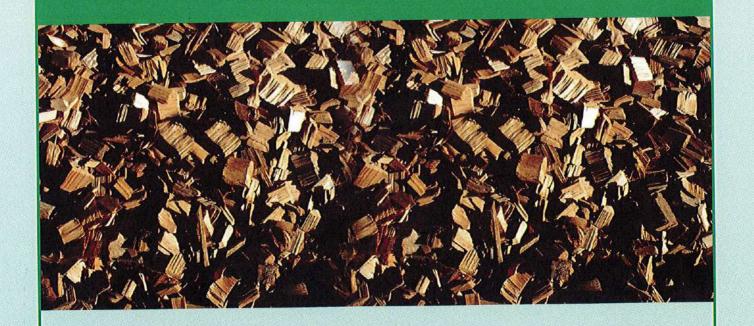
# Application for Engaging in and Carrying on of an On-grid Renewable Energy Project



Project Type: **Biomass** 

#### **Dear Applicant**

Thank you for the interest shown in developing renewable energy resources in Sri Lanka.

We are pleased to present you a copy of the prescribed application form attached hereto, formulated according to the provisions laid out in the Sri Lanka Sustainable Energy Authority Act No. 35 of 2007, On-grid Renewable Energy Projects Regulation 2009 published in the Gazette No. 1599/6 of 27th April 2009 and amended by the Gazette No. 1705/22 of 10th May 2011. A Guide to the Project Approval Process for On-grid Renewable Energy Project Development (Version V2.0/2011) can be downloaded at http://www.energy.gov.lk/pdf/guideline/Grid\_Renewable.pdf You are strongly advised to go through this Guide before submitting your application.

Your kind attention is invited to Chapter 2.0 'Applying for a Provisional Approval' given in the Guide to the Project Approval Process, for details on submitting a complete application. Please be kind enough to pay the application fee either in cash or through a bank draft, since this Authority is not in a position to accept cheques for the payment of application fees.

We look forward to the perfected application form.

Thank You

**Director General** 

### **Method of Submitting New Applications**

Any person, an individual or a company, may apply to develop a renewable energy project anytime, irrespective of whether the person holds any rights to the resource or land rights. The SEA would entertain only complete applications as required under Section 16(2) of the Act. A complete application form, prescribed in the On-grid Renewable Energy Projects Regulation 2011, accompanied by a Pre-feasibility report prepared by a Consultant accredited by the Authority, dealing with the following main components will have to be made after payment of the prescribed application fee to the SEA.

- a) Pre-feasibility report prepared by a Consultant accredited by SEA, with the one page summary
- b) A copy of the map of the geographical location of the proposed project
- c) A brief description of the project, including the amount of power to be generated
- d) The total estimated cost and financial model including the optimisation criteria adopted
- e) Proof of availability of adequate finances or the manner in which the required finances for the project are to be obtained
- f) Project location, describing the relative location of energy conversion plant and equipment to the resource, as a further explanation of (b) above
- g) A statement explaining how the Applicant intends to deliver electricity generated by the project to the national grid, and geographical area traversed by the power line to be constructed for that purpose
- h) A copy of the receipt obtained from the SEA, for the payment of the prescribed application fee, which will be calculated according to table below.

Amount of power proposed to be generated	Fee to be paid on application
1,000 kW or part thereof	LKR 100,000
Each additional 1,000 kW	LKR 50,000 payable on pro rata basis

**Note:** Projects of capacities less than 10,000 kW implemented by a single party or parties acting in concert, in parallel or in phases in a same geographical or spatial context will be considered as a single project capable of generating more than 10,000 kW of power.

Any application, after an initial inspection having obvious omissions will be returned unregistered to the Applicant, requesting the attention to the said omissions. An Applicant who fail to submit complete application forms runs the risk of another party applying for the same resource site, between the first attempt to submit the application and the second attempt, after attending to the obvious omissions as pointed out by the SEA.

