

Tender no:

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| 35   | Replace in its entirety with the following:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      | Unless otherwise stated adequate insurance is the responsibility of the Contractor. The Contractor shall submit the insurance policy to the Employer for approval, if so requested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      | <b>Damage to the Works</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 35.1 | <p>(a) Without in any way limiting the Contractor's obligations in terms of the Contract, the Contractor shall bear the full risk of damage to and/or destruction of the Works by whatever cause during construction of the Works and hereby indemnifies and holds harmless the Employer against any such damage. The Contractor shall take such precautions and security measures and other steps for the protection and security of the Works as he may deem necessary.</p> <p>(b) The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works.</p> <p>(c) The Employer shall carry the risk of damage to or destruction of the Works and material paid for by the Employer that is the result, whether direct or indirect or proximate or remote, of the excepted risks as set out in Clause 35.2.</p> <p>(d) Where the Employer bears the risk in terms of this Contract, the Contractor shall, if requested to do so, reinstate any damage or destroyed portions of the Works and the costs of such reinstatement shall be measured and valued in terms of Clause 44 hereof.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      | <b>Injury to Persons or loss of or damage to Properties</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 35.2 | <p>(a) The Contractor shall be liable for and hereby indemnifies the Employer against any liability, loss, claim or proceeding whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the Works unless due to any act or neglect of any person for whose actions the Employer is legally liable.</p> <p>(b) The Contractor shall be liable for and hereby indemnifies the Employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person, arising out of or in the course of or by reason of the execution of the Works unless due to any act or neglect of any person for whose actions the Employer is legally liable.</p> <p>The Contractor shall upon receiving an Order in Writing from the Engineer cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the Employer shall be entitled to cause it to be made good and to recover the cost thereof from the Contractor or to deduct the same from amounts due to the Contractor as stated in Sub-Clause 53 (4) hereof.</p> <p>(c) The Contractor shall be responsible for the protection and safety of such portions of the premises placed under his control by the Employer for the purpose of executing the Works until the issue of the Certificate of Completion.</p> <p>(d) Where the execution of the Works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the Contractor, shall and will remain adequately insured or insured against the death of or injury to persons or damage to such property consequent on such removal or interference with support until such portion of the Works has been completed.</p> <p>(e) The Contractor shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.</p> |

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| 35 (A)   | <p><b>HIGH RISK INSURANCE</b></p> <p>In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or do line formation the following will apply:</p> <p>(1) <b>Damage to the Works</b></p> <p>The Contractor shall, from the Commencement Date of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary.</p> <p>When instructed to do so by the Engineer, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs.</p> <p>(2) <b>Injury to Persons or Loss of or damage to Properties</b></p> <p>The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising at any time during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.</p> <p>(3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 35 (A) (1) and 35 (A) (2) above. Without limiting the Contractor's obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date but before commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so.</p> <p>(4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as set out in Clauses 35 (A) (1), 35 (A) (2) and (3). Such losses or damages may be recovered from the Contractor or by deducting the same from any amounts still due under this Contract or under any other contract presently or hereafter existing between the Employer and the Contractor and for this purpose all these contracts shall be considered one indivisible whole.</p> |
| 36.4     | Delete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 37.2.2.3 | The percentage allowance to cover the overhead charges is 33%, except on material cost where the percentage allowance is 10%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 40.2     | <p>Add the following to the end of the second paragraph:</p> <p>"which costs may be deducted from any payments due to the Contractor in terms of the Contract or any other Contract, now or in the future, existing between the Employer and the Contractor and for this purpose all these contracts shall be considered one indivisible whole."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| 42.1 | <p>The Works shall be completed within:</p> <p><b><i>The period per site that will be determined and agreed upon in writing (up to the maximum of two (2) calendar months from the site handover date) between the SAPS Project Manager and contractor based on the need and the scope of work per site within the term contract period.</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 43.1 | <p>The penalty for failing to complete the Works is 0,1% of the contract amount per calendar day.</p> <p><b><i>The contract amount and penalty amount will be determined per site</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 46.2 | <p>Contract Price Adjustment (CPA) will be applicable <span style="float: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></span></p> <p>If CPA is applicable, the value of the payment certificates is to be adjusted in accordance with the Contract Price Adjustment Schedule, where:</p> <p>The value of "x" is 0.15</p> <p>The values of the coefficients are:</p> <p>a= 0.25 (labour)</p> <p>b= 0.3 (contractor's equipment)</p> <p>c= 0.3 (material)</p> <p>d= 0.15 (fuel)</p> <p>The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are:</p> <p>a= 0.35 (labour)</p> <p>b= 0.20 (contractor's equipment)</p> <p>c= 0.35 (material)</p> <p>d= 0.10 (fuel)</p> <p>The urban area nearest the Site is <b>SAPS provincial Office</b></p> <p>The base month is <b><i>the month prior to the closing of the tender</i></b></p>                                                                                                                                                                                                                                                                                                                                            |
| 47.5 | <p>Add the following Clause 47.5</p> <p>If during the time for completion of the Works or any extension thereof abnormal rainfall or wet conditions occurs, then the formula below shall be used to <b>calculate separately the delay for each calendar month or part thereof. It shall be calculated each month during the period referred to in Clause 42.1 as the time for the completion of the Works and any extension time in accordance with Clause 42 that may have been granted by the Employer, or until the issue date of the certificate of practical completion, whichever is the shorter period. The delay calculated for a given month shall be used to determine the interim extension of time granted for the month. At the end of the applicable period referred to above, the aggregate of the monthly delays will be taken into account for the final determination of the total extension of time for the Contract:</b></p> $V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$ <p>If any value of V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.</p> <p>The delay for a part of a month shall be calculated by substituting pro-rata values for the variables in the equation.</p> |

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|        | <p>The symbols shall have the following meanings:</p> <p>V = Delays due to rain in calendar days in respect of the calendar month under consideration.</p> <p>Nw = Actual number of days during the calendar month on which a rainfall of Y mm or more per day has been recorded</p> <p>Rw = Actual rainfall in mm for the calendar month under consideration.</p> <p>Nn = Average number of days in the relevant calendar month (as derived from existing rainfall records provided in the project specifications) on which a rainfall of Y mm or more per day has been recorded.</p> <p>Rn = Average rainfall in mm for the calendar month, as derived from the rainfall records supplied in the project specifications.</p> <p>X = 20, unless otherwise provided in the project specifications.</p> <p>Y = 10, unless otherwise provided in the project specifications.</p> <p>The total delay that will be taken into account for the determination of the total extension of time for the Contract shall be the algebraic sum of the monthly totals for the period under consideration. But if the grand total is negative, the time for completion shall not be reduced on account of abnormal rainfall. The total extension of time for any calendar month shall not exceed <math>(Nc - Nn)</math> calendar days, where <math>Nc</math> = number of days calendar days in the month under consideration</p> <p>The factor <math>(Nw - Nn)</math> shall be considered to represent a fair allowance for variations from the average number of days during which rainfall equals or exceeds Y mm per day.</p> <p>The factor <math>(Rw - Rn) + X</math> shall be considered to represent a fair allowance for variations from the average for the number of days during which rainfall does not equal or exceed Y mm per day, but when wet conditions prevent or disrupt work.</p> <p>This formula does not take into account any flood damage, which could cause further or concurrent delays and which should be treated separately in so far as extension of time is concerned.</p> <p>Accurate rain gauging shall be taken at a suitable point on the site daily at 08:00 unless otherwise agreed to by the engineer, and the Contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with by unauthorized persons.</p> <p>Information regarding existing rainfall records, if available from a suitable rainfall station near the site, will be supplied in the project specifications, together with calculations of rain delays for previous years in accordance with the above formula. The average of these delays will be regarded as normal rain delays which the Contractor shall accommodate in his programme, and for which no extension of time will be considered.</p> |
| 48.3.4 | Replace the word "conclusive" with the words "prima facie"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 8.3.6  | Delete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 48.6 | <p>Add the following Clause 48.6</p> <p>"If the Employer fails to give his ruling within the period referred to in Clause 48.5, he shall be deemed to have given a ruling dismissing the claim."</p> |
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| 49.1.2 | Replace the word "Schedule" with the word "Bill"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 49.1.5 | The percentage advance on materials not yet built into the Permanent Works is 85%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 49.3   | <p>Replace with the following:</p> <p>Payment of the amounts referred to in Clause 49.1.1, 49.1.2, 49.1.3 and 49.1.4 shall, save to the extent otherwise provided in Clause 49.6, be subject to a retention, if applicable in terms of clause 7.1, by the Employer of an amount (herein after called the "retention money"), being the percentage, stated in Part 2 of the Contract Data of the said amounts due to the Contractor.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 49.5   | <p>Replace Clause 49.5 with the following</p> <p>In respect of contracts up to R1 million and in respect of contracts above R1 million where the Contractor elects a security by means of a 10% retention of the Value of the Works (excl. VAT), 50% of the retention shall be released to the Contractor when the Engineer issues the last Certificate of Completion in terms of clause 51.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable within 14 days of the issue of the last Final Approval Certificate.</p> <p>Or</p> <p>In respect of contracts above R1 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT), the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or released to the guarantor, respectively, when the Engineer issues the last Certificate of Completion in terms of Clause 51.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable within 14 days of the issue of the last Final Approval Certificate.</p> <p>Or</p> <p>In respect of contracts above R1 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT), the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Engineer issues the last Certificate of Completion in terms of Clause 51.4. The balance of the cash deposit shall become due and payable within 14 days of the issue of the last Final Approval Certificate or the variable guarantee shall expire upon the issue of the last Final Approval Certificate.</p> |
| 49.6   | A Retention Money Guarantee is not permitted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 49.7.2 | Replace the words "prime overdraft rate certified by the Contractor's banker" with the words "interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 49.11  | <p>Add Clause 49.11 as follows:</p> <p>In respect of any amount owed by the Contractor to the Employer, the Contractor shall pay the Employer interest at the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 50.    | Amend the percentage from 15 per cent to 20 per cent in the title, the Clause and in the sideline comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 52.2   | <p>Amend as follows:</p> <p>"...of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude ...powers of the Engineer and/or the Employer"</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| 53.1 | The Defects Liability Period is 12 months |
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**Tender no:**

