objective of this contract is to prepare a Paper on renewable energy integration and essential reliability services (ERS) that will provide policy makers and regulators with an overview of the ERS needed to maintain a reliable bulk electric system, the generation sources that provide these services, and the challenges of integrating renewable and non-renewable generation in a reliable mix. The final document will be made publicly available through Natural Resources Canada.

The Paper will also provide the basis for the subsequent development of shorter, 1-page fact sheets by the FPT EWG, related to electric reliability and written in layman's terms for public dissemination.

SW.4.0 PROJECT REQUIREMENTS

SW.4.1 Tasks, Deliverables, Milestones and Schedule

The Paper to be prepared under this contract should include the following sections. Given its objective, the goal will be to keep the Paper as non-technical as possible and of reasonable length (e.g. on the order of 30-35 pages), using tables to summarize information wherever possible. To limit the length of the Paper the focus will be in large part on the Bulk Electric System (nominally 100kv and above). Distributed energy resources and financial aspects should, however, be noted. Technologies or other approaches, which may provide ERS to the system, but are not themselves generation sources, should also be noted.

- a. An executive summary
- b. An introduction, describing the drivers for adding renewable generation to the grid and the challenges to be addressed regarding grid reliability
- c. Past trend and forecast of renewables integration in Canada, North America, and the world (charts/tables of % energy and capacity, targets etc)
- d. Description of ERS this section should be addressed to the extent possible in a table format, using the North American Electric Reliability Corporation`s (NERC's) glossary of terms and referencing it's reliability reports such as NERC's "Essential Reliability Services Task Force Measures Framework Report" and "All Megawatts are Not the Same"
- e. Description of the key characteristics of primary generation sources, including but not limited to: their typical sizes; operating limitations (e.g. minimum/maximum wind and temperature limitations for wind generators, whether they are intermittent or controllable, etc); and whether they provide ERS.
- f. Identification of ERS contributions from the generation sources described in section e. (to the extent possible provided in a table format).
- g. Description of distributed energy resources (DER). While the focus of the Paper is on ERS at the Bulk Electric System (BES) level, the Paper should describe DER (i.e. distributed generation, demand response) and their impact on the BES.
- h. Description of other applicable technologies. At a high level, describe other technologies or approaches that do not generate electricity but may be used to provide or supplement ERS at the source or system level (e.g. flexible AC transmission systems, storage technologies).



- Description of the challenges to maintain reliability on an integrated grid. This section will rely heavily on work done by NERC and others regarding the integration of renewables. It will also include findings from the 2003 Blackout and other reports regarding ERS (e.g reactive power deficiency).
- j. Description of regulatory initiatives, in Canada, the US (Federal Energy Regulatory Commission) and elsewhere as applicable, related to the provision of ERS (i.e. wind turbines and frequency response)
- k. Observations. For example these may include that: an electric grid must maintain the capacity to continue to reliably meet electricity demand as the mix of generation sources changes; and, that better a understanding of grid requirements, generator characteristics, and the implications of a changing resource mix leads to more informed choices
- I. Glossary of Terms and References

The breakdown of tasks and time schedule is as follows:

Task	Deliverables/Milestones	Time Schedule	Constraints
1.	Detailed Paper Outline - submitted electronically	3-4 weeks after contract award	Microsoft Office Word file.
2.	Presentation of the Outline	TBD	Via teleconference
З.	Written disposition of all comments received by the Project Authority (PA) on the Paper Outline (task 1)	1 week after receipt of comments from PA	Memo format
4.	Draft of Paper - submitted electronically	2-3 weeks after receipt of comments from PA on Paper Outline	Microsoft Office Word file.
5.	A presentation of the Draft Paper	TBD	Via teleconference
6.	Final Paper - submitted electronically and in hard copy (3 bound copies)	1-2 weeks after receipt of comments on Draft Paper	

1. Prepare a Detailed Paper outline based on the scope described in 4.1(a-l) above.

The Detailed Paper Outline should include:

- a. Table of Contents,
- b. A glossary of terms,
- c. A preliminary list of references
- d. ERS that will be described in the Paper,
- e. Generation sources and other reliability technologies to be covered in the Paper,
- f. Template of table(s) detailing generation sources and their characteristics, services, etc.,
- g. Template of other proposed table(s), and
- h. Summary of the challenges and considerations to be covered in the Paper.
- 2. Present the Outline to the Project Authority

The presentation will be scheduled in consultation with the Project Authority. Via face-to-face meeting or teleconference, present the Outline to the Project Authority and a subset of the FPT EWG.



3. Disposition written comments received from the Project Authority on the Paper outline.

Provide written responses to all comments or questions submitted by the Project Authority on the Paper outline, dispositioning how each will be addressed.

4. Prepare a Draft of the Paper

The Paper should be on the order of 30-35 pages in length and should not be overly technical in nature. The objective is to provide an overview that can be appreciated by a professional audience that may or may not have a relevant technical background. It should be based on the Paper Outline, revised as necessary to address comments received from the Project Authority, and include draft final versions of all figures, illustrations and tables.

