

Sustainable Energy Development Authority Malaysia (SEDA Malaysia) Galeria PjH, Aras 9, Jalan P4B, Persiaran Perdana, Presint 4, 62100 Putrajaya T : +603 - 8870 5800 F : +603 - 8870 5900 E : info@seda.gov.my

MANUAL FEED-IN APPROVAL APPLICATION FORM (BIOMASS)

| For office use only | • |
|------------------------------------|-----|
| Reference No. Serial No. | : |
| Date received | :// |
| Time received Receiving Officer | : |
| | |

Please submit your application form to: Sustainable Energy Development Authority Malaysia Galeria PJH Aras 9, Jalan P4W Persiaran Perdana Presint 4 62100 Putrajaya, MALAYSIA Tel No.: 03 – 8870 5800 Fax No.: 03 – 8870 5900

Please tick (V) in the applicable boxes.

| Information on Applicar | Information on Applicant | | | |
|---|--------------------------|--|--|--|
| Name of Applicant: | | | | |
| MyKad No./Passport No./Registration No. (or if not available, Service Tax Registration No.) ¹ : e-PBT No. ² : | | | | |
| Information on New or E | xistir | ng Project | | |
| Renewable Resource: | <u>Bio</u> | mass | | |
| Project Status: | | New Project Existing Small Renewable Energy Program (SREP) project (post commercial operation date (COD)) Existing SREP project (pre-COD) | | |
| Total Installed Capacity (MW ³): Net Export Capacity (MW): | | | | |
| | | | | |
| Voltage level at Connec Point: | tion | Low voltage Medium voltage High Voltage | | |
| Connection Type: | | Low voltage direct connection | | |

Medium voltage direct connectionHigh voltage direct connection

¹ Not applicable to local authorities.

² Applicable to local authorities only.

³ 1MW = 1,000 kW



| Name of Distribution Licensee: (e.g.: TNB, SESB, etc.) |
|--|
| Applicable criteria for bonus feed-in tariff rate in addition to basic feed-in tariff rate (if any): Use of gasification technology Use of steam-based electricity generating systems with overall efficiency of above 20% Use of locally manufactured or assembled boiler or gasifier Use of municipal solid waste as fuel source |
| Location of RE Project Site |
| UPI (Universal Parcel Identifier) Location District Sub-district / City / Town: Section: Lot / PT. No: |
| Project Site Address Address: |
| Postcode: District: District: |
| Please enter the GPS location of project or attach site map. If entering GPS location, please enter the latitude and longitude coordinates in degrees, minutes and seconds format (DDMMSS) (e.g. Latitude: 5° 18' 56.9802", Longitude: 103° 7' 16.647"). Latitude:° (" Longitude: ° (" |
| Site Ownership: 🗳 Fully Owned 🖾 Owned (Charged to Bank) 📮 Leased |
| Owner of the project site (if leased): The Applicant is required to provide documents proving the Applicant's ownership of the site, or other conditional or unconditional rights (e.g. letter or agreement) that the Applicant has to utilise/lease the site for a minimum period equivalent to the effective period. |
| Current site activities: Agriculture Commercial Industrial Others |



Contractor

This section is only applicable to new projects and existing SREP projects (pre-COD).

Details of service provider⁴

| Company Registration No.: | |
|---------------------------------------|------------|
| Company Name: | |
| Business Address: | 10. |
| | |
| City: | Postcode: |
| State: | |
| Telephone No: | |
| E-mail: | Website: |
| Project manager ⁵ (if any) | |
| Name of project manager: | |
| Nationality: | |
| MyKad No. / Passport No.: | |
| Telephone No: | Mobile No: |
| Email: | |
| Qualified Persons ⁶ | |
| Qualified Person 1 | |
| Name of Qualified Person: | |
| MyKad No./Passport No.: | |
| Organisation or Company | |
| Name: | |
| Company Registration No. (if any): | |
| Telephone No: | Mobile No: |
| Email: | |

⁴ The service provider can be a main engineering procurement and construction contractor, system integrator or technology provider based in Malaysia. The Applicant may also be its own service provider provided that its employees possess the applicable qualifications. A service provider may also be one of the qualified persons.