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| 55.1.6 | Amend as follows<br><br>"Has, to the detriment of good workmanship or without the written approval of the Employer or in defiance of the Engineer's instructions to the contrary, sublet any part of the Contract, or"                                                                                                                                                                                                                                   |
| 56.2.2 | Delete the following words<br><br>"without prejudice to his lien on the Employer's property"                                                                                                                                                                                                                                                                                                                                                             |
| 56.3   | Add the following at the end<br><br>After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any right whatsoever.                                                                                                                                              |
| 57.1   | Amend as follows:<br><br>"... Clauses 48 or 58.7 or in respect of any matter in terms of which the Employer has issued a certificate or instruction or has made a ruling, determination, decision or valuation, or in respect of any matter in terms of which the Employer has given effect to the provisio in Clause 2.3, the Contractor shall have the right by written notice with supporting particulars to the Engineer and Employer to require..." |
| 58.1.1 | Delete the words "Clause 48 or"                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 58.1.2 | Delete the words "48.5 or" and replace the word "Clauses" with the word "Clause"                                                                                                                                                                                                                                                                                                                                                                         |
| 58.1.3 | Amend as follows:<br><br>"... and the Engineer or Employer, as applicable, or by the Mediator's opinion to the extent that it has become binding in terms of Clause 58.2.6                                                                                                                                                                                                                                                                               |
| 58.2   | Dispute resolution is to be by means of mediation.                                                                                                                                                                                                                                                                                                                                                                                                       |
| 58.4   | Disputes are to be referred for final settlement to litigation.                                                                                                                                                                                                                                                                                                                                                                                          |
| 59     | Add the following Clause 59<br><br>"No amendments of this Contract or of any provisions or terms hereof and no waiver or relaxation or suspension of any of the provisions or terms of this Contract shall be of any force or effect unless reduced to writing and signed by both the parties hereto."                                                                                                                                                   |

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Tender no:

| PART 2: DATA PROVIDED BY THE CONTRACTOR |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| 1.8                                     | <p>The name of the Contractor is</p> <p>.....</p> <p>.....</p> <p>(insert the legal name of the Contractor, as well as the Contractor's registration number, if applicable)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.2.2                                   | <p>The addresses of the Contractor, where the Contractor shall receive notices, are as follows:</p> <p>Physical Address:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Postal Address:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Facsimile: _____ Telephone: _____</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 7.1                                     | <p>The security to be provided by the Contractor:</p> <p>(a) in respect of contracts up to R1 million, the security to be submitted by the Contractor to the Employer will be a retention of 5% of the Value of Works (excluding VAT)</p> <p>(b) in respect of contracts above R1 million, the Contractor will provide, as security, one of the following:</p> <p>(1) cash deposit of 10 % of the Contract Sum (excluding VAT) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>(2) variable construction guarantee of 10 % of the Contract Sum (excluding VAT) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>(3) retention of 10% of the Value of Works (excluding VAT) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>(4) cash deposit of 5% of the Contract Sum (excluding VAT) and a retention of 5% of the Value of Works (excluding VAT) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>(5) fixed construction guarantee of 5% of the Contract Sum (excluding VAT) and a retention of 5% of the Value of Works (excluding VAT) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><b>NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred</b></p> |

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|  | to above. No alterations or amendments of the wording of the pro-forma will be accepted. |
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**APPOINTMENT OF CONTRACTOR FOR DESIGN, SUPPLY, DELIVERY,  
INSTALLATION AND COMMISSIONING OF INVERTER BATTERY  
BACKUP / SOLAR SYSTEM IN KWA-ZULU NATAL PROVINCE REGION 1  
FOR THE PERIOD OF THREE (03) YEARS**

**BID: 19/1/9/1/30TB(23)**

**PART C:**

**CONTRACT**

**Part C.1.1**

**SPECIAL CONDITIONS**



#### **SPECIAL CONDITIONS OF THE CONTRACT**

**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

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**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT  
OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION &  
COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE  
PERIOD OF THREE (03) YEARS**

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PERIOD OF THREE (03) YEARS**

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**ABBREVIATIONS**

|          |                              |
|----------|------------------------------|
| BAC      | : Bid Adjudication Committee |
| CPA      | : Contract Price Adjustment  |
| CPI      | : Consumer Price Index       |
| ROE      | : Rates of Exchange          |
| SBD      | : Standard Bidding Document  |
| STATS SA | : Statistics South Africa    |
| VAT      | : Value- Added Tax           |



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**SECTION A**

**1. LEGISLATIVE AND REGULATORY FRAMEWORK**

This bid and all contracts emanating there from will be subject to the GCC 2004 and Contract Data. The Special Conditions of Contract are supplementary to that of the GCC Agreement. Where, however, the Special Conditions of Contract are in conflict with the GCC, the Special Conditions of Contract prevail.

**2. EVALUATION CRITERIA**

**2.1 Preference Point System**

**2.1.1** In terms of regulation of the Preferential Procurement Regulations pertaining to the Preferential Procurement Policy Framework Act, 2022 (Act 5 of 2000), responsive bids will be adjudicated by the State on the 80/20-preference point system in terms of which points are awarded to bidders on the basis of:

- The bid price (maximum 80 points)
- Specific goals (maximum 20 points)

**2.1.2** The following formula will be used to calculate the points for price:

$$P_s = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

$P_s$  = Points scored for comparative price of bid under consideration

$P_t$  = Comparative price of bid under consideration

$P_{\min}$  = Comparative price of lowest acceptable bid

**2.1.3** A maximum of 20 points may be allocated to a bidder for attaining their specific goals of contributor in accordance with the table below:



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| The specific goals allocated points in terms of this tender                                                        | Number of points allocated (90/10 system)<br>(To be completed by the organ of state) | Number of points allocated (80/20 system)<br>(To be completed by the organ of state) | Number of points claimed (90/10 system)<br>(To be completed by the tenderer) | Number of points claimed (80/20 system)<br>(To be completed by the tenderer) |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Persons historically disadvantaged on the basis of race with at least 51% ownership                                |                                                                                      |                                                                                      |                                                                              |                                                                              |
| Persons historically disadvantaged on the basis of gender with at least 51% ownership by women                     |                                                                                      |                                                                                      |                                                                              |                                                                              |
| Persons with at least 51% ownership who are youth                                                                  |                                                                                      |                                                                                      |                                                                              |                                                                              |
| Persons historically disadvantaged by unfair discrimination on the basis of disability with at least 51% ownership |                                                                                      |                                                                                      |                                                                              |                                                                              |

- 2.1.4 Bidders are required to complete the preference claim form (SBD 6.1).
- 2.1.5 The points scored by a bidder in respect of the specific goals contribution will be added to the points scored for price.
- 2.1.6 Only bidders who have completed and signed the declaration part of the preference claim form will be considered for preference points.
- 2.1.7 The SAPS may, before a bid is adjudicated or at any time, require a bidder to substantiate claims it has made with regard to preference.
- 2.1.8 The points scored will be rounded off to the nearest 2 decimals.
- 2.1.9 In the event that two or more bids have scored equal total points, the contract will be awarded to the bidder scoring the highest number of preference points for specific goals.



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2.1.10 However, when functionality is part of the evaluation process and two or more bidders have scored equal points including equal preference points for specific goals, the contract will be awarded to the bidder scoring the highest for functionality.

2.1.11 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

2.1.12 A contract may, on reasonable and justifiable grounds, be awarded to a bid that did not score the highest number of points.

**2.2 Evaluation method**

The evaluation will be conducted as follows:

**2.2.1 Mandatory conditions**

The Contractor shall ensure that he/she is conversant with the technical specification and applicable standards.

Note: it is the contractor's responsibility to ensure that his/her pricing make provision for the appointment of a registered professional Electrical and structural engineer/Technologist in terms of the Engineering and Profession Act 2000 (Act No.46 of 2000), the contract must have at least one Electrical engineer/Technologist, one structural engineer/Technologist, one safety officer/Agent and one personnel with wiremen's license.

Contractor must demonstrate or prove completion of similar solar installation not less than 8KW.

The Contractor shall complete the functional evaluation criterion table with all information provided in order to ensure their bid is responsive.

The contractor will be obligated in terms of this contract to ensure the Design, supply, delivery; installation & commission of INVERTER BATTERY BACKUP/SOLAR SYSTEM Power at Police Stations are completed within a period of two (2) months after receiving of order form.

The contractor shall fully acquaint themselves with the nature of the work carried out, the locality of the facility and any possible hindrances in the execution of Inverter Battery backup/Solar System, warranty and to allow



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for these entire factors in their price, as any later claim based on unforeseen events or knowledge will not be entertained.

The contract shall be entirely responsible for referencing all relevant standard specification of the SANS or other applicable published standard whether such standard is referenced in this document or not and ensuring compliance with the Engineering Works therewith. All equipment supplied shall be from suppliers that have proven track record and with aftersales technical support as well as complies with the small scale embedded generation requirement of the municipal area to be installed.

The combination of equipment will be site specific and shall be made in consultation with the SAPS engineer prior to commencement of works including whether a grid tied or hybrid storage system is best suited to user requirements.

After the design, supply, delivery, installation & commissioning of INVERTER BATTERY BACKUP/SOLAR SYSTEM are complete, full training shall be provided by the contractor with detail guidelines.

The contractor shall provide the following:

A full set of AS-BUILT drawings including SLD, DC, AC reticulation detail to the SAPS engineer as part of the handover documentation technical manuals and warrantee documentation on main equipment incl solar panels/inverters/batteries.

Practical completion certificates signed by PrEng/Pr Tech (ECSA)  
Commission test results report, Project Closeout Report, Certificate of compliance (COC).

The solar systems envisaged are for the sizes of: 8kVA 1phase, 12kVA 3phase, 50kVA 3phase, 100kVA 3phase or multiples of these sizes.

Hence the bidder shall price the bill of quantities according to these sizes such that any solar system that may be a multiple of this system will then be applied to the pricing provided.

All prices provided for in the rates below shall consider a complete supply and fit of those items in the installation.



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**Distribution Board (DB)**

The construction must be in accordance with SANS 10142-1:2017.

Openings into distribution boards must tie up with the installation. AC and DC circuitry shall not be in the same distribution box. All earthing requirements shall be included in pricing as well as labelling in DB. The AC DB and DC DB shall be complete with all internal requirements for the solar or battery inverter system to function adequately in accordance with the SANS requirements and shall be included in price where not explicitly separately priced in the Bill of Quantity.

All AC and DC DB shall include SPD class 1 surge protection and shall ensure adequate earth leakage state under particular of tender against each requirement whether the tender comply or do not comply with the requirement of the specification (failure will lead to disqualification of the bid).

**CONSULTANTS**

The consultants will be responsible to survey the existing electrical installation, provide as built drawings and draw up specifications for the Inverter battery Backup/Solar system and layouts of the proposed system and bill of quantities, inclusive of a comprehensive report with photos. System parameters to be determined with clients inputs. Such specifications, layouts, bill of quantities and report subject to client approval.

The consultants will be responsible to supply the client (SAPS) with a full set of construction drawings, bill of quantities and specifications.

The consultants will be responsible for compiling sets of handover files, containing full specifications, as built drawings, equipment brochures and pamphlets, COC's and final report

All work on site must be accompanied by a safety file with the method statement and approved by SAPS engineer with necessary work at height and occupational safety and COIDA information

**ENGINEERING NOTES**

ALL distribution boards will be COC'ed individually, irrespective of being contained in a singular frame or cabinet.



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Professional Technologist/Engineer to be responsible with, Design quality inspection, sign off installation and to do close out  
No Sprague may be specified or installed.

All conduit, inclusive of galvanised conduit, will be bent with appropriate pipe bending equipment or will be installed with appropriate elbows and bends.

