

REQUEST FOR INFORMATION (RFI) BIOMASS SUPPLY FOR TNB FUEL SERVICES SDN. BHD.

TNB Fuel Services Sdn. Bhd. (“TNBF”), a wholly owned subsidiary of Tenaga Nasional Berhad (“TNB”), is responsible for fuel procurement and transportation to power plant. TNBF hereby invites interested **EFB/ Wood pellet** Producers / Traders (herein called the “Applicants”) to submit Request For Information documents.

A. OBJECTIVE OF PRE-QUALIFICATION EXERCISE

1. To collect written information about the capabilities and capacity of biomass suppliers.

B. ELIGIBILITY

1. Genuine EFB/ wood pellet suppliers which currently in production
2. Applicants have the necessary business track record as specified in the RFI.

C. PROCESS FLOW

The overall process flow is illustrated as the following:



D. QUALITY REQUIREMENT

The below table show the indicative quality range of biomass products EFB/ wood pellet and may subject to change from time to time.

| Item | Property | Basis | Unit | TNBF Typical | Range | |
|------|-------------------------|-------------|---------|-----------------|-------|------|
| | | | | | Min | Max |
| 1. | Gross Calorific Value | As Received | Kcal/Kg | 4100 | 4000 | - |
| 2. | Total Moisture | As Received | % | 5 | - | 8 |
| 3. | Total Sulphur | As Received | % | 0.02 | - | 0.05 |
| 4. | Ash Content | Air Dried | % | 5 | - | 8 |
| 5. | Potassium (K2O) | Dry Basis | % | 5 | - | 10 |
| 6. | Sodium (Na2O) | Dry Basis | % | 0.5 | - | 2 |
| 7. | Chlorine (Cl) | As Received | % | 0.05 | - | 0.1 |
| 8. | Total Sulphur: Chlorine | As Received | Ratio | - | 2 | - |
| 9. | Fixed Carbon | Air Dried | % | 17.5 | 15 | 25 |
| 10. | Volatile Matter | Air Dried | % | 73 | 62 | 75.5 |
| 11. | Carbon | Dry Basis | % | 48.5 | 45 | 52 |
| 12. | Hydrogen | Dry Basis | % | 6.1 | 4.98 | 7 |
| 13. | Oxygen | Dry Basis | % | 39.5 | 31.2 | 43 |
| 14. | Nitrogen | Dry Basis | % | 0.35 | 0.22 | 0.49 |

1. Empty Fruit Bunch (EFB) Washed/Premium Pellet

| Item | Property | Basis | Unit | TNBF Typical | Range | |
|------|-----------------------|-------------|---------|-----------------|-------|------|
| | | | | | Min | Max |
| 1. | Gross Calorific Value | As Received | Kcal/Kg | 4200 | 4100 | - |
| 2. | Total Moisture | As Received | % | 5 | - | 8 |
| 3. | Total Sulphur | As Received | % | 0.01 | - | 0.01 |
| 4. | Ash Content | Air Dried | % | 2.5 | - | 5 |
| 5. | Potassium (K2O) | Dry Basis | % | 14 | 5 | 25 |
| 6. | Sodium (Na2O) | Dry Basis | % | 1.1 | 0.3 | 2.3 |
| 7. | Fixed Carbon | Air Dried | % | 18.5 | 16.9 | 23.5 |
| 8. | Volatile Matter | Air Dried | % | 72.5 | 69.7 | 75.8 |
| 9. | Carbon | Dry Basis | % | 50.3 | 48.5 | 54.3 |
| 10. | Hydrogen | Dry Basis | % | 5.98 | 5.21 | 7.3 |
| 11. | Oxygen | Dry Basis | % | 41.5 | 37.03 | 44 |
| 12. | Nitrogen | Dry Basis | % | 0.29 | 0.25 | 0.32 |

2. Wood Pellet

E. CONTACT PERSON

Kindly contact the person in charge from TNBF to make an engagement appointment:

Syazwan Sa'edan Mukhtar (E-mail: syazwan.mukhtar@tnb.com.my; Telephone: +6017-9298259) or Zahrol Poniran (E-mail: zahrolp@tnb.com.my; Telephone: +6019-2179092)

F. PENALTY

TNBF reserves the right to reject any RFI that is incomplete, either in part or in full. No penalties will be imposed on applicants in such case. Applicants are encouraged to provide comprehensive and detailed information to help us better understand their capabilities and capacity.

G. Confidentiality and Personal Data Protection

The Applicant shall treat this document and everything within it as private and confidential. The Applicant shall not publish or release information or drawings relating to this document except with prior written consent of TNBF.

TNBF and the Applicant agree to comply at all times with provisions and obligations contained in all applicable laws and regulations in Malaysia, including but not limited to the Personal Data Protection Act 2010.