 $^{^{\}rm 5}$ The project manager can be an employee of either the Applicant or the service provider.

⁶ Persons tasked by the Applicant with the carrying out of any work, action, certification, obligation or responsibility to the compliance with any provisions of any subsidiary legislation made pursuant to the Renewable Energy Act 2011. The Applicant is required to provide evidence of qualifications of qualified persons consistent with the requirements of the Renewable Energy (Technical and Operations) Rules 2011.



Scope of Work:

| Qualified Person 2 | |
|--|-------------|
| Name of Qualified Person: | |
| MyKad No. / Passport No.: Organisation or Company | |
| Name: | |
| Company Registration No. | |
| (if any): | |
| Telephone No: | Mobile No: |
| Email: | XV |
| | |
| a a a a a a a a a a | |
| Scope of Work: | |
| | |
| | |
| Qualified Person 3 | |
| Name of Qualified Person: | |
| MyKad No. / Passport No.: | |
| Organisation or Company | |
| Name: | |
| Company Registration No. | |
| (if any): | |
| Telephone No: | Mobile No.: |
| Email: | |
| Scope of Work: | |
| | |
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| | |
| | |



Technical Information on New or Existing Project

| Total Installed Capacity (MW): |
|--|
| Net Export Capacity (MW) : |
| Interconnection Voltage ⁷ (kV): |

(e.g.: 0.23kV, 0.4kV, 11kV, 22kV, 33kV or 132kV)

Distance from the Plant to Interconnection Point (km):

| | Generation ⁸ | Export ⁹ |
|------------------------------------|-------------------------|---------------------|
| Capacity factor ¹⁰ (%): | | |
| Energy Yield (MWh/year): | | |
| Specific Yield (MWh/MW/year): | | |

Yield Projection

| Year / YieldGeneration (Based on Installed Capacity)Export/Declared Annual Availation (Based on Net Export Capacity factor (%)1MWhCapacity factor (%)MWhCapacity factor222222332222455555676666 | city) |
|---|--------|
| MWhCapacity factor (%)MWhCapacity factor1 </td <td></td> | |
| 1 1 1 1 2 1 1 1 3 1 1 1 4 1 1 1 5 1 1 1 6 1 1 1 | or (%) |
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⁷ As determine by PSS or CCC (if any)

⁸ Total amount of renewable energy to be generated by the renewable energy installation in a year.
⁹ Total amount of renewable energy to be generated by the renewable energy installation and delivered up to the connection point in a year.

¹⁰ Capacity Factor Formula:

Capacity Factor (%) = [Energy Generated (MWh)/(Installed Capacity (MW)* 8760)] * 100

Percentage Export (%) = [Energy Export (MWh) / (Net Export Capacity (MW)* 8760)] * 100

¹¹ The Declared Annual Availability will be automatically pro-rated for the first and last years by the e-FiT Online System based on export data input.

These data entries will be automatically calculated by the e-FiT Online System using the information submitted by the Applicant above.

Fuel Requirements

| Fuel Type: | Quantity (cubic metres/year): | _ |
|------------|-------------------------------|---|
| Tonnes: | Calorific Value (kJ/Tonne): | |

Ratio of Supplied Fuel :

| | Supplier Name (e.g. the Applicant or name of other suppliers) | Ratio of Supplied Fuel ¹² (%) |
|----|--|--|
| 1. | | <u> </u> |
| 2. | | 5 |
| 3. | | |
| 4. | | |
| 5. | | |

Please attach scanned soft copy of the letter(s) of intent/offer letter(s)/term sheet(s) from the entity/(ies) that will be providing renewable resources to the Applicant for the project.

 Start Up
 Diesel
 Gas
 Petrol

 Fuel: (if any)
 Others:

¹² The total sum of this column must be equivalent to 100% of the renewable energy installation's fuel requirements.