All screw fixtures shall be made utilising Fischer type plugs and screws specific to Fischer type plugs.

NO NAIL-IN OR KNOCK-IN TYPE PLUGS OR SCREW TYPES WILL BE ALLOWED.

Bidder's documents will be scrutinized to establish if all the mandatory conditions are complied with and/or mandatory documents have been submitted. The bids of the Bidders who failed to comply with all the mandatory conditions and/or who failed to submit the mandatory documentation will be declared invalid.

Only bidders that submitted the mandatory documents, accepted the mandatory conditions and met the specification will be further evaluated.

The bidder must fully comply with Specification of the bid. The bidder must indicate in writing **Comply** or **Not Comply** in the relevant column of every field. Failure to do so will be interpreted as **Not Comply**.

**The bidder must fully complete and sign all the pages of the Specification and Special Conditions.**

**2.2.2 Technical evaluation**

Bidders offer will be evaluated in accordance with the set specifications.

Only bidders who complied with the mandatory requirements as specified in phase one (1) documents will be scrutinised to ascertain if the bidders comply with the specification.

Only bidders that comply with the specification or have minor acceptable deviations, bids will be evaluated in terms of price – phase three (3).



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**2.2.3 Calculation of points**

Points shall be calculated for price as prescribed by the PPPFA. The bidder that scores the highest points for price (max of 80 points) and Specific goals points' max of 20 points will be added to obtain a total of 100 points. The bid will be evaluated and awarded.

**3. RESPONSE FIELDS**

- 3.1 Bidders are required to submit responsive bids by completing all the prices, mandatory response fields and item questionnaires on the provided pricing schedule for the individual items.
- 3.2 Non-compliance with this condition will invalidate the bid for the item(s) concerned.

**4. VALUE ADDED TAX**

- 4.1 All bid prices must be inclusive of 15% Value-Added Tax.
- 4.2 Failure to comply with this condition may invalidate the bid.

**5. SUBMISSION OF BIDS**

- 5.1 Bidders must submit the bid in hard copy format (paper document) to The Divisional Commissioner: Supply Chain Management, 117 Cresswell Rd Silverton before the closing date and time.

The hard copy of the bid response will serve as the legal bid document.

The bid must be addressed to The Divisional Commissioner: Supply Chain Management.

- 5.2 Each bid should be submitted in a separate, sealed envelope or suitable cover on which the name and address of the bidder, the bid number and the closing date must be clearly endorsed.

**6. LATE BIDS**

Bids received after the closing date and time, at the address indicated in the bid documents, will not be accepted for consideration and where practicable, be returned unopened to the bidder.



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**7. COUNTER CONDITIONS**

Bidders' attention is drawn to the fact that amendments to any of the Bid Conditions or setting of counter conditions by bidders may result in the invalidation of such bids.

**8. FRONTING**

- 8.1 The South African Police Service supports the spirit of broad based black economic empowerment and recognizes that real empowerment can only be achieved through individuals and businesses conducting themselves in accordance with the Constitution and in an honest, fair, equitable, transparent and legally compliant manner. Against this background the South African Police Service condemn any form of fronting.

The South African Police Service, in ensuring that bidders conduct themselves in an honest manner will, as part of the bid evaluation processes, conduct or initiate the necessary enquiries/investigations to determine the accuracy of the representation made in bid documents. Should any of the fronting indicators as contained in the Guidelines on Complex Structures and

Transactions and Fronting, issued by the Department of Trade and Industry, be established during such enquiry/investigation, the onus will be on the bidder/contractor to prove that fronting does not exist.

Failure to do so within a period of 14 days from date of notification may invalidate the bid/contract and may also result in the restriction of the bidder/contractor to conduct business with the public sector for a period not exceeding ten years, in addition to any other remedies the South African Police Service may have against the bidder/contractor concerned.

**9. SUPPLIER DUE DILIGENCE**

The South African Police Service reserves the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include site visits.



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**10. COMMUNICATION**

- 10.1 The Divisional Commissioner: Supply Chain Management: South African Police Service may communicate with bidders where clarity is sought after the closing date of the bid and prior to the award of the contract, or to extend the validity period of the bid, if necessary.
- 10.2 Any communication to any government official or a person acting in an advisory capacity for the State in respect of this bid between the closing date and the award of the bid by the bidder is discouraged.
- 10.3 All communication between the bidder and the Divisional Commissioner: Supply Chain Management must be done in writing.

**11. CONTACT DETAILS**

**11.1 General**

The Divisional Commissioner: Supply Chain Management  
South African Police Service  
Private Bag 254, Silverton  
Physical address: 117 Cresswell Rd Silverton, Pretoria

**11.2 Bid Enquiries/ Specification /Technical Enquiries**

**Bid Enquiries**

Lt Colonel MS Kekana  
Tel: 012 841 7816  
Email: [KekanaMookho@saps.gov.za](mailto:KekanaMookho@saps.gov.za)

Captain MP Sindane  
Tel: 012 841 7503  
Email: [Sindane@saps.gov.za](mailto:Sindane@saps.gov.za)

CPAC Kenneth Mohlala  
Tel: 012 841 7358  
Email: [MohlalaKK@saps.gov.za](mailto:MohlalaKK@saps.gov.za)



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**Technical Enquiries**

Colonel Mulaudzi  
Tel: 012 349 6053  
Email: [MulaudziMD@saps.gov.za](mailto:MulaudziMD@saps.gov.za)

**SECTION B**

**12. CONTRACT PERIOD**

- 12.1 The contract period shall be for a period of 36 months (three years) and will commence on the day of acceptance of a bidders proposal and not per financial or calendar year.

**13. PARTICIPATING DIVISIONS/ PROVINCES FOR THE SAPS**

- 13.1 This is a Provincial Contract which will only be used and managed by the Division Supply Chain Management, Pretoria.

**14. LEGISLATIVE/ REGULATORY AND SPECIAL REQUIREMENTS SPECIFIC TO THIS BID**

**Bidders are required to adhere to the following legislative /regulatory and special requirements. Non-compliance with these conditions will invalidate the bid for such products offered.**

- 14.1 Have an active CIDB grading of **5 EP or higher (Electrical Engineering Works – Infrastructure).**
- 14.2 The bidder must have at least one Electrical Engineer/Technologist, one Structural Engineer/ Technologist, one Health and Safety officer/Agent, and one personnel with a wiremen's license. Copy of Professional registration, CV with relevant experience (failure to comply with his/her bid will be regarded as non-responsive).
- 14.3 The bidder must have one (1) or more completed projects, proof to be submitted with the bid document (proof of completion certificates/letter/certificate of compliance not older than ten (10) years) (failure to comply with his/her bid will be regarded as non-responsive)
- 14.4 Fully complete and sign all documents and return it with the bid **document.**



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14.5 Full compliance with the attached specifications for inverter battery backup / solar system.

14.6 Submit all mandatory documents as required.

14.7 All materials used or supplied to the SAPS must be new and must be SANS approved.

14.8 Bidders must take cognisance of the fact that the SAPS' requirement is based on an "as-and when-needed"-basis and is **NOT** quantity based. **NO** quantities can be specified or guaranteed and will be dependent on the ad hoc needs of the SAPS. **Bidders must take cognisance of this fact and must submit their prices.**

14.9 Payment will only be made after the unit has been delivered, placed, set, connected and accepted by the South African Police Service.

14.10 No inferior units or bad workmanship will be accepted or paid for.

**14.11 PROFIT MARGIN**

In order to determine if the tariffs and prices submitted in this bid document is reasonable and market related a cost breakdown must be submitted on closing date and time of the bid.

|                     | Percentage % |
|---------------------|--------------|
| Direct Labour       | %            |
| Other Variable Cost | %            |
| Fixed Cost          | %            |
| Profit Before VAT   | %            |
|                     | 100%         |

14.11.1 Failure to comply with the above-mentioned conditions **will** invalidate the bid for the item/s concerned.

**15 ADDITIONAL DOCUMENTATION/INFORMATION REQUIRED SPECIFIC TO THIS BID**

**15.1 Format and submission of bid**



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15.1.1 Bidders are required to submit their bids in the following manner:-

|           |                                                      |
|-----------|------------------------------------------------------|
| Section 1 | Standard bidding documents (CIDB, SBD documents)     |
| Section 2 | Pricing Schedule and Item Questionnaire              |
| Section 3 | Other supporting documentation (CSD, brochures etc.) |

**16 PRICING STRUCTURE**

- 16.1 Prices quoted must be VAT inclusive per unit, item, meter, cubic meter or as indicated.
- 16.2 Prices submitted for this bid must be filled in on the field provided on the pricing schedules supplied with the bid. Price structures that do not comply with this requirement will invalidate the bid.

**17 CONTRACT PRICE ADJUSTMENTS**

**17.1 Formula**

- 17.1.1 Prices submitted for this bid will be regarded as firm for the first year and non-firm for the second year and third year; will be subject to adjustment(s) in terms of the following formula, defined areas of cost and defined periods of time.
- 17.1.2 Applications for price adjustments must be accompanied by documentary evidence in support of any adjustment claim.
- 17.1.3 The following price adjustment formula will be applicable for calculating contract price adjustments (CPA).

|                                                                                                                                 |   |                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------|
| $Pa = (1 - V)Pt \left( D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + ..... + Dn \frac{Rnt}{Rno} \right) + VPt$ |   |                                                                                                               |
| Pa                                                                                                                              | = | The new adjusted price to be calculated                                                                       |
| V                                                                                                                               | = | Fixed portion of the bid price (15% or 0.15)                                                                  |
| Pt                                                                                                                              | = | Original bid price. Note that Pt must always be the original bid price and not an adjusted price              |
| (1-V)Pt                                                                                                                         | = | Adjustable portion of the bid price (85% or 0.85).                                                            |
| D1 – Dn                                                                                                                         | = | Each factor (or percentage) of the bid price, e.g., material, labour, transport, overheads, etc. The total of |



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|             |   |                                                                                                                                   |
|-------------|---|-----------------------------------------------------------------------------------------------------------------------------------|
|             |   | the various factors (or percentages) $D1 - Dn$ must add up to 1 (or 100%).                                                        |
| $R1t - Rnt$ | = | End Index. Index figure obtained from the index at the end of each adjustment period.                                             |
| $R1o - Rno$ | = | Base Index. Index figure at the time of bidding.                                                                                  |
| $VPt$       | = | 15% (or 0.15) of the original bid price. This portion of the bid price remains fixed, i.e. it is not subject to price adjustment. |

**17.2 Formula component definitions**

**17.2.1 Adjustable amount**

The adjustable amount is the portion of the bid price which is subject to adjustment. In this bid the adjustable amount is 85% of the original bid price. For example, if the bid price is R1000, then only R850 will be subject to adjustment.

**17.2.2 Fixed portion**

The fixed portion represents those costs which will not change over the adjustment period and DOES NOT represent the profit margin. In this bid the fixed portion is 15% of the original bid price.

Using the same example as above, it would amount to R150 which will remain fixed over the contract period.