# **APPLICATION FORM**

D	ate of Applicati	ion			Carolia Serial Gree	Traves Constitution	
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ee "Guide			ocess for On-Grid F	the <u>type</u> listed	below. gy Development"		
Project 1	<b>'ype:</b> Please mar	rk in the ap	opropriate box belo	ow. Please selec	t only one type.		
Small Hydro		iomass Grówn)	Agricultural	Waste	Municipal	Waste Heat	Other (Pls. Specify)
iyulo		. [	Agriculturur	maama	I I I I I I I I I I I I I I I I I I I		
Name	of the Project		oacity (kW):				
If the a	applicant is a Co	ompany	: Name: : Registration N : Names of Dire	O			
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Addre							
elephon	e Numbers:				EIIIalli		
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Company resolution certified by Company Secretary authorising the applicant to submit the application (please attach)

# 4. Project Pre-feasibility/Report (please attach)

The Applicant is expected to provide a Pre-feasibility report along with the application prepared by a Consultant accredited by the Authority, including the information and documents referred to in paragraphs (a) to (f) of sub-section (2) Section 16 of the Act.

a. Paste in the box below the relevant part of the 1:50000 map showing locations of the all project components and powerhouse

Copy of 1:50000 Maj	p with Project Layout (1:50000 scale not to be altered) Sheet No Sheet Name	

(b) a brief description of the project, including the amount of power to be generated; **Project Type: Project Information** Installed Generating Capacity of the Plant (kW) Name of Stream/River (if Hydro) Name of the Project Annual Electricity Generation (GWh) Proposed location of the Power Plant: provide the details below Village/Grama Niladhari Division **Divisional Secretary Division** District (c) the total estimated cost and financial model, including optimisation criteria adopted; (d) proof of availability of adequate finances or the manner in which the required finances for the project are to be obtained; (e) Project location i.e. Weir and Power House relative to river or stream system if it is a hydro power project, wind Turbine and Structures if it is a Wind power project, Energy Plantation, Power House and Water Source if it is a Biomass Project and Conversion facility relative to energy resource, if it is any other project; and (f) Grid connection i.e. how the applicant intends to evacuate electricity generated and the point at which the generator will be connected to the national grid and the geographical area traversed by the power line constructed for this purpose. Certification by the Applicant: I hereby certify that the Pre-feasibility Report attached to this application has been prepared by (name), a Consultant accredited by the Authority, and whose name and signature appears on page 1 of the Report. I attach herewith a copy of the receipt obtained, on the payment of the appropriate fee which is required to be made along with this application. I attach herewith technical and other details related to the resource site, as requested by the Director General. I have read and understood the "Guide to the Project Approval Process for On-Grid Renewable Energy Development" Name of person signing this application: Date

Signature:

# CALCULATION OF APPLICATION FEE

Column I	Column II			
Amount of power proposed to be generated	Fee to be paid on application and reapplication			
1,000 kW or part thereof	LKR 100,000			
Each additional 1,000kW	LKR 50,000 payable on pro rata basis			

**Note**: Projects of capacities less than 10,000 kW implemented by a single party or parties acting in concert, in parallel or in phases in a same geographical or spatial context will be considered as a single project capable of generating more than 10,000 kW of power.

Checklist of Contents of the Pre-feasibility Study which is to be attached to the Application for Provisional Approval for an On-grid Renewable Energy Project

Project type: Biomass (grown)

Profile of the Applicant	Mark Yes (	) No (x)
Background <sup>1</sup> of the company/individual applying for provisional approval	I French	1
Site Description		
Name of the site		
Name of the village and administrative divisions		
Sketch of the area earmarked for the power plant		
Land use and general socio-economic background of the area		
General infrastructure facilities - access roads, nearest CEB grid substation, water supply		
Preliminary Plant Design		
Rated capacity		
Preliminary layout of the power plant including a single-line diagram of the electrical		
system up to grid interconnection		
Gross/ net annual electricity generation		
Biomass type earmarked as the fuel and key properties		
Heat and mass balance calculations		
Biomass demand		
Data on biomass yield, required land area		
Ash disposal arrangements		
Biomass Supply		
Method of sourcing biomass		
If biomass will be grown by the plant owner, area earmarked for biomass plantations		
If biomass will be sourced from other suppliers, information on the identified		
suppliers - name, location, letter of consent in principle		
Arrangements for harvesting, transport and supply of biomass		
Localised social & environmental benefits likely to result due to utilisation of biomass in the power plant		
Localised negative social & environmental impacts likely to result due to		
utilisation of biomass in the power plant		
Proposed measures to mitigate negative impacts		
Project Costs		
Capital cost of the project		
Cost of biomass supply - price payable for biomass at source, handing costs, transport cos	ts	
O&M costs, insurance costs		
Financial Analysis		Yakasa
Financing parameters		
Financial analysis including a sensitivity analysis against key variables		
Project Development Plan		
Site ownership, plans to acquire land		
Source(s) earmarked to raise the equity and debt financing		
Project implementation schedule		