Financing

This section is only applicable to new projects or existing SREP projects (pre-COD).

A. Projected Capital Expenditure

1. Equipment Cost:

| Description | Cost (RM) |
|---------------------------|---------------|
| Fuel processing equipment | |
| *Boiler | O(r) |
| *Gasifier | |
| *Pyrolysis | |
| Steam turbine equipment | \mathcal{O} |
| Generator | |
| Balance of system | |
| Gas engine | |
| * If applicable | |

- * If applicable
- 2. Installation Cost (RM):
- 3. Design & Consultancy (RM):
- 4. Interconnection Cost (RM):
- 5. Preliminary Cost (RM):

6. Other Capital Cost (Please specify):

| Description | Amount (RM) |
|-------------|-------------|
| | |
| | |
| | |
| | |

Total Capital Cost (RM):

Summation of Section A (No. 1-6)



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| Financier: | |
|----------------------|-----|
| Loan Amount (RM): | |
| Loan Interest (%): | |
| Loan Tenure (years): | ()) |

Please attach the conditional letter(s) of approval from the entity(ies) who will be providing financing to the Applicant for the project. Such conditional letters of approval should state, among others, that the entity(ies) has considered the Applicant's financing proposal and agrees to provide financing for the project subject to the grant of the feed-in approval to the Applicant.

Total equity contribution by the Applicant¹³

Equity (RM):

Percentage¹⁴ (%):

No

C. Projected Annual Operational Expenditure

- 1. Insurance Premium (RM):
- 2. Operation & Maintenance Cost (RM):
- 3. Fuel Cost at Site (RM):
- 4. Other Operating Cost (Please specify):

| Amount (RM) |
|-------------------------------|
| |
| |
| |
| |
| |
| |
| ation of Section C (No. 1- 4) |
| |

Project IRR Project IRR (%):

¹³ Note for company only: As part of your Financial milestones, you will be required to upload a copy of your company's bank account latest 3 months statements showing a minimum credit balance of 5% of the capital cost of your project ¹⁴ Applicant's equity is limited to not less than 5% of the total project cost.



Proposed Work Plan¹⁵

Please select a proposed work plan¹⁶:

□ Work Plan A: If Renewable Energy Installation will be connected to a Low Voltage Supply Line.

□ Work Plan B: If Renewable Energy Installation will be connected to a Medium or High Voltage Supply Line.

□ Work Plan C: If Renewable Energy Installation is an existing SREP project (post COD).

Work Plan A

| No. | Milestones | Estimated Due Date |
|-----|---|--------------------|
| 1. | Feed-in approval application submission date | |
| | Time frame: Month ¹⁷ (s) Week (s) | |
| 2. | Registration of renewable energy power purchase agreement (REPPA) with the Sustainable Energy | |
| | Development Authority Malaysia | |
| Ļ | Time frame: Month (s) Week (s) | |
| 3. | Energy Commission public license (provisional) | |
| | Time frame: Month (s) Week (s) | |
| 4. | Financing Agreement | |
| | Time frame: Month (s) Week (s) | |
| 5. | 1 st Payment to Engineering, Procurement and Construction Contractor | |
| | Time frame: Month (s) Week (s) | |
| 6. | Feed-in tariff Commencement Date | |

¹⁵ Total duration must not exceed 36 months.

¹⁶ Applicants with an existing SREP project (pre-COD) are required to select Work Plan A or Work Plan B only.