**17.2.3 Cost components and proportions**

The cost components of the contract price usually constitute the cost of materials (raw material or finished product), cost of direct labour, cost of transport and those other costs which are inclined to change. The proportions are the contribution to the contract price of each of these cost components. In this bid the following cost components will be used to calculate contract price adjustments.



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Bidders are requested to submit the cost breakdown of the bid price for each item with their bid. Should the cost breakdown be the same for all items on the bid, please indicate it clearly in the bid document. Bidders will not be allowed to change the cost breakdown of bid prices during the tenure of the contract.

Successful bidders that are direct importers of raw material/finished product can apply for RoE adjustment under cost element D1. If the successful bidder is not a direct importer of raw material/finished product, cost component D1 would not be applicable and only local cost components (D2 - Dn) would be applicable.

| Cost Component                                             | % Contribution |
|------------------------------------------------------------|----------------|
| D1- Imported Raw Material/Finished product (if applicable) |                |
| D2 - Local Raw Material/Finished product (if applicable)   |                |
| D3 - Labour                                                |                |
| D4 - Transport                                             |                |
| D5 - Other                                                 |                |
| <b>TOTAL (Cost components must add up to 100%)</b>         | <b>100 %</b>   |

**17.2.4 Applicable indices/references**

The applicable index refers to the relevant market index, which is a true reflection of price movement(s) in the cost over time. In this bid the following indices or reference will be applicable:

| Cost component                                              | Index Publication                                                    | Index Reference                          |
|-------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------|
| D1 - Imported Raw Material/Finished product (if applicable) | Supplier/Manufacturer invoice(s) and remittance advice. <sup>1</sup> | Documentary evidence to accompany claim. |
| D2 - Local Raw Material/Finished product (if applicable)    | CPI OR Supplier/Manufacturer invoice(s) <sup>2</sup>                 | Documentary evidence to accompany claim  |

<sup>1</sup> In cases where invoices are supplied as documentary evidence, it is advised that invoices closest to the Base Index date and the End Index date be submitted. It should ideally reflect the adjustment period.

<sup>2</sup> Same as footnote 1.

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|                |                                                                        |                                                             |
|----------------|------------------------------------------------------------------------|-------------------------------------------------------------|
| D3 - Labour    | Labour agreement <sup>3</sup><br>OR<br>Stats SA PO141 (CPI)<br>Table E | Labour agreement<br>to be provided<br>OR<br>CPI - All Items |
| D4 – Transport | STATS SA P0141 (CPI)<br>Table E                                        | Table E - Transport<br>– Other Running<br>Cost              |
| D5 – Other     | Specify                                                                | Documentary<br>evidence to<br>accompany claim               |

**17.2.5 Base Index Date**

The base index date applicable to the formula is defined as the date at which the price adjustment starts. In this bid the base index date is **December 2023**.

**17.2.6 End Index Date**

The end index dates are the dates at predetermined points in time during the contract period. In this bid the end indices are defined in the next paragraph (Price Adjustment Periods).

**17.2.7 Price Adjustment Periods**

Adjustment to contract prices must be applied for at the following dates:

| Adjustment                 | CPA application to reach the office at the following dates | End Index Date | Dates from which adjusted prices will become effective | Dates until which adjusted prices will be effective |
|----------------------------|------------------------------------------------------------|----------------|--------------------------------------------------------|-----------------------------------------------------|
| 1 <sup>st</sup> Adjustment | 1 February 2025                                            | March 2025     | 3 March 2025                                           | 31 January 2025                                     |
| 2 <sup>nd</sup> Adjustment | 1 February 2026                                            | March 2026     | 3 March 2026                                           | 31 January 2026                                     |

<sup>3</sup> In the absence of a labour agreement, the labour cost component will be adjusted with CPI Headline inflation.



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**17.3 Rates of Exchange (RoE) – Base and Average rates**

In the event where material and/or finished products are imported the following will apply:

17.3.1 The formula described above will be used and the imported cost component of the bid price (D1) will be adjusted taking into account the base RoE rate (refer paragraph 17.3.4) and the average RoE rate over the period under review indicated in paragraph 17.3.6 below.

17.3.2 In the event where the RoE adjustment goes hand in hand with a material/product price increase, the material/product price (in foreign currency) will be converted to South African currency using the base rate (paragraph 17.3.4) for the earlier invoice and the average RoE rate for the period under review as indicated in paragraph 17.3.6 below for the later invoice.

17.3.3 The imported cost component (D1) will be adjusted together with all the other cost components indicated in paragraph 17.2.3 and 17.2.4 above and at the predetermined dates indicated in paragraph 17.2.7 above.

17.3.4 Rate(s) of exchange to be used in this bid in the conversion of the bid price of the item(s) to South African currency is indicated in the table below.

| Currency | Rates of exchange<br>3 month average for the period<br>01 December 2023 to 01 January 2024 |
|----------|--------------------------------------------------------------------------------------------|
|----------|--------------------------------------------------------------------------------------------|

17.3.5 Should the bidder make use of any other currency not mentioned above, the bidder is requested to calculate the average for the period 01 December 2023 to 01 January 2024 using the Reserve Bank published rates for the specific currency. Visit [www.reservebank.co.za](http://www.reservebank.co.za) to obtain the relevant rates.

17.3.6 Contract price adjustments due to rate of exchange variations are based on average exchange rates as published by the Reserve Bank for the periods indicated hereunder:



**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

| Adjustment                 | Average exchange rates for the period: |
|----------------------------|----------------------------------------|
| 1 <sup>st</sup> Adjustment | 29 February 2024 to 29 August 2024     |
| 2 <sup>nd</sup> Adjustment | 30 August 2024 to 28 February 2025     |

**General**

17.3.7 Unless prior approval has been obtained from the SAPS Bid Adjudication Committee no adjustment in contract prices will be made.

17.3.8 Applications for price adjustment must be accompanied by documentary evidence in support of any adjustment.

17.3.9 CPA applications will be applied strictly according to the specified formula and parameters above as well as the cost breakdown supplied by bidders in their bid documents.

17.3.10 In the event where the supplier's CPA application, based on the above formula and parameters, differs from Contract Management's verification, Contract Management will consult with the supplier to resolve the differences.

17.3.11 Bidders are referred to paragraph 7 of the Special Conditions regarding Counter Conditions.

**18 DELIVERY AND QUANTITIES**

**18.1 Delivery Basis**

18.1.1 It is a requirement of this Bid that delivery must take place as follows after official orders have been received by the successful Bidder.

**Table 1: Lead times**

| Amount of design, supply, delivery and installation and commissioning of inverter backup solar system power per Project | Lead Time |
|-------------------------------------------------------------------------------------------------------------------------|-----------|
| Complete system                                                                                                         | 2 Months  |



**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

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18.1.2 As this bid calls for Provincial delivery provision must be made for delivery anywhere within the borders of the Province. No additional delivery costs will be paid.

**19 Quantities**

19.1 No quantities are reflected in the bid as orders will be placed on the basis of "as and when required" and no guarantee is given or implied as to the actual quantity which will be procured during the contract period.

**SECTION C**

**20 ROLES AND RESPONSIBILITIES**

**20.1 Contract Administration**

20.1.1 The administration and facilitation of the contract will be the responsibility of the Divisional Commissioner Supply Chain Management and all correspondence in this regard must be directed to the following address:

The Divisional Commissioner: Supply Chain Management, Private Bag X254, Pretoria, 0001.

20.1.2 Contractors must advise the Divisional Commissioner Supply Chain Management immediately when unforeseeable circumstances will adversely affect the execution of the contract. Full particulars of such circumstances as well as the period of delay must be furnished.

**20.2 Supplier Performance Management**

Supplier performance management will be the responsibility of the Section Head Programme and Project Management at the Division Supply Chain Management and where supplier performance disputes cannot be resolved between the contractor and the relevant purchasing institution.

The Divisional Commissioner: Supply Chain Management: Bid Management must be informed for corrective action.



**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

**21 Placement of Orders and Payments**

- 21.1 Orders will and may only be placed per SAPS Supply Chain Management who will be responsible for the payment to contractors for goods delivered and/or services rendered.
- 21.2 Contractors should note that the order(s) will be placed as and when required during the contract period and delivery points will be specified.
- 21.3 The instructions appearing on the official order form regarding the supply, dispatch and submission of invoices must be strictly adhered to and under no circumstances should the contractor deviate from the orders issued by the SAPS.
- 21.4 The South African Police Service is under no obligation to accept any quantity which is in excess of the ordered quantity.

**22. Delivery Adherence**

- 22.1 Delivery of goods/services must be made in accordance with the instructions appearing on the official order forms.
- 22.2 It is a requirement of this Bid that delivery must take place as follows after official orders have been received by the successful Bidder.

**Table 1: Lead times**

| <b>Amount of design, supply, delivery and installation and commissioning of inverter backup solar system power per Project</b> | <b>Lead Time</b> |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Complete system</b>                                                                                                         | <b>2 Months</b>  |

- 22.3 Non-compliance to the above-mentioned delivery dates will result in the enforcement of penalties in terms of GCC 2004 and Contract Data.

**23 PRODUCT ADHERANCE/BRAND CHANGE**

- 23.1 In the event where a bidder offers a specific brand against an item and the item is subsequently awarded to the bidder, it is required of the successful bidder to continue to supply the brand awarded throughout the contract period.



**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

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23.2 In the event that the brand is discontinued, the Divisional Commissioner: Supply Chain Management: Bid Management must be notified of such an occurrence.

24 Contractors are not allowed to deliver a different brand other than the brand awarded to them prior to an approval of brand change from The Divisional Commissioner: Supply Chain Management, SAPS.

**25 QUALITY ADHERANCE**

25.1 If the delivered supplies are not in accordance with the contract requirements, the cost of inspections, tests and analysis done by an independent testing facility shall be defrayed by the contractor.

**25. CERTIFICATES OF COMPLIANCE AND LOCAL AUTHORITY REGISTRATION LETTER FOR BOREHOLE**

25.1 An electrical compliance certificate must be issued with each complete system installed

25.2 An electrical compliance certificate must be issued after connection to the main power supply, for each unit

25.3 Borehole registration certificate/ letter from the local authority must be issued for borehole drilled, for each borehole.

25.4 Failure to submit the electrical compliance certificates and/or letter borehole registration(s) will lead to non- acceptance of the borehole system(s) and subsequent no payment.

**26. PENALTIES FOR LATE COMPLETION**

26.1 Where the contractor fails to bring the works or sections thereof to practical completion on the date or dates stated in the schedule or revision thereof in terms of Clause 43.1 of GCC 2004, the contractor shall be liable to the employer for penalty per calendar day for no completion of the works or each section thereof at the rate in the schedule. The principal-agent shall calculate the penalty due from the date or revised date in terms of Clause 43.1 up to and including the actual date of practical completion of the works or section thereof or the date of cancellation in terms of Clause 56.3.