<sup>&</sup>lt;sup>1</sup> Current business, products,/services, proposed business plan for the project

Annex to the Pre-feasibility Report: Land Resource Requirements

# For Project Components

Extent	Location/Description	Present Ownership

### For Site Access

Extent	Location/Description	Present Ownership

Name of the Project	Project Type		Biomas	Biomass (grown)	Name of	Name of the Applicant			
Village(s)   As harvested and after drying cants' dedicated   District	Name of the Project								
village(s)         Yield         Moisture Content           cants' dedicated and after drying         District         Retent of land after drying           cood plantation         Number of suppliers         Mono crop or mixed crop         Extent of land (ha)           suppliers         Number of mixed crop or mixed crop         Cooling method (describe):         Extent of land (ha)           st plant technology         Mater demand (kw)         Cooling method (describe):         Extent of land (ha)           secribeday)         (m) Ader demand (kw)         Cooling method (describe):         Receiving grid substation           escribed         (km)         (km)         Receiving grid substation           escribed         (km)         Pre-project, land rights (LKR million)         Receiving grid substation           cumptions in cost Electro-mechanical equipment (LKR million)         Colling method (describe)         Colling method (describe):           conter-IDC, insurance, working capital, contingencies (LKR million)         Total         Electro-mechanical equipment cost (LKR million)         Total           Project development costs (LKR million)         Project development cost (LKR million)         Total         Equity IRR           Equity IRR         Equity IRR         Other financial parameters (specify)         Intention of the stention of the			District:			DS Division	14.22	GN Division(s)	
Supply   Applicants' dedicated   (kg/tree/year)   District   As harvested and after drying   Applicants' dedicated   District   As particular   As harvested and after drying   Applicants' dedicated   District   As particular   District   Distr	tion of Power	riant	Village(s)	35					
Supply Outside suppliers   Applicants' dedicated fuelwood plantation   Number of suppliers   Mono crop or suppliers   Suppli	Resource			Yield		Moisture Content			LHV (MJ/kg)
Applicants' dedicated fuelwood plantation         District         DS division         Extent of land (ha)           Outside suppliers         Number of suppliers         Mono crop or mixed crop or (kw)         Mono crop or efficiency         Extent of land (ha)           Power plant technology         (kw)         (kw)         Mater demand (tonne) day         Cooling method (describe): efficiency           Biomass demand (tonne) day)         Interconnection voltage         (kw)         Interpt of new transmission line (km)         Receiving grid substation           (volt)         Pre-project, land rights (LKR million)         Receiving grid substation         Electro-mechanical equipment (LKR million)         Total           any assumptions in cost (Civil works (LKR million))         Electro-mechanical equipment (LKR million)         Total         Total           Any assumptions in cost (Electro-mechanical equipment (LKR million))         Project development costs (LKR million)         Total         Electro-mechanical equipment (LKR million)           Any assumptions in cost (Electro-mechanical equipment (LKR million))         Electro-mechanical equipment (LKR million)         Total         Any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA.	on	Name of the fuel		(kg/tree/year)		As harvested and af	ter drying		
Number of Suppliers   Number of Suppliers   Number of Suppliers   Number of Suppliers   Mono crop or	The same of the sa	Applicants' dedicated fuelwood plantation	District		DS division		Extent of land (ha)		Fuelwood