5. Present the Draft to the Project Authority

The presentation will be scheduled in consultation with the Project Authority. Via face-to-face meeting or teleconference, present the Draft Paper to the Project Authority and a subset of the FPT EWG.

6. Prepare the Final Draft of the Paper.

The final draft should address all comments received from the Project Authority. The Final Draft of the Paper, in electronic format and hard copy (3 bound, full colour, single sided hard copies) will be submitted to the Project Authority for approval.

SW.4.2 Reporting Requirements

The contractor will submit all deliverables to the Project Authority electronically in accordance with the contract schedule. The reports will be provided in Microsoft Office Word format. The final report will also be provided in hard copy (3 bound, colour, single sided, copies). The Project Authority will look to confirm the date and time of the presentations with the contractor at least 1 week in advance, and will be available to respond to points of clarification by the contractor on an as required basis.

The Project Authority, in consultation with a subset of the FPT EWG, will review and provide written comments on each deliverable, will ensure written comments are provided to the contractor 5 working days from receipt of the deliverable, unless otherwise noted in advance, and will expect comments to be appropriately dispositioned.

The Project Authority will authorize payment on receipt of the Outline (task 1), approval of the draft (task 4) and approval of the final report (task 6).

SW.5.0 OTHER TERMS AND CONDITIONS OF THE SOW

SW.5.1 Estimated Period of the Contract

The estimated period of the contract is 12 weeks, as of the date of Contract Award.

SW.5.2 Location of Work, Work Site and Delivery Point

The work is expected to be completed at the Contractor's place of business. All deliverables are to be provided to the Project Authority's place of work.

SW.5.3 Language of Work

All deliverables are to be provided in English.

Canada

SW.6.0 REQUIRED RESOURCES OR TYPES OF ROLES TO BE PERFORMED

The Contractor shall have a minimum of 15 years of working experience with the Canadian electricity sector or more broadly, the North American Electricity Sector, with knowledge of current electricity sources, relevant North American reliability standards, and electric reliability services, as well as knowledge of Canadian power systems and associated regulatory regimes.

The Contractor shall be familiar with national and international trends regarding electricity generation, transmission and distribution and a strong understanding of the challenges that these trends place on maintaining electric reliability.

The Contractor shall have experience in assessing technical challenges or events relevant to electric reliability.

The Contractor shall have a proven track record in preparing materials which summarize, and clearly communicate highly technical information to senior-level audiences.

SW.7.0 APPLICABLE DOCUMENTS AND GLOSSARY

SW.7.1 Applicable Documents

The Contractor will use publicly available information in the preparation of the report. Access to nonpublic information will not be required. The following list of documents is not comprehensive but provided as examples of relevant background material available.

- The "After the Blackout: Implementation of Mandatory Electric Reliability Standards in Canada" (July 2015), which may be found here provides an example of a report prepared by the FPT EWG for public dissemination.
- The "Essential Reliability Services Task Force Measures Framework Report" (November 2015), • which may be found here and the document titled "All Megawatts are Not the Same" (October 2015), which may be found here provide certain concepts and proposed measures related to electric reliability services.
- "Canada's Renewable Power Landscape, Energy Market Analysis 2016" by the National Energy Board which may be found here assesses the status and trends in renewable power generation in Canada.
- The "Ontario Smart Grid Assessment and Roadmap" (January 2015) by Navigant which may be found here assessed opportunities to modernize the grid for the benefit of the electricity system and its customers.
- "Integrating Renewable Energy into the Electricity Grid" Case studies showing how system operators are maintaining reliability", (June 2015), by the Brattle Group which may be found here looks at two U.S. case studies showing how system operators are maintaining reliability using various operational and technological options to accommodate renewable energy generation.
- "Innovation Outlook Renewable Mini-Grids Summary for Policy Makers" (2016), prepared for the International Renewable Energy Agency, which may be found here is an example of a summary paper.
- "Smart Grids and Renewables A Guide to Effective Deployment" (November 2013) prepared for the International Renewable Energy Agency, which may be found here provides a summary of



smart grid technologies.



ANNEX "B" - BASIS OF PAYMENT

(to be completed at contract award)



APPENDIX "1" - EVALUATION CRITERIA

Bidders are advised to address these criteria in the following order and in sufficient depth in their proposals to enable a thorough assessment. NRCan's assessment will be based solely on the information contained within the proposal. NRCan may confirm information or seek clarification from bidders.

Bidders are advised that only listing experience without providing any supporting data to describe responsibilities, duties and relevance to the criteria will not be considered demonstrated for the purpose of this evaluation.

The Bidder should provide complete details as to where, when (month and year) and how (through which activities/ responsibilities) the stated qualifications/experience were obtained. Experience gained during formal education shall not be considered work experience. All criteria for work experience shall be obtained in a legitimate work environment as opposed to an educational setting. Co-op terms are considered work experience provided they are related to the required services.

Bidders are also advised that the month(s) of experience listed for a project whose time frame overlaps that of another referenced project will only be counted once. For example: project one time frame is July 2001 to December 2001; project two time frame is October 2001 to January 2002; the total months of experience for these two project references is seven (7) months.