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**SPECIAL CONDITIONS OF CONTRACT: BID FOR THE APPOINTMENT OF CONTRACTOR: DESIGN, SUPPLY, DELIVERY; INSTALLATION & COMMISSION OF INVERTER BATTERY BACKUP/SOLAR SYSTEM: FOR THE PERIOD OF THREE (03) YEARS**

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**26.3 Penalties shall be calculated proportionally on the contract value of each phase of the projects.**

**CALCULATION OF PENALTIES PER DAY (EXCLUDING VAT)**

The penalty for failing to complete the works is 0,1% of the contract amount per calendar day. (The contract amount and penalty amount will be determined per site)

**CONTENTS OF SPECIAL CONDITIONS**

I/we, the undersigned, hereby declare that I/we have read and understand the above and agree to be bound by the stated terms and conditions.

**NAME OF BIDDER:** \_\_\_\_\_

**CAPACITY:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**APPOINTMENT OF CONTRACTOR FOR DESIGN, SUPPLY, DELIVERY,  
INSTALLATION AND COMMISSIONING OF INVERTER BATTERY  
BACKUP / SOLAR SYSTEM IN KWA-ZULU NATAL PROVINCE REGION 1  
FOR THE PERIOD OF THREE (03) YEARS**

**BID: 19/1/9/1/30TB(23)**

**PART C**

**CONTRACT**

**PART C.2.**

**SCOPE OF WORK AND BILLS OF QUANTITIES**

**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**



**SOUTH AFRICAN POLICE SERVICE**

**DESIGN, SUPPLY, DELIVERY, INSTALLATION & COMMISSIONING  
OF INVERTER BATTERY BACKUP/SOLAR SYSTEM**

**KWA ZULU NATAL PROVINCE REGION 1**

**(UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE )**

**ENGINEERING CONTRACT: THREE YEARS**

**COMPILED BY: SAPS, Facility Management: Pretoria  
JULY 2023**

**M MULAUDZI**  
**Tell: (012) 349 6058**  
**E-Mail: [mulaudzimd@saps.gov.za](mailto:mulaudzimd@saps.gov.za)**

**SWJ GROBBELAAR**  
**Tell: (012) 845 8954**  
**E-Mail: [grobbelaarswj@saps.gov.za](mailto:grobbelaarswj@saps.gov.za)**

**SIGNATURE OF THE BIDDER .....**

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA,UMGUNGUNDLOVE, UTHUKELA,ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

## 1. INTRODUCTION

The South African Police Service under Supply Chain Management Division has a requirement to Design, supply, delivery, installation & commission of INVERTER BATTERY BACKUP/PV SOLAR for POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.

## 2. SCOPE OF WORKS

The works comprises of Design, supply, delivery, installation & commissioning of INVERTER BATTERY BACKUP/PV SOLAR SYSTEM Power for POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1

The Contractor will provide all equipment's, labour, materials, transportation, test, installation & commissioning of INVERTER BATTERY BACKUP/SOLAR SYSTEM Power for POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1 to supply Critical areas, CSC, Cells , passages, outside lights.

The Contractor will issue Certification of Compliance (COC) for all work done.

The Contractor will design, supply, delivery, installation & commissioning of INVERTER BATTERY BACKUP/SOLAR SYSTEM with the following items:

- Solar Panels- Only Tier 1 allowed
- Solar Grid Tied and Hybrid invertors
- Lithium-ion Battery Storage where applicable.
- Switches, wiring, mountings , rails ,cables ,lugs , Fuses ,connectors, AC,DC combiner box and all accessories.



**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

The Contractor shall ensure that he/she is conversant with the technical specification and applicable standards.

Note: it is the contractor's responsibility to ensure that his/her pricing make provision for the appointment of a registered professional Electrical, civil and structural engineer/technologist in terms of the Engineering and Profession Act 2000 (Act No.46 of 2000)

The Contractor shall complete the functional evaluation criterion table with all information provided in order to ensure their bid is responsive.

Based on the outcome of the functional evaluation, the successful bidder shall proceed further in the evaluation where the financial considerations are taken into account as follows.

The bidder shall ensure that all information is provided to support the functional evaluation as omission of incomplete information shall render the bidder unsuccessful.

### 3. REGULATIONS, STANDARDS AND REFERENCES

The entire installation shall be carried out to the satisfaction of the SAPS, Facility Management, and shall be carried out in accordance with the following Standard Specifications and Regulations including but not limited to.

- SANS 10400: The application of the National Building Regulations.
- All municipal regulations pertaining to building codes and health and safety requirements.
- South African Occupational Health and Safety Act (Act 85 of 1993).
- ISO 9000/9001 Quality Management Systems.
- SANS 1186 Symbolic safety signs
- SANS 1632 Batteries
- SANS 1652 Battery chargers – industrial type
- SANS 10140 Identification colour marking
- SANS 60529 Degrees of protection provided by enclosures
- SANS 10142-1 Wiring of Premises
- SANS 10198-8 Cable laying and Installation
- SANS 10400 Building regulations
- SANS 10142-2 Medium voltage installations above 1kv a.c. not exceeding 22kv.
- SANS 61084-1-2 Electrical Installation Ducting and Trunking Systems on walls and ceilings



**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

- SANS 61305-1-2,4 Electrical Installation Conduit Fittings
- SANS 767- 1-2 Electrical Earth Leakage Protection units
- SANS 45001 Occupational Health and Safety Act No. 85 of 1993
- SANS 62109-1/ IEC 62109-2
- NRS 097-2-1: Inverters shall be certified and operate according to SANS 62109-1, IEC 62109-2 and NRS 097-2-1
- The municipal by-laws and any specific requirements of the Local Supply Authority of the area or district concerned.
- Local Fire Regulations

#### 4. NOTICE TO BIDDER

This tender is for the Design, supply, delivery, installation & commission of INVERTER BATTERY BACKUP/SOLAR SYSTEM Power at POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.

The contractor will be obligated in terms of this contract to ensure Design, supply, delivery, installation & commission of INVERTER BATTERY BACKUP/SOLAR SYSTEM Power at POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1 are completed within duration stipulated.

The contractor shall fully acquaint themselves with the nature of the work carried out, the locality of the facility and any possible hindrances in the execution of Inverter Battery backup/Solar System, warranty and to allow for these entire factors in their price, as any later claim based on unforeseen events or knowledge will not be entertained.

The contract shall be entirely responsible for referencing all relevant standard specification of the SAPS and SANS or other applicable published standard whether such standard is referenced in this document or not and ensuring compliance with the Engineering Works therewith. All equipment supplied shall be from suppliers that have proven track record and with aftersales technical support

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

as well as complies with the small scale embedded generation requirement of the municipal area to be installed.

The references in this document to standard specification shall not be construed as limiting, and are given merely as a guide for basic reference. Where SABS is stated, the applicable SANS shall apply. The SAPS further reserve the right to accept or decline such variations.

- Any equipment or part of the equipment shall not be removed from devolved and non-devolved facilities for repairs or otherwise unless permission is granted by POLICE STATION in consultation with Division Supply chain Management /Facility Management Programme and Project Management. If it happens that such equipment or part of the equipment is removed without the permission, such equipment or part of the equipment will be returned to where it was taken at no cost to SAPS.
- All installations must adhere to local wiring regulations and standards.
- This contract required Grading of 5 EP or higher (Electrical Engineering Project Works).
- For the bid submission a Bill of Quantity (BoQ) is provided below.
- Sizes of 8kW single phase, 12kW 3phase, and 50kW 3phase is priced herein, but the size of the backup/solar plants may vary as per the table below. In the interest of standardizations, spares and ease of maintenance and operation, these system and component sizes will be utilized in multiples of the equipment where the required power on site exceed a single size as per the table below, and the information provided will be multiplied accordingly to meet the requirements.
- Note that the equipment and pricing must permit scaling and parallelizing of equipment for more power to facilitate this requirement of selecting different battery, inverter and solar combinations
- The below table is a simple guide and may vary in terms of solar power kWp, inverter power kVA and battery storage capacity.kWh
- The battery storage indicated is an estimate only based on peak demand of C2 rating
- The solar size is dependent on the permissible roof space or not and also maximum DC input of the inverter assumed
- The table is a guide only to intended system sizing from the BoQ

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

| item | Power required<br>@ site | System size<br>proposed from<br>BoQ | Estimated<br>Storage size<br>proposed from<br>BoQ | Estimated Solar<br>kWp |
|------|--------------------------|-------------------------------------|---------------------------------------------------|------------------------|
| 1    | 8kW@220VAC               | 8kW x1                              | 15.2kWh                                           | 8kWp                   |
| 2    | 12kW@400VAC              | 12kW x1                             | 20kWh                                             | 12kWp                  |
| 3    | 16kW@ 220VAC             | 8kW x2                              | 30kWh                                             | 16kWp                  |
| 4    | 25kW@400VAC              | 12kW x2                             | 40kWh                                             | 40kWp                  |
| 5    | 50kW@400VAC              | 50KW x1                             | 100kWh                                            | 100kWp                 |
| 6    | 100kW@400VAC             | 50KX x2                             | 120kWh                                            | 120kWp                 |
| 7    | 150KW@400VAC             | 50kw x3                             | 200kWh                                            | 150kWp                 |
| 8    |                          |                                     |                                                   |                        |

The combination of equipment will be site specific and shall be made in consultation with the SAPS engineer prior to commencement of works including whether a grid tied or hybrid storage system is best suited to user requirements

## 5. TECHNICAL REPORT AND SPECIFICATION

After the design, supply, delivery, installation & commissioning of INVERTER BATTERY BACKUP/SOLAR SYSTEM are complete, full training shall be provided by the contractor with detail guidelines.

The contractor shall provide:

- a full set of AS-BUILT drawings including SLD, DC, AC reticulation detail to the SAPS engineer as part of the handover documentation
- technical manuals and warrantee documentation on main equipment incl solar panels/inverters/batteries
- Practical completion certificates signed by PrEng/Pr Tech (ECSA)
- Commission test results report
- Project Closeout Report
- Certificate of compliance (COC)

SIGNATURE OF THE BIDDER .....

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

## 6. CLEANING OF SITE

- After completion of construction activities, the contractor shall remove all his equipment and site facilities from the site and leave the site in a tidy condition. The cost thereof must be included for in the P & G's.

