



ENERGY OFFICE

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21 February 2018

7N – 37081: Technical Assessment for the eThekweni Wind Turbines.

1. Purpose

The purpose of this Request for Quotation (RFQ) is to appoint a suitable service provider to conduct a technical assessment of the 2 x 150kW wind turbines currently in storage.

2. Project Background

The eThekweni Municipality received a donation of two complete AN Bonus 150-30 wind turbines from the Bremen Overseas Research and Development Association in 2010. The two AN Bonus together with spare parts were transported to Durban for installation to allow further scientific research in wind turbines technology, the interphase with the local grid infrastructure and to generate knowledge on managing wind energy development projects.

Initially, the Bluff military base was identified as a possible site for the installation of these turbines. However, after public participation process was initiated it was recommended that the environmental risks are too high due to the presence of an important bat colony in the vicinity of the site.

The Energy Office and Electricity Unit began searching for the alternative sites within the Municipal boundaries with the help of the Durban Natural Science Museum, Environmental Planning and Climate Protection Department. Five sites were identified to be considered for future possible installation, these sites include Cliffdale, Balgownie, Drummond, Langafontein, and UKZN, Westville Campus.

After further considerations around land ownership issues, wind resources, and close approximation to residential plots the list was further reduced to two sites. Langafontein and UKZN were considered for further scoping assessment. Based on a scoping assessment for birds and bats, undertaken for both sites, the UKZN Westville campus was recommended for further investigation through an Environmental Impact Assessment (EIA) process. The Langafontein site was considered more sensitive from a bird and bat perspective than the UKZN Westville campus site.

Upon further consideration of the details of the project, and consultation with the national Department of Environmental Affairs (DEA), the generation capacity of the wind turbines cumulatively does not require any legislated environmental process to be followed, in terms of the Environmental Impact Assessment (EIA) Regulations (2014) as amended. As a result, no environmental authorization would be required prior to the construction of the eThekweni Wind Repowering Project. Although eThekweni did not have to legally undertake any environmental impact assessment process, in order

to take an informed decision an EIA was undertaken. This was in line with the Municipality's vision of being the most caring and liveable city by 2030.

The wind turbines are AN-Bonus 150-30 and have a rotor diameter of 23m and a hub height of 30m bringing the total height of the wind turbine to approximately 41.5m. The concrete foundation of the wind turbine is anticipated to be approximately 4.7m x 4.7m (22.09m²). The surface area of approximately 22.09m² will require erecting the turbines. There is a need to conduct technical due diligence prior to installing the turbines to adequately assess if the wind turbines are still functional and their remaining lifespan. All major components of the turbine must be mechanically tested and a necessary assessment test certificate issued to verify the equipment condition.

3. Project Aim

The Energy Office of the eThekweni Municipality is mandated to reduce carbon emission by identifying mitigations initiatives that promote the increase in renewable energy uptake by providing proof of concept development, piloting small scale renewable energy projects and conceptualizing clean sustainable energy initiatives in collaboration with other eThekweni departments. The overall wind re-powering program seeks to achieve the following:

- Assess the impact of wind energy on the local grid infrastructure. This can be achieved through practical-based research using postgraduate engineering students and municipal officials;
- Generate knowledge and internal expertise in wind energy and energy project development. This experience will be valuable going forward and will inform further installations on related regulations applicable.
- Collect sufficient data to better understand the environmental impacts of wind energy within the local context which can be used for future wind energy developments in Kwa-Zulu Natal.
- Collaborate with institutions of higher learning in the field of wind energy and contribute to the research development in wind resources in the KZN area.

4. Scope of service

The successful service provider will be required to conduct a broad technical evaluation on the turbine design and its manufacturing record. This shall include the following:

- The conceptual design, adequacy, and performance characteristics of the AN-Bonus (150 – 30) turbine for the wind and weather conditions in proposed location, University of Kwa-Zulu Natal, Westville Campus;
- Provide the record of the turbine manufacturer engineering and design standards and procedures;
- Investigate and test all major components of the wind turbine. Their origin, design and operating life, material structure of all components, and other engineering relegated matters;
- Track record of utilized AN-Bonus with the same design capacity and manufacturer, including past performance of the wind turbine under similar weather condition as in Durban, equipment defects, overheating etc.;
- Determine estimate basic lifetime performance of all major components of the wind turbine;

- Recommend major maintenance program required including the preventive maintenance and or refurbishment. This should include reliability calculations, operational cost, and quality of electricity generation;
- Provide engineering report on the status of the wind turbines by recommending if it can be still used or not. The outcome of the assessment must be signed by competent Engineer registered with Engineering Council of South Africa;
- Provide risk assessment plan for wind turbines (all major risks, minor, moderate or high). This will help client to plan accordingly and provide necessary resources during the construction phase of the project;
- Should the assessment test be positive, issue the wind turbine assessment certificate and recommend the way forward. The provision of design certificate of Wind turbines is essential in order to ensure that critical items of equipment assessed has been designed in accordance with industry standards. Wind turbine certification is required after assessment is complete.

