



REQUEST FOR INFORMATION

DATA MANAGEMENT PROGRAM TECHNOLOGY TOOLS

Enquiries:

All enquiries and submissions are to be directed to:

Owuor Okiro

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Email: proposals.propositions@neb-one.gc.ca

Subject: Owuor Okiro: Solicitation # 84084-17-0162

Issuing Office

National Energy Board
517 Tenth Avenue S.W.
Calgary, Alberta
T2R 0A8

Vendor

TBD

VENDORS NAME AND SIGNATURE

Name (please print)

Date

Signature



Part 1 - Introduction

This Request for Information (RFI) is issued solely for information and planning purposes and does not constitute a solicitation or obligation on the part of the National Energy Board of Canada (NEB). Neither unsolicited proposals nor any other kind of offers will be considered in response to this RFI. Vendors will not be reimbursed any costs associated with developing responses and/or providing information in response to this RFI and/or any follow-up information requests.

Any information submitted in response to this RFI will become the property of the NEB and will not be returned. Any/all information received in response to this RFI that is marked Proprietary will be handled accordingly. Such restrictions should be clearly indicated on each sheet containing such information.

A Request for Information (RFI) is used when detailed information and feedback are required. Responses are used to assist the NEB in finalizing their plans for the requirement and in developing achievable objectives and deliverables in order to launch a competitive Request for Proposal process.

The main objectives of this RFI are to gain information about potential solutions for Data Management Program Technology Tool(s).

This is not a bid solicitation. A contract will not result from this activity.

This RFI is for informational purposes only and does not constitute a commitment by the NEB. Responses to this RFI will not constitute a commitment from the industry provider. The NEB will not reimburse any expenses incurred for the preparation of responses to this RFI.

CONFIDENTIALITY

All information contained in this RFI must be treated as confidential. All information obtained with this RFI is treated as confidential. Any/all information received in response to this RFI that is marked Proprietary will be handled accordingly. Such restrictions should be clearly indicated on each sheet containing such information.

Part 2 Respondent Instructions

1. Responses are to be submitted electronically to the following address:

owuor.okiro@neb-one.gc.ca

2. It is requested that responses are not submitted by facsimile (fax) or physical mail, but rather only in softcopy format, submitted to the electronic mailing address above.



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Closing date: Close of business November 1st, 2017

3. Any response submitted will become the sole property of the National Energy Board and will not be returned to the Respondent. The response will be used to assist the NEB in further analysing the presented requirement and, as such, may be used in the development of a future solicitation process.

4. The RFI document is available on <https://buyandsell.gc.ca>.

5. Response required by COB on November 1st, 2017.

6. Inquiries

Please address all inquiries about this RFI to the Contracting Authority:

Owuor Okiro
Management Services
The National Energy Board
517 10th Ave SW
Calgary AB, T2R 0X8
E-mail: Owuor.Okiro@neb-one.gc.ca

To ensure the equality of information among bidders, answers to enquiries will be forwarded through Buy and Sell simultaneously to every bidder without revealing the sources of the inquiry.



Part 3 – Statement of Work

Title

Data Management Program (DMP) Technology Tools – National Energy Board, Calgary AB

Background

The National Energy Board (NEB or the Board) is an independent federal, quasi-judicial regulator established in 1959 to promote safety and security, environmental protection and economic efficiency in the Canadian public interest within the mandate set by Parliament for the regulation of pipelines, energy development and trade. For more information see the Board's web site www.neb-one.gc.ca.

Data Management (DM) ensures that our data is accurate, complete, stored securely, and is available to those who need it when they need it. Effective DM is achieved through the existing Data Management Program (DMP). The DMP delivers the changes needed to get to, and sustain, a state of high quality, timely, trustworthy, relevant, easily-accessible data for internal and external consumers.