## 7. SPECIAL CONDITION OF THE CONTRACT

| STATE UNDER PARTICULAR OF TENDER AGAINST EACH REQUIREMENT WHETHER THE TENDER COMPLY OR DO NOT COMPLY WITH THE REQUIREMENT OF THE SPECIFICATION (FAILURE WILL LEAD TO DISQUALIFICATION OF THE BID) ( Please do not make a tick or / X ) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Comply / not Comply |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 7.1                                                                                                                                                                                                                                    | This tender is for the Design, supply, delivery, installation & commission of INVERTER BATTERY BACKUP/SOLAR SYSTEM Power at POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1. Decommissioned of outmoded or damaged equipment will remain the property of the SAPS (as specified in this document).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
| 7.2                                                                                                                                                                                                                                    | The contractor will be obligated in terms of this contract to ensure the Design, supply, delivery; installation & commission of INVERTER BATTERY BACKUP/SOLAR SYSTEM at Police Stations are completed within a period of two (2) months after receiving of order form. The Contractor shall fully acquaint them with the nature of the work to be carried out, the locality of the facility and any possible hindrances in the execution of the installation and to allow for all of these factors in their prices, as any later claim bases on unforeseen events or knowledge will not be entertained. (as specified in this document)                                                                                                                                                                                                                                                          |                     |
| 7.3                                                                                                                                                                                                                                    | Supply and install symbolic safety signs in compliance with SANS 1186-4: 2004. Ensure that all required warning signs on the outside of the building or BATTERY BACK UP/SOLAR SYSTEM facility are to be in position. The lettering must be readable and visible and in a good state. (as specified in this document)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |
| 7.4                                                                                                                                                                                                                                    | Final Delivery will not be taken unless proof can be provided, by means of signed job cards by the responsible official on site, indicating that such services were carried out. All job cards will be certified and sign-off by the relevant SCM Representatives. All <b>original</b> job-cards must be attached to the applicable invoices, for payment purposes. The applicable documentation, such as load test certificates, COC, and photos, should be attached to the job-cards, as part of the supporting documentation. The contractor will supply job cards in accordance with the example including herein. The job card must be completely legibly in black ink after completion of each service and/or maintenance.                                                                                                                                                                 |                     |
| 7.5                                                                                                                                                                                                                                    | Electrical Connections –Wiring must be designed and installed as prescribed by SABS 1042 wiring of buildings. (as specified in this document)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |
| 7.6                                                                                                                                                                                                                                    | Throughout the work shall be executed to the highest standards and to the entire satisfaction of the SAPS, SCM Representative who shall interpret the meaning of the Contract Document and shall have the authority to reject any work and materials, which, in his judgment, are not in full accordance therewith. <u>All condemned material and workmanship shall be replaced or rectified as directed and approved by the SAPS, SCM Representative.</u> All work shall be executed in a first-class manner by qualified expert. The Contractor shall warrant that the materials and workmanship shall be of the highest grade, that the equipment shall be installed in a practical and first-class manner in accordance with the best practices and ready and complete for full operation. It is specifically intended that all material or labour which is usually provided as part of such |                     |

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|      | equipment as is called for and which is necessary for its proper completion and operation shall be provided without additional cost whether or not shown or described in the Contract Document.                                                                                                                                                                                                                                                                                                           |  |
| 7.7  | The Contractor shall comply with the requirements of the Health & Safety Specification and applicable regulations. The contractor shall refer to the site information, and the specifications describing the scope of the Engineering Works, for information about the type of environment in which the work is to be executed. Notwithstanding anything stated in this document the contractor shall be responsible for determining the safety requirements of the site. (as specified in this document) |  |
| 7.8  | All electrical cables, unarmored and armored, shall be locally manufactured and shall bear the SABS stamp of approval.                                                                                                                                                                                                                                                                                                                                                                                    |  |
| 7.9  | All new BATTERY BACK UP/SOLAR SYSTEM will be designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002 standards.                                                                                                                                                                                                                                                                                                                                        |  |
| 7.10 | New equipment and material shall be supplied with a written guarantee confirming a defects liability period of 12 months from date of practical completion. These guarantees shall be furnished in favour of the SAPS.                                                                                                                                                                                                                                                                                    |  |
| 7.11 | Equipment and material installed shall be new and unused.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| 7.12 | The Contractor shall ensure that all safety regulations and measures are applied and enforced during repair work on cabling, wiring, distribution boards, luminaires, power points and fixed appliances.                                                                                                                                                                                                                                                                                                  |  |

## 8. INSTALLATION DURATION AND SCOPE OF WORKS BATTERY BACK UP/SOLAR SYSTEM

The Installation duration and scope of works for INVERTER BATTERY BACKUP/SOLAR SYSTEM for various facilities throughout the Province shall be provided by a simple GANTT diagram from Microsoft projects showing the installation time scales and Milestones and activities for a typical rooftop solar battery backup site of (eg 50kWp with 50kWh Battery Storage).

Prior to installation, the bidder shall provide a single line diagram with the cable ratings and protection gear clearly designed and market to show the project engineer , after design by the design PrEng/PrTech who will take responsibility of Design.

The FOR CONSTRUCTION drawings will also include a DC wiring schematic indicating the string arrangements proposed for the solar DC side of the installation where applicable as well as the DC battery connection and protection proposed in the installation.



## 9. CONDITIONS OF CONTRACT incl SAFETY

The Contractor shall comply with the obligations and requirements of the Agreement and Contract Data documents contained in Part C1 including the General Conditions of Contract 2004 (GCC 2004).

The Contractor shall allow for all the responsibilities and obligations in terms of the conditions of contract and contract data, including;

- Risks, costs and obligations in terms of the General Conditions of Contract, the Contract Data and of the standardized specifications, except where provision is made in the Project Specifications to cover compensation for any of these items.
- Head office, site overheads and supervision.
- Profit and financing costs.
- Sureties, employment-related expenses, statutory expenses.
- Indemnities & insurances: The contractor will only be permitted to perform work on the site if a valid insurance policy document and proof of cover or premium payment have been submitted and approved.
- The Contractor shall maintain current registration and have paid the necessary fees to the Compensation Commissioner in compliance with the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993 (COID). The contractor will only be permitted to perform work on any site if a valid Letter of Good Standing issued by the Compensation Commissioner has been submitted and approved.
- A detailed program for the execution of the engineering works, Maintenance works and Installation works for the whole of the contract period, listing each facility, its location and fixed dates of maintenance. The contractor will be required to comply with the program at all times.
- Expenses of a general preliminary and general nature not specifically related to any item or items of permanent or temporary work.
- All work on site shall carry a safety file with method statement and necessary OHSE approval including work at height

## 10. SPECIFICATIONS FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS

The solar systems envisaged are for the sizes of: 8kVA 1phase, 12kVA 3phase, 50kVA 3phase, 100kVA 3phase or multiples of these sizes.



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Hence the bidder shall price the bill of quantities according to these sizes such that any solar system that may be a multiple of this system will then be applied to the pricing provided.

All prices provided for in the rates below shall consider a complete supply and fit of those items in the installation.

## 10.1 Inverter- GRID TIED OR HYBRID TYPE

Any inverter shall be NRS097 compliant. Only tier 1 BNEF supplied products will be permitted. Hybrid inverter is a highly efficient power management tool that allows the user to hit those 'parity' targets by managing power flow from multiple sources such as solar, mains power (grid), and Generators, and then effectively storing and releasing power as and when utilities require.

### INTERACTIVE COMMUNICATION

- Easy and simple to understand LCD display.
- User APP permissible on selected telephone for remote sensing
- Supporting Wi-Fi or GSM monitoring.
- Visual power flow screen.
- Frequency/droop control.
- High-voltage battery.
- Highly efficient.
- Up to 16 inverters can be connected in parallel.
- Minimum 4 MPPT inputs built in as standard
- Programmable solar priority scheme with peak shaving and peak lopping capability and programmable zero grid injection
- Time of day programmable logic of solar power
- Separate port for generator control and grid input
- Minimum 10 yr warranty

### COMPATIBLE

- Compatible with mains electrical grid voltages or Generators.
- 12kVA 3phase machine up to 240Amp charge/discharge current

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- Support storing energy from diesel Generators.
- THD<3%
- Max MPPT efficiency >=99.9%
- 230V/400V Three-phase Pure Sinewave Inverter.
- Self-consumption and feed-in to the grid.
- Auto restart while AC is recovering.
- DC and AC are coupled to retrofit the existing solar system.
- Grid regulation IEC61727, IEC62116, IEC60068, IEC61683, NRS 097-2-1
- EMC safety regulation IEC62109-1/-2, IEC61000-6-1, IEC61000-6-3, IEC61000-3-11, IEC61000-3-12
- PV Input Lightning Protection
- Anti-islanding Protection
- PV String Input Reverse Polarity Protection
- Insulation Resistor Detection
- Residual Current Monitoring Unit
- Output Over Current Protection
- Protection
- Output Shorted Protection
- Output Over Voltage Protection
- Surge protection
- Noise level < 30dB
- IP65 rated
- Power factor minimum 0.8

## 10.2 Lithium Battery

### Technical Specifications

- CAN 2.0/RS485 BUS communication protocol compatible with the selected inverter
- Wall mount and cabinet/rack mount options available
- Total Energy Capacity [kWh]: as specified
- Energy, 80% DoD [kWh]: as specified
- Energy, 90% DoD [kWh]: as specified
- Selected storage shall be approved by inverter supplier or preferred model selected
- Enclosure: ~3mm thick Aluminium, powder coated, tamper proof, indoor use
- On-board Management: Full battery management system and internal trip protection



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- Human Interfaces: On and Off Buttons, State of Charge LED Display (0 to 100%), Error/Fault light, Error/Fault Reset Button, USB Plug for Programming and data access with PC, main breaker
- Cluster controller separate for optimised battery management at high voltage level >500VDC
- Protection: Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Protection for overcurrent, cell under and over voltage, temperature, weak cell detection and other critical events
- Battery Chemistry: Lithium Iron Phosphate (LiFePO<sub>4</sub>)
- Battery Cooling: Natural Convection (heat generation is negligible inside the battery)
- Suitable Ambient Temp [°C]: 0°C to +35°C
- Extreme Operating Temp [°C]: -20°C to +55°C
- Warranty: 10 years or 6 000 cycles for average 70% DoD, and max 90% DoD
- Service life – Cycles: >16 years (>5 500 cycles) expected life at 70% DoD per cycle, >20 years (>7 500 cycles) at 50% DoD or ±2°C, 0.5C/0.5C, EOL 70% ≥ 6000
- High Voltage operating voltage 500-700VDC for >60kWh LiFePo options
- Peak discharge 125A
- Altitude ≤ 2000m
- Certification CE/IEC62619/UL1973/UL9540A/UN38.3

### 10.3 Solar Panels

- Solar Panels that are from Tier 1 BNEF supplier shall be provided only, the Manufacturer of the solar panels must demonstrate proof of over 60GWp produced/installed capacity and participation in South Africa over last 5 years (South African conditions)
- Module efficiency minimum 21.5%
- Linear degradation rate of < 0.55% pa over 25 years
- Certification IEC 61215 / IEC 61730 / CE / INMETRO / MCS / UKCA CEC listed (US California) UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68 UNI 9177 Reaction to Fire: Class 1
- Positive power tolerance +10W on monocrystalline type only



- Module fire performance TYPE 1 (UL 61730 1500V) or TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730)

## 10.4 Distribution Board (DB)

- The construction must be in accordance with SANS 10142-1:2017.
- Openings into distribution boards must tie up with the installation. AC and DC circuitry shall not be in the same distribution box. All earthing requirements shall be included in pricing as well as labelling in DB. The AC DB and DC DB shall be complete with all internal requirements for the solar or battery inverter system to function adequately in accordance with the SANS requirements and shall be included in price where not explicitly separately priced in the Bill of Quantity.
- All AC and DC DB shall include SPD class 1 surge protection and shall ensure adequate earth leakage where necessary

## 10.5 Cable Trays

### 10.5.1 Metal Cable Trays

Metal cable trays shall be manufactured from perforated rolled steel. Metal trays manufactured to the following standards shall be used:

- Less than 150 mm wide 1,2 mm minimum thickness with 12 mm minimum return.
- 150 mm to 457 mm 1,2 mm minimum thickness with 19 mm minimum return.
- 460 mm to 610 mm (Heavy duty) 2,5 mm minimum thickness with 76 mm return.