¹⁷ Minimum time frames for registration of REPPA is 2 months



<u>Work Plan B</u>

| No. | Milestones | Estimated Due Date |
|-----|--|--------------------|
| 1. | Feed-in approval application submission date | |
| | Time frame: Month ¹⁸ (s) Week (s) | |
| 2. | Registration of renewable energy power purchase agreement (REPPA) with Sustainable Energy Development Authority Malaysia | |
| Ļ | Time frame: Month (s) Week (s) | |
| 3. | Energy Commission public license (provisional) | |
| | Time frame: Month (s) Week (s) | |
| 4. | Financing Agreement | |
| | Time frame: Month (s) Week (s) | |
| 5. | 1 st Payment to Engineering, Procurement and Construction Contractor following financial close | |
| | Time frame: Month (s) Week (s) | |
| 6. | Initial operation date (IOD) | |
| | Time frame: Month (s) Week (s) | |
| 7. | Feed-in tariff Commencement Date | |

 $^{^{\}rm 18}$ Minimum time frames for registration of REPPA is 2 months



<u>Work Plan C</u>

| No. | Milestones | Estimated Due Date |
|-----|--|--------------------|
| 1. | Feed-in approval application submission date | |
| | Time frame: Month ¹⁹ (s) Week (s) | |
| 2. | Registration of renewable energy power purchase agreement (REPPA) with Sustainable Energy Development Authority Malaysia | |
| | Time Frame: Month (s) Week (s) | |
| 3. | Energy Commission public licence (permanent) | |
| | Time frame: Month (s) Week (s) | |
| 4. | Feed-in-tariff Commencement Date | |

These data entries will be automatically calculated by the e-FiT Online System using the information submitted by the Applicant above.

¹⁹ Minimum time frames for registration of REPPA is 2 months



Supporting Documents Checklist

The certified true copies of the following documents are to be submitted in support of this application, where applicable²⁰.

| 1. | Written documentation from a qualified person setting out the detailed engineering design (Including all relevant calculations to justify the installed capacity and claimed efficiencies) of the renewable energy installation utilizing the relevant fuel source including the relevant equipment for the combustion process of the fuel source, the calculation of the indicative quantity of fuel source required and the calculation of the indicative quantity of renewable energy to be generated from the installation. | |
|----|---|--|
| 2. | Documents proving the Applicant's ownership of the site, or other conditional or unconditional rights (e.g. Lease or leasing agreement) that the applicant has to utilize/lease the site for a minimum period equivalent to the effective period. | |
| 3. | Land title showing proof of ownership by the applicant or lessor. | |
| 4. | A scanned soft copy of the letter(s) of intent/offer letter(s)/term sheet(s) from the entity(ies) that will be providing renewable resources. | |
| 5. | The approval letter from the distribution licensees (DL) together with the report on the power system study (PSS) conducted in accordance with the Renewable Energy (Technical and Operational Requirements) Rules 2011 and amendments Rules 2014. | |
| 6. | Use of steam-based electricity generating systems with overall efficiency of above 20%: Written confirmation by a qualified person verifying that the criteria will be met based on the design efficiency of the renewable energy installation, accompanied by the relevant calculations. | |
| 7. | Use of gasification technology: Relevant manufacturer's specifications and data sheet tested according to international standards by certified testing bodies as may be recognised by the Authority from time to time pursuant to guidelines, providing for the conversion of biomass to gasification through gasification or plasma technology. | |

²⁰ The maximum page size for supporting documents is A3.



| 8. | Use of locally manufactured or assembled gasification technology, either: (a) A certified copy of the manufacturer's licence issued under the Industrial Co- ordination Act 1975 [Act 156]; (b) A certificate of factory acceptance test or its | |
|-----|--|--|
| 9. | equivalent; or (c) A certificate from the manufacturer. A certificate of registration (with Practicing Certificate) of each Qualified Person with the Board of Engineers Malaysia as a Professional Engineer (Electrical). | |
| 10. | Documentary evidence to show that the Applicant have the financial means to make available the requisite capital to fund at least 20% of the estimated total project development costs (including financing costs during construction) by financial close. Such evidence may include, but is not limited to, bank statements (duly certified by the bank) or bank referral letters evidencing cash deposits, working capital credit facilities such as overdraft and/or revolving credit facilities or bank letter of offers for credit facilities with sufficient available limit equivalent to the requisite amount; bank guarantees and/or standby letter of credit from a Malaysian bank; unencumbered fixed assets and/or land accompanied by valuation reports which may be collateralized to Banks | |
| 11. | Detailed financial model/project cash flow showing all costs and income involved throughout the 21 years commitment. The information and data provided in the financial model shall be clearly explained (mandatory in excel format). | |