DM enables all decision-making at the NEB to be based on facts and offers the means for relevant energy and pipeline information to be provided to the public. DM also:

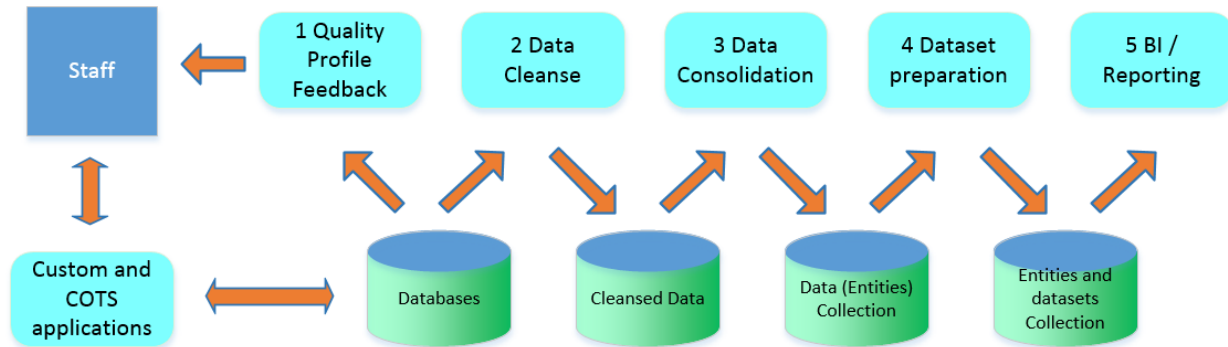
- addresses perceived and actual issues related to quality of data, relevance of data available internally and externally, and accessibility and usability of data for internal and external users; and
- provides ability to identify trends and issues, and conduct analysis to identify areas of potential harm to take action (evidence-based decision making).

Objective

The objective of the RFI is to gather information and receive a product demonstration from respondents in order to prepare for a competitive Request for Proposal process.

Scope

The software to support the following activities is desired.



Data goes through the following activities:

- 1) **Quality Profile Feedback** – Configured rules are applied against custom and commercial data sources, with results available to configured source administrators.
- 2) **Cleanse** - Data is cleansed and stored in a cleansed format.
- 3) **Consolidation** – Like data is combined, other shaping rules applied to result in single lists of entities. One list per entity.
- 4) **Preparation** - Data is prepared into private/public sets, predetermined datasets, and other rules as configured. Entities can be in multiple datasets.
- 5) **BI / Reporting** – Reporting tools and other consumption tools utilized as desired.

The scope of this RFI is to understand your offerings of software tools (may be referenced as a system or systems and may include demonstration) concerning activities 1 through 4 above as mandatory, and activity 5 as optional, and are grouped as follows:

- a) Data Quality Management (DQM) (activity 1 and 2) - System must have the ability to configure data quality rules (from identified business rules) that will be used to check the source systems. Any issues will be recorded and made available to the identified business contact for correction. A 'cleanse' process will support checking the rules and as configured, allow data updates into a cleansed copy of the data (not source). The sources may include configured external lists (example from an ftp server or RESTful interface), and may be replicas of internal application backend databases.
- b) Provision (Activity 3 and 4) – The solution must provide the ability to configure and run processes (workflows etc.) for transforming the cleansed data into representations of each entity. This may involve merging data of similar entities (for example where company exists in multiple sources) or other transformations as appropriate (adding missing fields, looking up translations, looking up alternate field names etc.) to result in one collection (table/list/database/etc) per entity. Each entity list may appear once each in a public collection and a private collection, where additional rules are applied to create the public collection (remove confidential rows or columns etc.).
- c) Master Data Management (MDM) – the functionality to support storing and managing master and reference data (centralized sources utilized for lookups etc.), both physically



and with the appropriate business processes and changes implemented. Master sources for each entity and master reference entries may reside within proposed solution, or within existing application backend databases. Solution to support both scenarios.

- d) Consumption (Activity 5) – Providing the ability to consume and report or visualize data elements and data sets that are error free and consistent with other data extractions. Any integration of bundled or third party consumption tools with field lists etc. to be identified.

Meta-data management is not within scope of the first phase of the project. It is recognized as a future component; any meta-data solution integration should be noted and collected.

Requirements

1. Data Quality Management

1.1. Input

- 1.1.1. Must be able to retain configuration of sources (tables, views, calculated results, APIs, etc.) including access credentials.
- 1.1.2. Must provide support for alternative (non local, non MSSQL) sources such as through web based APIs and FTP servers.
- 1.1.3. Desired. Quality checks will be based on existing fields, tables, attributes etc. that will be configured into solution based on what exists in current systems. What capabilities exist to reduce the effort to create and maintain these settings?
- 1.1.4. Desired. A graphical representation of data such as the entities, tables, and relationships both physical (what is stored in tables) and logical (the entities) provides a method to communicate and update configurations. Please describe any related capabilities to accomplish this.