For the purpose of information and notification, TNB's Personal Data Protection Policy can be accessed at <https://www.tnb.com.my/pdpa>

F. DISCLAIMER

All information provided in response to this RFI will be treated as confidential and used solely for the purpose of data gathering. The RFI is issued solely for information-gathering and planning purposes and does not constitute a solicitation or offer to enter into any binding contractual arrangement. Responses to this RFI shall not bind TNBF to any contractual commitment, nor shall TNBF be obligated to select or

award any contract to the respondent. TNBF also reserves the right to amend, withdraw this RFI at any time without incurring any liability. All costs associated with the preparation and submission of responses to this RFI shall be borne solely by the respondent.



TNB FUEL SERVICES SDN. BHD.

REQUEST FOR INFORMATION ON BIOMASS SUPPLY

A. GENERAL INFORMATION

| | | |
|----|---|---------------------|
| 1. | Company: | |
| 2. | Office Address: | Registered Address: |
| 3. | Tel No.: | Fax No.: |
| 4. | Date of incorporation: | |
| 5. | Principal activities: | |
| 6. | Authorized Capital: | Paid-Up Capital: |
| 7. | Vendor Registration Number MOF/ TNB (if any): | |
| 8. | Contact Person (1) | |
| | Name: | Designation: |
| | Tel No. (Office): | Fax No.: |
| | Mobile No.: | Email: |
| | Contact Person (2) | |
| | Name: | Designation: |
| | Tel No. (Office): | Fax No.: |
| | Mobile No.: | Email: |

| | | | |
|------|---|-------------|----------------|
| 9. | Board of Directors | | |
| No. | Name | Nationality | Identification |
| i. | | | |
| ii. | | | |
| iii. | | | |
| iv. | | | |
| v. | | | |
| | | | |
| 10. | Management | | |
| No. | Name | Nationality | Identification |
| i. | | | |
| ii. | | | |
| iii. | | | |
| iv. | | | |
| v. | | | |
| | | | |
| 11. | Financial Performance | 2022 | 2023 |
| i. | Quick ratio = $\frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$ | | |

Note: Please provide supporting evidence e.g. curriculum vitae of key personnel, company profile, audited Financial Report etc.



B. BUSINESS EXPERIENCE

1. Supply Chain

The applicant shall specify their business relationships of **all relevant parties** in the supply chain in the following table:

| Role | Company Name (Please fill in below) | Example |
|-----------------------------------|--|---|
| Feedstock supplier | | Westine Plantation Sdn. Bhd. |
| Joint Venture | | Eastin Biomass Sdn. Bhd. |
| Transporter | | Marine Shipping Bhd. |
| Trading Arm | | Westine Trading Sdn. Bhd (as Applicant) |
| Producer | | Westine Biomass Production Bhd. |
| Third Party product suppliers | | Berry Sdn Bhd |
| Others (Please Specify): | | Research Corporation as researcher |

Note: Please insert 'NA' if not applicable.

2. Production Details

- Biomass Type (EFB/ Wood) : _____
- Experience in biomass production (XX years) : _____
- Design capacity: _____ metric tonnes of biomass product/year.
- What evidence is available to substantiate the reported annual biomass production? Options include internal registers or annual reports:

2.1 Past Production (2021-2023)

| Year | Total Production (mt) | Feedstock Type | Export Sales (mt) | Domestic Sales (mt) |
|------|-----------------------|----------------|-------------------|---------------------|
| 2021 | | | | |
| 2022 | | | | |
| 2023 | | | | |

2.2 Production Forecast (2024-2025)

| Year | Total Production (mt) | Feedstock Type | Export Sales (mt) | Domestic Sales (mt) |
|------|-----------------------|----------------|-------------------|---------------------|
| 2024 | | | | |
| 2025 | | | | |

3. Certification / Accreditation

| Year | Certification | Certification Body | Validity |
|------|---------------|--------------------|----------|
| | | | |
| | | | |
| | | | |
| | | | |

Note: Sustainable certification such as FSC, RSPO, ISCC, Green Gold Label (GGL) etc.



C. PRODUCTION INFORMATION

1. Feedstock information

| | |
|---|--|
| Feedstock Type: | |
| Permit: (agriculture, forestry etc if applicable) | |
| Physical Description: | |
| Origin of Harvest: | |
| Specify any pre-processing outside the applicant's factory/ plant (shredding, chipping, drying, etc): | |
| Receiving plant storage address: | |

Please provide regional map demonstrating biomass producer and feedstock origin location(s).

TNBF may request for evidence on site to confirm the origins during site visit. (for example Certified Material Recycling, supplier invoices, supplier contracts, internal registers or annual reports)

2. Photographs/ illustration (Production Process)

This section shall illustrate photographs/illustration/pictures of at least the following:

- Feedstock storage
- Overview of biomass manufacturing plant
- Washing method and waste water treatment (if any)
- Dryer (if any)
- Wood chipper and hammer mill if wood pellets
- Pelletizer, biomass storage and handling

A ground plan of the facilities and / or a flowchart shall also be included if available. Please add dates when photographs were taken.