PLEASE NOTE: ECSA REGISTERED ENGINEER OR TECHNOLOGIST IS A MANDATORY REQUIREMENT. FAILURE TO ATTACH EVIDENCE WOULD RESULT IN PROPOSAL DISQUALIFICATION

5. Documents requirements

The following document are expected from the recommended service provider:

- **Bidding proposal** is required for adjudication purposes and recommending the potential service provider. (All service providers must submit proposal with comprehensive methodology);
- **Inception Report** is required to identify project constraints;
- **Preliminary Report** is required assess the design of the wind turbine and its components;
- **Risk Assessment Report** is required to assess future operational concerns;
- **Engineering Judgment Report** must be submitted and be signed by a competent engineer or technologist. Status of wind turbine certificate must be provided from independent certifying body and
- **Final Closeout Report** must be prepared and contain all above deliverables.

6. Proposal Submission

This contract will be adjudicated in terms of the eThekweni Municipality Supply Chain Management rules and policies and will follow the 80:20 rule. The procurement will be done in terms of the Section 18 of approved Supply Chain Management Policy, "Procedures for procuring goods or services through written or verbal quotations and formal written price quotations¹" (i.e. formal written price quotations for procurements of a transaction value over R30 000 up to R200 000 (VAT included).

6.1 Proposal Adjudication Criteria

The adjudication of proposals will be conducted in two phases in terms of the following Scoring System:

Phase 1: Functionality (100 points)

- [1] Experience in assessing equipment designs, performance testing and guarantees using engineering principles such as power curves tests for Wind turbines **[30 points]**
- [2] Experience in tracing track record of used equipment and conducting investigation on origin, serial defects, and active design life span of that particular equipment (components) **[30 points]**
- [3] Quality of the proposal, clear methodology to carry out the investigation and programme plan **[20 points]**
- [4] Experience in obtaining accredited design certificate from independent certifying body **[10 points]**
- [5] Project team (company or individuals) must have educational background in the technical field and be registered with engineering council of South Africa as professional engineer or technologist **[10 points]**

Criteria	0%	40% (poor)	70% (satisfactory)	90% (good)	100% excellent)
1	0 points	12 points	21 points	27 points	30 points
2	0 points	12 points	21 points	27 points	30 points
3	0 points	08 points	14 points	18 points	20 points
4	0 points	04 points	07 points	09 points	10 points
5	0 points	04 points	07 points	09 points	10 points

Bidders must score a minimum of 70 points in total for functionality in order to be evaluated for “Phase 2: Price and Preferential Procurement”. The functionality criteria will be scored according to the following requirements:

Criteria	Description	No response 0%	Poor (40%)	Satisfactory (70%)	Good (90%)	Very good (100%)
Experience in assessing equipment designs, performance testing and guarantees using engineering principles such as power curves tests for Wind turbines	Does project team member (individual or company) have the relevant and sufficient experience to successfully action the Scope of Works?	No information or insufficient or irrelevant information provided	Experience in assessing equipment designs, but lack performance testing and knowledge about subject matter. The knowledge outlined in this chapter is insufficient to adequately assess wind turbine status.	Experience is outlined clear and some have experience in assessing such kind of equipment and components. The chapter bring average expectation about design, performance testing. The information provided can be used to assess turbines.	Experience in assessing wind energy behaviors, equipment, components, and simulation is provided. Comprehensive knowledge about wind energy systems is provided. Team members are have been exposed to wind energy sector and have conducted assessment of this type including engineering power carves, and performance guarantees	Meets all the expectation as per the criteria description and have additionally provided innovative ideas about technical assessment.
Matrix score		[0 points]	[12 points]	[21 points]	[27 points]	[30 points]