1.2. Process

- 1.2.1. Must be able to store rules related to each field, row, and table as appropriate.
- 1.2.2. Must be able to store rules and perform profile for most of the following: accuracy, currency, precision, privacy, reasonableness, referential integrity, timeliness, uniqueness, validity, inaccurate case, extraneous entries, address inaccuracies, consistency. Please include your definition of each supported and describe how these quality checks will be accomplished.
- 1.2.3. Must be able to run on scheduled basis. Please describe (internal scheduler,



initiated by third party scheduler etc.) how this is accomplished.

1.3. Output

- 1.3.1. Must provide quality profile results per entity, table, source etc. as configured for analysis and communication to appropriate (configured) data administrators.
- 1.3.2. Must provide new/updated 'cleansed' data into target destinations (MSSQL database servers), allowing for additional shaping (configured settings for replacing missing fields etc.).

2. Provision

2.1. Input

- 2.1.1. Must be able to retain configuration of sources including access credentials.
- 2.1.2. Must provide support for alternative (non local, non MSSQL) sources such as through web based APIs and FTP servers.
- 2.1.3. Desired to be usable/configurable without SQL knowledge requirement.

2.2. Process

- 2.2.1. Must be able to run on scheduled basis.
- 2.2.2. Must include change management activities such as versioning of configurations, scripts and rules.
- 2.2.3. Must support substitution of field names through standardized dictionaries etc.
- 2.2.4. Must support storage and operation of custom scripts and shaping instructions.
- 2.2.5. Desired to have graphical interface for configuration and display of rules, schedules, and other configuration settings.

2.3. Output

- 2.3.1. Must have ability to write to MSSQL server new and updated tables.
- 2.3.2. Must support user configuration to whatever format is desired for Tableau etc.



2.3.3. Desired to provide RESTful interface for populated datasets. May involve additional web services / servers etc. to host with integration into solution, please describe.

2.3.4. Desired to support additional workflow processes and scripts for publishing to external sites etc.

3. Master Data and Reference Data Management

3.1. Input

3.1.1. Must be able to configure external master data fields, entities etc. including tables, databases, etc. and access credentials.

3.2. Process

3.2.1. Must provide workflow / processes for managing master data and reference data change requests.

3.2.2. Desired to have integrated self-serve solution(s) for change requests, approvals, publishing etc.

3.2.3. Desired to provide change management functionality such as versioning and auditing.

3.3. Output

3.3.1. Desired to generate automated notifications of changes of master/reference data for subscribers.

3.3.2. Desired to generate email notifications of processed change requests.

4. Consumption

4.1. Optional, please describe any capabilities and integrations for producing graphs, reports, dashboards, exported datasets, mapping, or other visual representations including drilldowns for any summarized data.

5. Meta Data Management



5.1. Optional, please describe any capabilities and integrations for managing and administering meta data and any integration into consumption functionality.

6. Other Data Management

6.1. For other data management activities not covered in above systems, tools will be required to support the various workflows, data tracking, communications, and other activities such as the following:

6.1.1. Administration of a data dictionary and glossary. Desired. This may be directly integrated into the field definitions (physical and logical) of the data quality system above, or a separate process.

6.1.2. Administration of the creation and storage of business process documentation. Optional. This may be directly integrated into other systems above or a separate process.

6.1.3. Administration of role definitions and capabilities. Optional. If the solution requires setting roles and responsibilities for internal functionality, may be helpful to expand to all data related roles and responsibilities to maintain just one list.

6.1.4. Administration of a dashboard to communicate current status of quality profile results etc. (configurable). Optional.

6.1.5. An integrated helpdesk / ticket system. Optional. If portions of the solution have self-service for users, an integrated support system will provide status and management of the incoming requests.

6.2. Data Governance

6.2.1. Additional data governance tools. Optional. Data governance tools will mainly be focused on monitoring existing state and project implementation status and on communicating standards, definitions, and other content to be shared or available to all staff for a common understanding. Any integration into systems should be highlighted.

Part 4 –Questions for Industry

All respondents will answer the questions in section (A). Respondents with a hosted solution will also answer questions in section (B).



 Generally responses should be limited to two pages per questions, except for question Q1.