3. Production Process

The following table examines the on-site biomass production process, focusing on key description of the processes undergone by feedstock. Please tick (√) whichever applicable.

| | |
|-------------------|---|
| Feedstock Storage | <input type="checkbox"/> Open air <input type="checkbox"/> Warehouse <input type="checkbox"/> Silo <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> No storage |
|-------------------|---|

| | | | |
|---------------------------------|--|---------------------------------|---|
| Feedstock Preparation | <input type="checkbox"/> Shred and Press (EFB) <input type="checkbox"/> Washing (EFB) <input type="checkbox"/> Debarking (Wood) <input type="checkbox"/> Chipping (Wood) | | |
| | <table border="1"> <tr> <td rowspan="2"><input type="checkbox"/> Drying</td> <td> type: <input type="checkbox"/> drum dryer <input type="checkbox"/> belt dryer <input type="checkbox"/> other (specify) _____ </td> </tr> <tr> <td> energy carrier: <input type="checkbox"/> steam <input type="checkbox"/> hot air/ flue gases <input type="checkbox"/> hot water </td> </tr> </table> | <input type="checkbox"/> Drying | type: <input type="checkbox"/> drum dryer <input type="checkbox"/> belt dryer <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> Drying | type: <input type="checkbox"/> drum dryer <input type="checkbox"/> belt dryer <input type="checkbox"/> other (specify) _____ | | |
| | energy carrier: <input type="checkbox"/> steam <input type="checkbox"/> hot air/ flue gases <input type="checkbox"/> hot water | | |
| Sizing | Target size _____ mm | | |
| | <input type="checkbox"/> Hammer mill (wood) <input type="checkbox"/> Cutting (EFB) | | |
| Pelletizing | <input type="checkbox"/> Number of Pelletizers _____ <input type="checkbox"/> Design capacity of each pelletizer _____ metric tonnes per hour | | |
| Product handling | <input type="checkbox"/> Rolling stock <input type="checkbox"/> Conveyor belt <input type="checkbox"/> Blowpipe <input type="checkbox"/> Forklift <input type="checkbox"/> Other (specify) _____ | | |
| Product Storage | Maximum Storage Capacity _____ metric tonnes | | |
| | <input type="checkbox"/> Warehouse <input type="checkbox"/> Silo <input type="checkbox"/> Open air <input type="checkbox"/> Dome <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> No storage | | |

4. Inland and Sea Transportation

The following tables examine the inland and/ or sea transportation, focusing on flexibility in term of bulk delivery.

4.1: Inland Transport

| | |
|---|--|
| Mode of Transport | |
| Transport Capacity | |
| Owner (self-owned / outsourced) | |
| Packaging method (loose/ jumbo bag/ drum etc) | |

4.2: Sea Transport (if applicable)

| | |
|--|--|
| Sea loading/ Jetty location | |
| Vessel IMO | |
| Vessel Name | |
| Capacity of the whole ship used - Nominal Capacity (metric tonnes) | |
| Distance of the sea loading/ Jetty location from the biomass storage location (km) | |
| Please indicate address of off-site storage, handling or trans-shipment facility if applicable | |



DECLARATION

I, _____ ID No. _____
 Hereby certify that all the information/data given to this applicant are correct and up-to-date. If there are any changes in the information/data supplied, I shall undertake to notify you in writing as soon as possible.

I also declare that all the information given in this application is true and correct.

| | |
|--|------------------------|
| SIGNATURE | COMPANY'S STAMP |
| NAME : DESIGNATION : DATE : | |

NOTES

| | |
|------------------------------|--|
| RFI Form | a. The form is available for download at our official websites: <ul style="list-style-type: none"> www.tnbfuel.com > Procurement > Tender Advertisement tnbfbid.com > Coal Advertisement |
| Quality Sampling Test | a. Biomass quality test requires a minimum of 5kg sample to be sent (with AWB receipt) to: <p style="margin-left: 20px;">Ms. Miza Farzana bt Amir Mahmud Digital Solutions, Technical Services TNB Labs Sdn Bhd. No.1, Lorong Ayer Hitam, Kawasan Institusi Penyelidikan, 43000, Kajang Selangor.</p> b. The quality sampling test result is chargeable upon request by the Applicant. c. Quality Sampling fee is a one-time payment and it is not refundable. d. The fee is RM3,500.00 nett (for quality sampling) and payable to TNBF's bank account as of below: <p style="margin-left: 20px;">Name : TNB Fuel Services Sdn. Bhd. A/C No : 5141 8735 2288 Swift Code : MBBEMYKL Bank Name : Maybank Wisma IJM Ground Floor, Jalan Yong Shook Lin, 46200 Petaling Jaya, Selangor, Malaysia</p> |

CHECKLIST

The applicant is advised to submit the following documents in this RFI to enable TNBF to fairly assess their overall capacity and capability.

| No. | Document | Confirm Submission <i>Applicant please tick</i> (√) | TNBF (Office use) |
|-----|--|---|----------------------|
| 1. | RFI Form | | |
| 2. | Company Profile | | |
| 3. | Latest audited financial report | | |
| 4. | Curriculum vitae of key personnel | | |
| 5. | Regional map demonstrating biomass producer and feedstock origin location(s) | | |
| 6. | Photographs/illustration (production proses) | | |
| 7. | Supporting evidences (Contract/ Agreement/LOI/MOU/LOA/LOU if any) | | |