Experience in tracing track record of used equipment and conducting investigation on origin, serial defects, and active design life span of that particular equipment (components)	Does project team members (individual or company) have experience root cause investigations and engineering assessment on refurbishment of equipment? Further, able to trace history of performance.	No information or insufficient or irrelevant information provided	The experience and knowledge provided in this chapter is below the expectation. There is no information about team exposure on investigating causes of failure and no information about design life assessment of refurbished equipment. The information is provided but cannot be used to adequately assess the wind turbines.	Experience is outlined clear and team members have relevant experience in the field of wind energy. Engineering assessments have been completed for wind turbines, serial defects and origin of the equipment track record.	Experience in assessing wind energy behaviors, record tracing of used equipment, and conducting equipment investigations. There is too much information about origin of equipment, and expectation about design life of that particular equipment. The information provided meets all the Scope of Works expectation.	Meets all the expectation as per the criteria description and have additionally provided innovative ideas about this technical assessment. Experience is more than the expectation.
Matrix score		[0 points]	[12 points]	[21 points]	[27 points]	[30 points]
Quality of the proposal, clear methodology to carry out the investigation and programme plan	The team proposal must show quality to achieve project deliverables and outline project scheduling plan.	No information or insufficient or irrelevant information provided	The technical approach and / or methodology is poor and not promising to achieve project objectives. The service provider has misunderstood the brief about subject matter.	The proposal is generic and not tailored to address the specific project objectives of this project. The approach does not adequately deal with critical parameters of the system.	The proposal is likely to fulfill the project objectives. The methodology outlines all the systems critical parameters. There is a clear project plan to mitigate any potential project risks during assessment. Clear programme plan	The proposal responds to all the objectives of the project and provided a holistic approach to address all issues of potential risks. Methodology is well prepared and adequately meets the expectation.
Matrix score		[0 points]	[8 points]	[14 points]	[18 points]	[20 points]

Experience in obtaining accredited design certificate from independent certifying body	Experience in obtaining design certificate from the independent certifying body.	No information or insufficient or irrelevant information provided	There is no clear work plan towards obtaining accredited certificate for wind turbines. However, they have outlined the generic procedure.	There is the generic understanding in terms of what needs to be done and how. Chapter do provide items completed of similar nature. Procedure is outlined better.	There is good understanding in terms of how the certificate can be obtained from independent certifying bodies. The Chapter provides more information about items completed related to wind turbines. Clear work plan.	Meets all the expectation as per the criteria description and have additionally provided innovative ideas about getting certificate from accredited certifying bodies. Have completed vast majority of equipment certification.
Matrix score		[0 points]	[04 points]	[07 points]	[09 points]	[10 points]
Project team (company or individuals) must have educational background in the technical field and be registered with ECSA as professional engineer or technologist	Educational background is the back bone of this project. The team must demonstrate the understanding of mechanical engineering, electrical engineering and structural engineering.	No information or insufficient or irrelevant information provided	Company or individual have relevant engineering qualifications but there is only one of their candidates is registered with ECSA as professional mechanical engineer or technologist.	Company or individual have relevant engineering qualifications but there is only two of their candidates is registered with ECSA as professional mechanical and electrical engineer or technologist. The provision is made for candidate (as one person) with both mechanical and electrical engineering. They falls under this category.	Company or individual have relevant engineering qualifications but there is only three candidates registered with ECSA as professional mechanical, electrical and structural engineer or technologist. The provision is made for candidate (as one person) with mechanical, electrical and structural engineering. They falls under this category.	A dedicated team (individual or company) of engineering experts with experience doing research about wind turbines. Demonstrating knowledge in the form of both ECSA registration and voluntary registration with Association of Energy Engineers. Team members have Pr Eng / Pr Tech / CEM and REP. Additional energy certification (CEM or REP) on top of ECSA registration will fall under this category.
Matrix score		[0 points]	[04 points]	[07 points]	[09 points]	[10 points]

Phase 2: Price and Preferential Procurement (100 points)

- 1) Price (80 points)
- 2) Preferential Procurement (20 points)

Broad Based Black Economic Empowerment Points will be awarded to bidders in accordance with the table below:

B-BBEE Status Level of Contributor	80/20 Point System
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

6.2 Total Scores

The total adjudication score will be recorded as follows:

Criteria	Max. Points Scoring
Phase1: Functionality	100 Points
[1] Experience in assessing equipment designs, performance testing and guarantees using engineering principles such as power curves tests for Wind turbines.	30
[2] Experience in tracing track record of used equipment and conducting investigation on origin, serial defects, and active design life span of that particular equipment (components).	30
[3] Quality of the proposal, clear methodology to carry out the investigation and programme plan.	20
[4] Experience in obtaining accredited design certificate from independent certifying body.	10
[5] Project team (company or individuals) must have educational background in the technical field and be registered with engineering council of South Africa as professional engineer or technologist.	10
TOTAL Phase 1:	100
Note: 70 points required in phase 1 to proceed to phase 2	
Phase 2: Price and Preferential Procurement	100 Points
Price	80
Preferential Procurement	20

6.3 Proposal Requirements

Proposals need to be structured as follows:

- 1] A chapter outlining experience in assessing equipment designs, performance testing and guarantees using engineering principles such as power curves tests for Wind turbines;
- 2] A chapter outlining experience in tracing track record of used equipment and conducting investigation on origin, serial defects, and active design life span of that particular equipment (components);
- 3] A chapter indicating a quality of the proposal, clear methodology to carry out the investigation and programme plan;
- 4] A chapter outlining experience in obtaining accredited design certificate from independent certifying body;
- 5] A chapter indicating educational background of the competent engineer or technologist and details of his/her registration with engineering council of South Africa as professional engineer or technologist.