1. TECHNICAL CRITERIA

1.1 MANDATORY EVALUATION CRITERIA

The Mandatory Criteria listed below will be evaluated on a simple pass/fail basis. Proposals which fail to meet the mandatory criteria will be deemed non-responsive.

Criterion ID	Mandatory Criteria	Proposal Page #	Pass/Fail
M1	The proposed resource(s) must have a university degree from a recognized university and a minimum of 15 years of working experience with the Canadian electricity sector, or more broadly, the North American electricity sector. Bidder to provide proof of education and experience for the proposed resources(s) which can include, but is not limited to: CVs and lists of publications/presentations.		
M2	The proposed resource(s) must have a minimum of 10 years' experience in preparing materials which summarize, and clearly communicate technical information for decision makers. Bidder to provide proof of experience for the proposed resource(s) which can include, but is limited to CVs and lists of publications/presentations.		



1.2 EVALUATION OF RATED CRITERIA

The criteria contained herein will be used by NRCan to evaluate each proposal that has met all of the mandatory criteria.

Proposals must achieve the stated minimum points required for each rated criterion to be assessed as responsive under the point rated technical criteria section; proposals not meeting the minimum required points will be deemed non-responsive.

Proposals will be evaluated based on the following criteria:

Criterion ID	Point Rated Technical Criteria	<i>Minimum</i> <i>Points</i> /Maximum Points	Proposal Page #
R1	The proposed resource(s) must be able to identify and summarize technical challenges or events relevant to essential reliability services. In 1 page or less, provide specific examples that provide proof of ability and relevance to the Statement of Work (SOW) Points will be distributed as follows (see evaluation grid below for further info): 10 points – excellent 8 points – very good 6 points – good 4 points – satisfactory 2 points – poor 0 points - unacceptable	10	
R2	 The proposed resource(s) must have experience in preparing and presenting information (reports/papers/presentations) on electric reliability related matters to Canadian audiences. In 1 page or less, provide specific examples that provide proof of experience and relevant to the SOW. Points will be distributed as follows (see evaluation grid below for further info): 10 points – excellent 8 points – very good 6 points – good 4 points – satisfactory 2 points – poor 0 points – unacceptable 	10	
R3	The Bid shall include a proposed approach to present essential reliability services and how these services are provided by various electricity sources and technologies. In 2 pages or less, provide a tabular template or templates which address the requirement Points will be distributed as follows (see evaluation grid below for further	20	



	info):		
	20 pointa aveallant		
	20 points – excellent		
	16 points – very good		
	12 points – good		
	8 points – satisfactory		
	4 points – poor		
	0 points - unacceptable		
R4	The proposed resource(s) must be familiar with national and international trends regarding electricity generation, transmission and distribution and communicate the challenges that these trends place on electric reliability. In 1 page or less, provide an overview of trends and current and future challenges relevant to the SOW, with supporting references, that provide proof of familiarity. Points will be distributed as follows (see evaluation grid below for further info):	10	
	10 points – excellent 8 points – very good		
	6 points – good		
	4 points – satisfactory		
	2 points – poor		
	0 points - unacceptable		
Total points		50	

The evaluation grid described below will be used to evaluate the bidders' proposals based on each rated criterion.

EVALUATION GRID				
Excellent (100%)	The rated criteria are addressed in detail and the information provided shows that the bidder fully and thoroughly understands all elements of the rated criteria.			
Very good (80%)	The information provided clearly shows the bidder fully understands all elements of the rated criteria.			
Good (60%)	The information provided clearly shows the bidder fully understands certain but not all elements of the rated criteria.			
Unsatisfactory (40%)	The information provided shows a limited understanding of the specified criteria, without showing that the bidder fully understands all elements of the rated criteria. The bidder shows basic communication skills. The project results presented are poor and non-significant.			
Poor (20%)	The information provided shows that the bidder has a basic understanding of the specified criteria.			
Unacceptable (0%)	The information provided does not meet the criteria.			



2. FINANCIAL CRITERIA

Canada

2.1 MANDATORY FINANCIAL CRITERIA

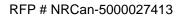
Bidders must provide financial details as requested in this appendix. Proposals which do not contain pricing details as requested below shall be considered incomplete and non-responsive.

2.1.1 FUNDING LIMITATION

The maximum funding available for the Contract resulting from the bid solicitation is \$30,000.00 (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

This maximum included a) the Price to perform the Work, b) any Travel and Living and c) Miscellaneous Expenses that may be required.

Any bids received in excess of this maximum funding will be automatically deemed non-responsive and will not be evaluated.



APPENDIX "2" – FINANCIAL PROPOSAL FORM

1. FIRM PRICE - Milestone Payments

Bidder tendered all-inclusive firm price to perform the work is in Canadian funds, applicable taxes excluded. Any Travel and Living Expenses and other miscellaneous expenses must be included in the firm price.

Milestone #	Description of Milestone	Milestone Firm Price (applicable taxes excluded)
1	Outline – task 2 (1/3 of the total amount)	\$
2	Draft – task 4 (1/3 of the total amount)	\$
3	Final Report – task 6 (1/3 of the total amount)	\$
	\$	