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Declaration

Declaration Form for Biomass Feed-in Approval Application (by company or other entity)*

| Applicant's Name Total Installed Capacity (MW) Net Export Capacity (MW) Method of Connection | : | |
|---|---|-----|
| Feed-in Tariff Rate (RM/kWh) | : | |
| Bonus | : | |
| SCOD | : | |
| Installation Address | : | |
| | | |
| | | |
| | | |
| | | |
| I, [Name: | | and |
| residential address: | | |
| | | |
| | |] |
| sincerely declare the following | : | |

- 1. I am a representative of the Applicant and have been duly authorized to make this declaration on its behalf.
- 2. All information and accompanying documents submitted herein are true, accurate and complete. The Applicant is not aware of any other information or document which would make the documents submitted untrue or misleading. The Applicant understands and acknowledges that the omission of any relevant information or document, or the submission of any information or document that it knows or has reason to believe is false or misleading may result in the rejection of this application, the revocation of any feed-in approval granted pursuant to this application and/or shall constitute an offence committed by it under the Renewable Energy Act 2011 and/or its applicable subsidiary legislation.
- 3. The certified true copies of the documents identified in the Supporting Documents Checklist of the application form have been submitted by the Applicant to the Sustainable Energy Development Authority Malaysia in support of this application.
- **4.** Any additional information that may henceforth be required will be submitted by **the Applicant** by electronic medium or by way of electronic transmission in accordance with guidelines issued



by the Sustainable Energy Development Authority Malaysia. Such information shall include but is not limited to information relating to the milestones for the proposed renewable energy installation and the dates by which such milestones are to be achieved. The declaration I have made in paragraph 2 above shall be repeated for any additional information the Applicant may submit in accordance with this paragraph 4.

- 5. The Applicant will immediately notify the Sustainable Energy Development Authority Malaysia if the Applicant becomes insolvent.
- 6. A service provider may be appointed by the Applicant to make this application on its behalf but the Applicant shall be fully responsible for the contents thereof.
- 7. The Applicant hereby agrees to the Terms and Conditions of Use of the Sustainable Energy Development Authority Malaysia website. These terms include but are not limited to the restriction on divulging the e-FiT Online System username and password assigned to the Applicant to any third party and permitting or encouraging any unauthorized user to access the restricted section in the e-FiT Online System by using the username and password assigned to the Applicant.
- 8. The Applicant hereby agrees and consents to the full disclosure of the information submitted with this application and any additional information it may submit in accordance with paragraph 4 above to the Energy Commission and any service provider and/or financier identified by the Applicant. The Applicant also agrees and consents to the disclosure of such information to the distribution licensee whose electricity distribution network the proposed renewable energy installation is to be connected to, to the extent deemed appropriate by the Sustainable Energy Development Authority Malaysia. Such disclosure shall not be a breach of any confidentiality obligations owed to it by the Sustainable Energy Development Authority Malaysia.
- 9. The Applicant has read and understood all the rules and regulations as stipulated in the Renewable Energy Act 2011, its subsidiary legislation and SEDA's Guidelines & Determinations. This Application complies with the provisions of the Renewable Energy Act 2011 and subsidiary legislations made thereunder.

Name: MyKad No./Passport No: Designation: Date:



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*Please select the applicable declaration section (i.e. individual, service provider or company or other entity). The selected declaration section is to be separately printed, signed by the relevant person(s), scanned and submitted to the Sustainable Energy Development Authority Malaysia via the e-FiT Online System. The physical hard copy of the signed declaration is to be subsequently furnished to the Sustainable Energy Development Authority Malaysia via the declaration be subsequently furnished to the Sustainable Energy Development Authority Malaysia no later than 7 days after the Applicant receives notice that its application has been successful.