The following information and documents need to be attached:

- 1] The location of the submitting entities offices;
- 2] Original Valid Tax Clearance Certificate;
- 3] CV's, ECSA certified certificate and Energy certificate;
- 4] Detail list of all references for similar projects completed and contact numbers;
- 5] Annexure: Supporting Documents (MBD 9 Forms):
 - a. Original Declaration of Interest
 - b. Original Declaration of Municipal Fees
 - c. Original Certificate of Independent Bid Determination
 - d. Certified copy of BBBEE certification

THE CLOSING DATE FOR SUBMISSIONS OF QUOTATIONS IS 11H00 ON THE 07 MARCH 2018

THE COMPULSORY CLARIFICATION MEETING TO BE HELD AT ENERGY OFFICE ON THE 28 FEBRUARY 2018

Each service provider must submit a quotation clearly marked **“Technical Assessment for eThekweni Wind Turbines”** Quotations / proposals need to be submitted to:

E-mail: Lungile.Mthethwa@durban.gov.za

Delivered to: Lungile Mthethwa

3rd Floor, Smart Exchange, Durban, 4001

Tel: 031 311 4509

For Technical Queries contact

E-mail: Sbu.Ntshalintshali@durban.gov.za

Tel: 031 322 2634

NOTE: ONLY HARD COPIES ARE ACCEPTED

Please ensure that you receive a confirmation of receipt if submitted by email and that emails do not exceed 5 MB in size. The eThekweni Municipality does not bind itself to accept the lowest or any quotation, and reserves the right to accept a portion of any quotation, unless the supplier expressly stipulates otherwise in their quotation. The eThekweni Energy Office does not undertake to consider quotations received after the due date and time unless clear evidence of dispatch is available. This request for quotations is subject to any changes which may stem from a negotiation of the final terms with the service provider, as well as any additional budget which may be allocated to the project. Payment arrangements will be negotiated on the basis of the completion of project milestones and will be outlined in the letter of appointment. Final payment will be paid on full completion of the project and the receipt of the final set of deliverables.

A. DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state².
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1. Full Name of bidder or his or her representative:.....

3.2. Identity Number:

3.3. Position occupied in the Company (director, trustee, shareholder³):.....

3.4. Company Registration Number:

3.5. Tax Reference Number:.....

3.6. VAT Registration Number:

3.7. The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8. Are you presently in the service of the state? **YES / NO**

If yes, furnish particulars.....

3.9. Have you been in the service of the state for the past twelve months?**YES / NO**

²MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

³Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

If yes, furnish particulars.....

.....

3.10. Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?
YES / NO

If yes, furnish particulars.

.....

.....

3.11. Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

If yes, furnish particulars

.....

.....

3.12. Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

If yes, furnish particulars.

.....

.....

3.13. Is any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?**YES / NO**

If yes, furnish particulars.

.....

.....

3.14. Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?**YES / NO**

3.14.1 If yes, furnish particulars:

.....

.....

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

.....

Signature

.....

Date

.....

Capacity

.....

Name of Bidder

A. DECLARATION OF MUNICIPAL FEES

I/We do hereby declare that the Municipal fees of _____ (company name), are, as at the date of the tender closing, fully paid up, or arrangements have been concluded with the Municipality to pay the said fees :

ACCOUNT	ACCOUNT NUMBER
ELECTRICITY	_____
WATER	_____
RATES	_____
JSB LEVIES	_____
OTHER	_____

I acknowledge that should it be found that the Municipal fees are not up to date, the Council may take such remedial action as is required, including termination of contract, and any income due to the Contractor shall be utilised to offset any monies due to the Council.

Name

Signature

Designation

Date

B. CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

MBD 9 CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:
I certify, on behalf

of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
6. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - a) has been requested to submit a bid in response to this bid invitation;
 - b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) geographical area where product or service will be rendered (market allocation)
 - c) methods, factors or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a bid;
 - e) the submission of a bid which does not meet the specifications and conditions of the bid; Or
 - f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998, and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

.....

Signature

.....

Date

.....

Position Name of Bidder

.....

Date

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.