### 10.5.2 Accessories

Horizontal and vertical bends, T-junctions and cross connections shall be supplied by the Contractor. The dimensions of these connections shall correspond to the dimensions of the linear sections to which they are connected. The radius of all bends shall be 1m minimum. The inside dimensions of horizontal angles or connections shall be large enough to ensure that the allowable bending radius of the cables is not exceeded. Sharp angles shall be 45° mitered.

## 10.6 PVC - Insulated Cables

This section covers the requirements for PVC-insulated cables for general installations under normal environmental conditions.



Cables shall be manufactured in accordance with SANS 1507-3:2015, shall come only from fresh stocks, and shall be constructed as follows:

- Armored cables PVC-insulated/PVC-bedded/ armored/black extruded PVC outer sheath.

Cable shall be manufactured and supplied in one length to the lengths specified unless these lengths exceed a standard drum length in which case a ruling shall be obtained from the SAPS.

At the option of the SAPS acceptance tests shall be carried out on production runs of the cable in accordance with SANS 1507-3:2015.

## 10.7 PVC - Sheathed Aluminium-Covered Cables

Aluminum-covered cables shall comprise PVC-insulated copper conductors protected by an aluminum foil tape screen and a PVC sheath. Cable ends shall be made off with compression glands fitted with a neoprene ring to seal the end. Aluminum sheathed cable shall be installed on surface only using matching saddles installed at suitable intervals to prevent sagging. Where exposed to sunlight, the cable shall have a stabilized black outer sheath.

## 10.8 Labelling

Care shall be taken to ensure that all equipment is fully labelled and that accurate descriptions and safety warning notices appear in English.

Engraved plastic or ivory-sandwiched strips shall be used throughout. The strips shall bear white lettering on black background for normal labels and red letters on a white or yellow background for danger notices.

## 10.9 Circuit breakers and fuses

All moulded-case circuit breakers shall be flush mounted with only the toggles protruding. Miniature circuit breakers may be installed in clip-in trays mounted on the frame. All other circuit breakers shall be bolted to the chassis. Special provision shall be made for large main switches when designing the framework. Care shall be exercised that the rear studs of circuit breakers are properly insulated from the steel chassis. Where necessary, insulating material shall be installed that the toggles are in the up position when "ON" and "OFF".

DC and AC protection gear shall not be same unit

Only SABS approved circuit breakers are allowed for use in compliance with SAN10142-1



DC protection shall be through fuselinks with both positive and negative side protection using double pole DC fuselink holders with quick release device and disconnect.

## **10.10 INSTALLATION OF CABLES and EARTHING**

This section covers the installation of cables for the distribution of power in buildings, other structures and in ground for system voltages up to 11 kV, 50 Hz.

All earthing shall comply with the SANS10142-1-2 Standard of either TNCS or TNSS with equal potential bonding to of the inverter N/E to the main feeder N/E and a relay disconnect in the event of islanding

A detailed lighting and earthing and surge plan shall be provided to the SAPS engineer prior to commence of work indicating the philosophy, observations on site and class of protection to be provided.

### **10.11 Cable Types**

- All cables and jointing and termination accessories used for power distribution shall comply with SANS 10142-1:2017.
- Cables with copper conductors shall be used throughout unless otherwise specified or approved.
- All unarmoured cables shall be installed in metal trunking, sleeves or conduits unless clearly specified to the contrary.
- XLPE Cables shall only be used in exceptional circumstances with the written permission of the Project Manager: SCM Facility Management.
- All DC cabling shall be minimum 6mm<sup>2</sup> TUV tested and 1500VDC rated with Teflon insert and rodent and UV resistant.

### **10.12 Identification of Cables**

- Cables shall be identified at all terminations by means of punched metallic bands or marked with labels or tags. (Also refer to SANS 10142-1:2017).
- The use of PVC tape with punched characters is not acceptable.
- The identification numbers of cables shall be shown on "as-built" drawings of the installation.

## **10.13 TRENCHING**

- The Contractor shall be responsible for all trenching excavations unless specified to the contrary.



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- The Contractor shall, before trenching commences, familiarise himself with the routes and site conditions and the procedure and order of doing the work shall be planned in conjunction with the general construction programme for other services and building requirements.
- The Contractor shall acquaint himself with the position of all the existing services such as storm water pipes, water mains, sewer mains, gas pipes, telephone cables, etc. before any excavations are commenced. For this purpose he shall approach the local municipal authority and any other authority which may be involved, in writing.
- The Contractor will be held responsible for damage to any existing services brought to his attention by the relevant authorities and shall be responsible for the cost of repairs.
- The Contractor shall take all the necessary precautions and provide the necessary warning signs and/or lights to ensure that the public and/or employees on site are not endangered.
- The Contractor shall ensure that the excavations will not endanger existing structures, roads, railways, other site constructions or other property.
- Trenching shall be programmed in advance and the approved programme shall not be departed from except with the consent of the Project Manager: SCM Facility Management.
- Trenches shall be as straight as possible and shall be excavated to the dimensions indicated in this specification.
- The bottom of the trench shall be of smooth contour, and shall have no sharp dips or rises which may cause tensile forces in the cable during backfilling.
- The excavated material shall be placed adjacent to each trench in such a manner as to prevent nuisance, interference or damage to adjacent drains, gateways, trenches, water furrows, other works, properties or traffic. Where this is not possible, the excavated materials shall be removed from site and returned for backfilling on completion of cable laying.
- Surplus material shall be removed from site and disposed of at the cost of the Contractor.
- Trenches across roads, access ways or footpaths shall not be left open. If cables cannot be laid immediately, the Contractor shall install temporary "bridges" or cover plates of sufficient strength to accommodate the traffic concerned.





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- In the event of damage to other services or structures during trenching operations, the Contractor shall immediately notify the SCM Facility Management and institute repairs.
- Prior to cable laying, the trench shall be inspected thoroughly and all objects likely to cause damage to the cables either during or after laying shall be removed.
- Where ground conditions are likely to reduce maximum current carrying capacities of cables or where the cables are likely to be subjected to chemical or other damage or electrolytic action, the SCM Facility Management shall be notified before installing the cables. The Project Manager: SCM Facility Management will advise on the course of action to be taken.

#### **10.14 Dimensions of trenches**

- A trench must be excavated at a depth of 500mm and a width of 300mm. An electrical warning tape must be laid 300mm above the depth of 500mm trench.
- The width shall be increased where more cables are installed to allow for the spacing as stipulated above.
- Where trenches change direction or where cable slack is to be accommodated, the Contractor shall ensure that the requirements of the relevant SANS 10198-8:2016 specification regarding the bending radii of cables are met when determining trench widths.

#### **10.15 Joint Holes**

Where cable joints are required to be made in the course of a cable run, a joint hole shall be excavated of sufficient size to enable the cable jointer to work efficiently and unimpeded.

#### **10.16 Bedding**

- The bottom of the trench shall be filled across the full width with a 75 mm layer of suitable soil sifted through a 6 mm mesh and levelled off.
- Only sandy clay or loam soil with a satisfactory thermal resistivity (not exceeding 1.5 °C m/W) may be used for this purpose. Sea or river sand, ash, chalk, peat, clinker or clayey soil shall not be used. The use of crusher sand is acceptable.
- Where no suitable soil is available on site, the Contractor shall import fill from elsewhere and make all the necessary arrangements to do so. The cost of importing soil for bedding purposes shall be included in the unit rates for excavations.



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- After cable laying, a further layer of bedding shall be provided to extend to 75 mm above the cables.
- The bedding under joints shall be fully consolidated to prevent subsequent settling.

### **10.17 Cable Sleeves**

- Where cables cross under roads, railway tracks and other service areas, etc. and where cables enter buildings, the cables shall be installed in Polyethylene (6 mm thickness), pipes or earthenware pipes. Pitch fibre and PVC pipes are not acceptable because of the adhesion that occurs after a period of time between the pipe and the sheathing or outer serving of the cables.
- Pipes shall be joined in accordance with the manufacturer's instructions.
- Sleeves shall cross roads and railway tracks at right angles.
- Cable sleeves shall be installed to the spacing and depths stated below.
- Galvanised metallic sleeves up to and including 76 mm dia. shall be supplied and installed by the contractor.
- The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

### **10.18 Backfilling**

- The Contractor shall not commence with the backfilling of trenches without prior notification to the SCM Facility Management so that the cable installation may be inspected. Should the Contractor fail to give a timeous notification, the trenches shall be re-opened at the Contractor's cost. Such an inspection will not be unreasonably delayed.
- The tape shall be yellow, marked with the words "**ELECTRICAL WARNING TAPE**" in black.
- Backfilling shall be undertaken with soil suitable to ensure settling without voids. The maximum allowable diameter of stones present in the backfill material is 75 mm.
- The Contractor shall have allowed in his tender for the importation of suitable backfill material if required.



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- The backfill shall be compacted in layers of 150 mm and sufficient allowance shall be made for final settlement. The Contractor shall maintain the refilled trench at his expense for the duration of the contract. Surplus material shall be removed from site and suitably disposed of.
- On completion, the surface shall be made good to match the surrounding area.
- In the case of roadways or paved areas the excavations shall be consolidated to the original density of the surrounding material and the surface finish reinstated.

## **10.19 INSPECTIONS, TESTING, COMMISSIONING AND HANDING OVER**

### **10.20 PHYSICAL INSPECTION PROCEDURE**

- Once the Contractor has completed the installation, written notice shall be given to the Project Manager: SCM Facility Management in order that a mutually acceptable date can be arranged for a joint inspection.
- During the course of the inspection, the Project Manager/Engineer will compile a list of items (if any) requiring further attention. A copy of this list will be provided to the Contractor who will have a period of 7 days in which to rectify the offending items of the installation.
- The Contractor shall then provide written notice that he is ready for an inspection of the remedial work to the offending items.
- This procedure will continue until the entire installation has been correctly completed to the satisfaction of the Project Manager/Engineer.

### **10.21 TESTING AND COMMISSIONING**

- All installed equipment shall be commissioned and tested as per the manufacturer's recommendations. The results of all tests must be recorded and submitted to SAPS, SCM, Facility Management for approval.
- Routine factory tests reports shall accompany all equipment supplied and shall be given to the SAPS, SCM, Facility Management, prior to the equipment being installed and commissioned.
- Contractor to provide COCs and all relevant test certificates to SAPS Project Manager/Engineer prior to energizing of equipment.