(A) General Questions

Function	
Q1	How does the respondent propose to meet each of the business requirements listed in Part 3 of this document? Please limit your response to one page per requirement.
Q2	For any requirement not met by the proposed solution, do any arrangements such as integrations of the solution currently exist with third party solutions? If so please identify the requirement, third party solution, and nature of the integration.
Q3	Please describe any bilingual (English and French) support.
Q4	If on premise and off premise options exist, please describe functional differences and limitations between the two. For each requirement please indicate which variation meets the requirement.
Q5	How does the proposed solution differentiate from other solutions on the market, what does the respondent consider their added strength?
Infrastructure	
Q6	What measures has the respondent implemented to provide high system availability? What is the system availability, in percentage terms? Does the respondent offer this availability as part of the Service Level Agreement (SLA)?
Data Management	
Q7	Describe what out of the box reporting and analytical capabilities exist in your solution?
Q8	If the solution becomes the master source for any data, it will be desirable to access this data programmatically for other NEB purposes such as displaying on custom web pages. Please describe any APIs or other programmatic means available to access data within solution.
Q9	Does a data model, Entity Relationship Diagram, or other documentation exist for reading data from the backend (database server)?
Q10	Can the configurations and data stored within the solution be exported for other purposes? What limitations currently exist for configuration export and



	import?
Software	
Q11	Does the solution have a mobile app or responsive User Interface design for your solution (e.g. the user interface automatically adapts its appearance depending on the size of the screen)?
Q12	What configuration options are available in your solution related to personalization and branding?
Q13	Describe how additional customization development can be performed on your solution, should any aspect of the solution require tailoring to NEB's needs.
Q14	List the modern web browsers with which your solution is compatible.
Q15	Describe the workflow capabilities of your solution and describe how these can be configured.
Q16	Can solution allow for NEB to build custom modules?
Q17	Does a roadmap or similar information exist for future development efforts and life expectancy of existing solutions? If so please provide.
Q18	Please describe any user feedback mechanisms in place for the proposed solutions.
Hardware	
Q19	What mobile devices does your solution support?
Security	
Q20	Describe how the identification, authorization and access to the information by authorized NEB staff will be managed over the life cycle of the information.
Q21	Describe what security controls have been implemented in your solution to protect data in transit.
Q22	Describe what security controls have been implemented in your solution to protect data at rest.
Q23	Describe the security architecture of your solution.
Support	
Q24	Describe your support offerings. Are there different tiers or levels for different



	levels of service and cost?
Q25	The NEB expects system availability 24 hours a day, 365 days a year. How does the respondent propose meet this service standard?
Q26	Does the respondent sub-contract any of the services that you offer?
Q27	Please describe anticipated software update process.
Q28	Please provide an example of how a security issue was identified to the public, and how this was addressed. For example if using Struts, how was the recent security concern addressed.
Q29	Based on your experience, how long is a typical ramp up period for a project of this magnitude?
Licensing and Price	
Q30	Describe your pricing model for the proposed solution; include one-time costs as well as operating costs after go-live. Provide sufficient details for the NEB to estimate the total cost of ownership of the solution for the first three years after go-live. Please include options for concurrent licensing, subscriptions etc. as appropriate. Please detail each package and/or module individually.
Vendor Background	
Q31	Has the respondent provided similar service and/or solutions to other clients? Provide a brief description of the services provided indicating the implementation duration, size of client and other pertinent details.
Q32	How long has the respondent been in the business of providing this type of service and/or solution to other clients?
Q33	Does the respondent have other suggestions or concerns about this requirement it would like to bring to the attention of NEB?

(B) Questions for Hosted Solutions:

Architecture	
Q34	Is this a hosted solution? If hosted, describe your hosting environment.
Infrastructure	



Q35	Does your solution support a virtualized environment?
Data Management	
Q36	Is your solution single or multi-tenant?
Q37	Could the services be provided on a separate and dedicated server?
Security	
Q38	Has your IT infrastructure received any formal security certification (e.g. SOC 2/SSAE 16), ISO 27002, etc.) from a recognized independent third party? If so, would the compliance reports be available for review?
Q39	What security controls have been implemented in your solution to protect your system from hackers?
Q40	What security monitoring capability has been deployed in your solution to detect abnormal activities on your systems?
Q41	Describe your data center physical security measures.