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- Commissioning shall be conducted in accordance with the relevant IEC standard with clear test procedure provided by the bidder in their proposal and documentation and recording of string voltages, inverter startup test and measurements and recording of all voltages and currents during commissioning recorded and signed off by commissioning PrEng/PrTech.

## 11 CLEANING OF SITE

- After completion of construction activities, the contractor shall remove all his equipment and site facilities from the site and leave the site in a tidy condition. The cost thereof must be included for in the P & G's.

## 12 PREAMBLES TO SCHEDULE OF QUANTITIES

### PRICE SCHEDULE

**General** – The Schedules of Quantities define the scope of the Engineering Works in terms of the measurement and payment parameters specified. The Schedules shall be read in conjunction with the General Conditions of Contract. The quantities stated on the schedules are provisional and are subject to re-measurement upon completion. Bidders shall quote for all equipment and all accessories specified within this document. The procurement of this equipment shall take place as needed, spread over the one year period. Servicing and maintenance of all newly installed equipment and components and guaranteeing free of defects for the full maintenance period of one year, will form part of this contract.

**Descriptions & Measured Items** – The Schedule of Quantities consists of Descriptions followed by measured items (Item lines) which specify the items of differing dimensions, ratings, etc. which comply with the overall requirements of such Description. The measured items may add, subtract or in any other way vary the Description. Below each item line the measured quantities applicable to each of the applicable sections of the Works appears under the relevant column heading, the total of which is shown under the Quantity column. The terms used and Schedule layout are defined in the *Schedule of Quantities* Legend which is presented at this Preamble. The Schedule of Quantities is based upon the Standard system of measurement modified as necessary. **Fixed Rates** – Rates shall be fixed for the duration of the contract. **All inclusive** – The Descriptions and item lines are of necessity abbreviated summaries of the specifications and unless otherwise stated or elsewhere measured, shall include all necessary components and accessories required or necessary for the correct functioning or performance of the item when incorporated into the Engineering Works. The rates and prices shall accommodate the nature of the Engineering Work and any restrictions which apply to the Works Environment and the Site of the Works, shall include all the costs and expenses that may be required in and for the construction of the Works described and shall include the cost of all general obligations, risks and liabilities stated or implied in the contract documents.

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## 12.1 DETAIL SCHEDULES OF QUANTITIES

| No                   | DESCRIPTION                                                                                                                                                                                                                               | UNIT     | QTY | RATE | AMOUNT        |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|------|---------------|
| 1                    | <b>PRELIMINARY &amp; GENERAL</b>                                                                                                                                                                                                          |          |     |      |               |
|                      | <b>NOTE: THE FOLLOWING WORK IS TO BE CARRIED OUT BY AN APPROVED SPECIALIST: SUPPLY, DELIVERY, INSTALLATION &amp; COMMISSIONING OF BATTERY BACK UP/SOLAR SYSTEM OF POLICE STATION, OCCUPIED BY THE SOUTH AFRICAN POLICE SERVICE (SAPS)</b> |          |     |      |               |
| 1.1                  | Preliminary & General: Site Establishment (Office Rental)                                                                                                                                                                                 | Per week | 1   |      | Rate only     |
| 1.2                  | Insurance: Construction Works : Time related                                                                                                                                                                                              | sum      | 1   |      | Rate only     |
| 1.3                  | Insurance: Public Liability : Time related                                                                                                                                                                                                | sum      | 1   |      | Rate only     |
| 1.4                  | Insurance: Special Risk (SASRIA) : Time related                                                                                                                                                                                           | sum      | 1   |      | Rate only     |
| 1.5                  | Insurance: Occupational Compensation (COLD): Time Related                                                                                                                                                                                 | sum      | 1   |      | Rate only     |
| 1.6                  | Admin facilities: Maintenance register, communication, etc.                                                                                                                                                                               | sum      | 1   |      | Rate only     |
| 1.7                  | Attending of six(6) monthly meeting with client (two per year)                                                                                                                                                                            | sum      | 1   |      | Rate only     |
| 1.8                  | Site hand-over meeting and inspection with client (stations)                                                                                                                                                                              | ea       | 1   |      | Rate only     |
| 1.9                  | Display boards placed at each facility room/ container/facility (contract information)                                                                                                                                                    | ea       | 1   |      | Rate only     |
| 1.10                 | Safety compliance as per OHS act and specification, including DCP Fire extinguisher Cabinet and 9 kg dry powder fire extinguisher combo in the INVERTER BATTERY BACKUP/SOLAR SYSTEM                                                       | ea       | 1   |      | Rate only     |
| 1.11                 | Engineering AS BUILT DRAWINGS and CLOSEOUT reports                                                                                                                                                                                        | ea       | 1   |      | rate          |
| 1.12                 | Commissioning test report and measurement                                                                                                                                                                                                 | ea       | 1   |      | Rate per site |
| 1.13                 | Training                                                                                                                                                                                                                                  | ea       | 1   |      | Rate per site |
| 1.14                 | Lightning , surge and Earthing plan                                                                                                                                                                                                       | ea       | 1   |      | Rate per site |
| 1.15                 | Other on site safety file and OHSE considerations                                                                                                                                                                                         | ea       | 1   |      | Rate per site |
| <b>SUBTOTAL NO 1</b> |                                                                                                                                                                                                                                           |          |     |      |               |
| 2                    | <b>ELECTRICAL MATERIALS &amp; EQUIPMENT</b>                                                                                                                                                                                               |          |     |      |               |
| 2.1                  | <b>KIOSKS</b>                                                                                                                                                                                                                             |          |     |      |               |
| 2.1.1                | Single sided distribution kiosk (inclusive of mounting rails, faceplate, faceplate blank inserts, legend holder, screws, rawl bolts, washers, lock, keys, key ring, key tag, and Certificate of Compliance)                               | sum      | 1   |      | Rate only     |

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**PART C 2: DESIGN, SUPPLY, DELIVERY, INSTALLATIONS & COMMISSIONING OF BATTERY BACKUP/SOLAR SPECIFICATIONS AT POLICE STATIONS (UGU, HARRY GWALA, UMGUNGUNDLOVE, UTHUKELA, ETHEKWINI & ILEMBE ) IN KWA ZULU NATAL PROVINCE REGION 1.**

|                      |                                                                                                                                                                                                                       |                  |   |  |           |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|--|-----------|
| 2.1.2                | Double sided distribution kiosk (inclusive of mounting rails, faceplates, faceplate blank inserts, legend holders, screws, rawl bolts, washers, locks, keys, key rings, key tags and Certificates of Compliance)      | sum              | 1 |  | Rate only |
| 2.2                  | <b>CONDUIT &amp; SLEEVES</b>                                                                                                                                                                                          |                  |   |  |           |
| 2.2.1                | 25 mm diameter PVC conduit (inclusive of accessories, saddles/raised saddles, fixtures)                                                                                                                               | / m              | 1 |  | Rate only |
| 2.2.2                | 50 mm diameter PVC conduit (inclusive of accessories, saddles/raised saddles, fixtures)                                                                                                                               | / m              | 1 |  | Rate only |
| 2.2.3                | 25 mm diameter galvanised conduit (inclusive of accessories, saddles/raised saddles, fixtures)                                                                                                                        | / m              | 1 |  | Rate only |
| 2.2.4                | 50 mm diameter galvanised conduit (inclusive of accessories, saddles/raised saddles, fixtures)                                                                                                                        | / m              | 1 |  | Rate only |
| 2.2.5                | 50 mm diameter ribbed sleeve                                                                                                                                                                                          | / m              | 1 |  | Rate only |
| 2.2.6                | 110 mm diameter ribbed sleeve                                                                                                                                                                                         | / m              | 1 |  | Rate only |
| <b>SUBTOTAL NO 2</b> |                                                                                                                                                                                                                       |                  |   |  |           |
| 3                    | <b>TRENCHING</b>                                                                                                                                                                                                      |                  |   |  |           |
| 3.1                  | Trenching and backfilling, 300 mm (w) x 600 mm (d) (Inclusive of electrical warning tape)                                                                                                                             | / m              | 1 |  | Rate only |
| 3.2                  | Reinstate concrete surfaces, upon completion of trenching, inclusive of compaction to verified civil engineering standards (soil conditions and depth/width of trenching)                                             | / m <sup>2</sup> | 1 |  | Rate only |
| 3.3                  | Reinstate paving, upon completion of trenching, inclusive of replacement of broken paving material and inclusive of compaction to verified civil engineering standards (soil conditions and depth/width of trenching) | / m <sup>2</sup> | 1 |  | Rate only |
| <b>SUBTOTAL NO 3</b> |                                                                                                                                                                                                                       |                  |   |  |           |
| 4                    | <b>CABLES</b>                                                                                                                                                                                                         |                  |   |  |           |
| 4.1                  | <b>PVC INSULATED</b>                                                                                                                                                                                                  |                  |   |  |           |

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|       |                                                                                                                           |     |   |  |           |
|-------|---------------------------------------------------------------------------------------------------------------------------|-----|---|--|-----------|
| 4.1.1 | 1.5 mm <sup>2</sup> 3 Core PVC Insulated (inclusive of all glands, terminals, ferrules)                                   | / m | 1 |  | Rate only |
| 4.1.2 | 2.5 mm <sup>2</sup> 3 Core PVC Insulated (inclusive of all glands, terminals, ferrules)                                   | / m | 1 |  | Rate only |
| 4.1.3 | 4 mm <sup>2</sup> 3 Core PVC Insulated (inclusive of all glands, terminals, ferrules)                                     | / m | 1 |  | Rate only |
| 4.1.4 | 6 mm <sup>2</sup> 3 Core PVC Insulated (inclusive of all glands, terminals, ferrules)                                     | / m | 1 |  | Rate only |
| 4.1.5 | 10 mm <sup>2</sup> 3 Core PVC Insulated (inclusive of all glands, terminals, ferrules)                                    | / m | 1 |  | Rate only |
| 4.2   | <b>FOUR CORE STEEL WIRE ARMOUR &amp; EARTH</b>                                                                            |     |   |  |           |
| 4.2.1 | 6 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 4 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)              | / m | 1 |  | Rate only |
| 4.2.2 | 10 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 6 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)             | / m | 1 |  | Rate only |
| 4.2.3 | 16 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 10 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.2.4 | 25 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 16 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.2.5 | 35 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 25 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.2.6 | 50 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 25 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.2.7 | 70 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 35 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.2.8 | 95 mm <sup>2</sup> 4 Core PVC/SWA/PVC + 50 mm <sup>2</sup> BCEW (inclusive of all glands, terminals, ferrules)            | / m | 1 |  | Rate only |
| 4.3   | <b>DC CABLES</b>                                                                                                          |     |   |  |           |
| 4.3.2 | 6 mm <sup>2</sup> 2 core (red or black) double insulated PV cable (inclusive of all glands, terminals, ferrules and tape) | / m | 1 |  | Rate only |

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