chnology		Outside suppliers	Number of suppliers		Mono crop or mixed crop		Extent of land (ha)	22	(tonne/year)
nd water demand noting method (describe):    Majoral	Acres de la constante de la co	Power plant technology		Installed capacity (KW)		Overall plant efficiency	27.75	Specific fuel co (kg/kM	insumption (h)
n voltage (km) (km) Receiving grid substation (km) (km) (km) (km) (km) (km) (km) (km)	The second second	Biomass demand (tonne/day)		Water demand (m³/day)		Cooling method (des	scribe):	Ash/residues (tonne/day)	Ash disposal (describe):
Pre-project, land rights (LKR million)  Sin cost	Transmission	Interconnection voltage (volt)		Length of new tra (km)	nsmission line		Receiving grid substation		Any special issues on transmission:
Pre-project, land rights (LKR million)  Civil works (LKR million)  Electro-mechanical equipment (LKR million)  Transmission line (LKR million)  Other-IDC, insurance, working capital, contingencies (LKR million)  Project development costs (LKR million)  Project development costs (LKR million)  Estimated annual maintenance cost(LKR million)  Equity IRR  Equity IRR  Other financial parameters (specify)  Les related to the resource, power plant, land and transmission line, that require the attention of the SEA:	onmental issu	es (describe)							
Electro-mechanical equipment (LKR million)  Transmission line (LKR million)  Other-IDC, insurance, working capital, contingencies (LKR million)  Project development costs (LKR million)  Project development costs (LKR million)  Estimated annual maintenance cost (LKR million)  Equity IRR  Other financial parameters (specify)  Les related to the resource, power plant, land and transmission line, that require the attention of the SEA:	lated Investme	nt (LKR million)	Pre-project, land	d rights (LKR million)				Project Financing	Plan (LKR million)
Electro-mechanical equipment (LKR million)  Transmission line (LKR million)  Other-IDC, insurance, working capital, contingencies (LKR million)  Project development costs (LKR million)  Estimated annual maintenance cost (LKR million)  Equity IRR  Cather financial parameters (specify)  Other financial parameters (specify)  Other financial parameters (specify)  Other financial parameters (specify)	e state here ar	ny assumptions in cost	Civil works (LKR n	nillion)				Equity by the Appl	icant
Cother-IDC, insurance, working capital, contingencies (LKR million)  Project development costs (LKR million)  Estimated annual maintenance cost (LKR million)  Equity IRR  Any special notes on the financing plan:    Data financial parameters (specify)	ates		Electro-mechan	ical equipment (LKR	million)			Equity from other	sonices
ct IRR Equity IRR Equity IRR Equity IRR edescribe any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA:			Other-IDC insur	ance, working capit	tal. contingencies	(LKR million)			Total
Estimated annual maintenance cost (LKR million)  Ct IRR Equity IRR Other financial parameters (specify)  e describe any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA:			Project develop	ment costs (LKR milli	on)			Any special notes	on the financing plan
ct IRR Equity IRR Other financial parameters (specify) e describe any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA:						Total			
ct IRR e describe any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA:			Estimated annu-	al maintenance cos	t(LKR million)				
e describe any additional issues related to the resource, power plant, land and transmission line, that require the attention of the SEA:	ct IRR	Eq	uity IRR		Other financial p	parameters (specify)			
	e describe any	, additional issues related	to the resource,	power plant, land a	and transmission I	line, that require the a	ttention of the SEA	ii.	
					1				
	s to the Projec	ct Approving Committee:	7						
Notes to the Project Approving Committee:									
	PAC submission Date:	-04	Discussion on	TO THE OWNER OF THE PARTY OF TH	Dogicion.			Comminicated to applicant on:	applicant on:

### Checklist of important attributes to be considered when registering new applications

	Duly filled application form	Yes	No
1	Minute by Dir/Head ,for processing of application		
2	Project type		
3	Name of Project & its Capacity		
4	Contact details Name of Applicant: if the applicant is to be changed later for any reason, a processing fee equal to application is required to be paid, to effect such changes		
4 (a)	Pre-feasibility report prepared by a Consultant accredited by SEA		
4 (b)	Original geographical Location Marked map (1:50000)		
4(c)	A brief description of the project		
4(d)	The total estimated cost and financial model		
4(e)	Proof of availability of adequate finances		
4(f)	Project location		
5	Grid connection power line trace		
6	Certification by the Applicant with Signature		
7	Certification by the Accredited Consultant with Signature		
8	Pre- Feasibility Study cover page Project type Capacity Applicant Details Consultant Details		
9	Annex to the Pre- feasibility report : Land Resource Requirement		
10	Summary sheet : FormatF2		
11	Annual Reports / Audited Accounts / Bank References		
12	Registration No		
13	A copy of the receipt obtained from the SEA for the payment of application fee		

#### Reasons of Refusal of Application

- Any Conflict with Marked location with respect to SEA Maps or EnerGIS interface
- Over / Under estimation of Power Capacity
- Non availability of Concurrence of CEB to grid connect the proposed project when consulted under the provisions of Section 17 of the Act.
- If particular NRE resources is earmarked earlier or is to be developed by a state sector organisation
- Capacity greater than 10MW; which carries no written directive from the Ministry of Power and Energy specific to the project
- Project located in an Excluded Area: all natural reserves, such as Conservation Forests and Wild Life Sanctuaries and other sensitive areas.

#### Note

- Only the complete applications as required under the Section 16(2) of the Act of SLSEA and further prescribed in the On grid Renewable Energy projects Regulation 2011 will be entertained by SEA.
- The availability of a particular resources location can be checked by logging on to the EnerGIS database through (http://www.energy.gov.lk/sub\_pgs/geographic.html) or by perusing the maps provided at the front office of SEA
- Pre feasibility report should include all the items in the checklist- Format F1

#### **Certification by Applicant:**

I have read, verified and understood that this application is complete / incomplete in terms of the Section 16 of the Sri Lanka Sustainable Energy Authority act No.35 of 2007 and take responsibility for the acceptance of the application based on the facts contained therein / the rejection of the application by the Project Approving Committee on any one or more grounds mentioned above

Date:	Applicant name and signature:
Time:	Witnessed by SEA officer name & signature:



### **CERTIFICATION BY THE ACCREDITED CONSULTANT**

5		1
Address :		
Telephone :		Facsimile:
Email :		
certify that the pre-feasib	allity study for	
	and the contract of the contra	are in accordance with the guidelines provided by Sri Lank
ustainable Energy Author		, and a second s
25121112515 2110187 1011101		*
nave visited the site and v	verified the locations of the	e project as shown in the attached map (Map details: She
		0000) and understand that the SEA holds no responsibility
		er due to any unforeseen reason.
etails of the project are gi	iven below:	
retails of the project are gi	ven below.	
pplicant Details:		
Name:		
Name: Designation :		
Name: Designation : Company :		
Name: Designation : Company :		
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Name: Designation : Company :		
Name: Designation: Company: Address:		
Name: Designation: Company: Address:		
Name: Designation: Company: Address:  roject Details: SEA Ref:		
Applicant Details:  Name: Designation: Company: Address:  Project Details: SEA Ref: Type: Name:		
Name: Designation: Company: Address:  roject Details: SEA Ref: Type: Name:	kW - Initial	
Name: Designation: Company: Address:  Project Details: SEA Ref: Type:	kW - Initial	
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Name: Designation: Company: Address:  roject Details: SEA Ref: Type: Name:	kW - Initial	

Sequence in filing:

at .

1. Cover page

2. This certificate by the consultant - Annex- V

3. Summary of the Pre-feasibility study - Annex- IV

4. Pre-feasibility report (list of contents provided)

#### New Renewable Energy Development

The Government of Sri Lanka envisages developing New Renewable Energy (NRE) resources to reach a 10% target in power generation by 2015. Mahinda Chintana Idiri Dekma envisions further extending this goal to reach 20% by 2020.

Sri Lanka Sustainable Energy Authority (SEA) was established on 01 October 2007, enacting the Sri Lanka Sustainable Energy Authority Act No. 35 of 2007. With this landmark legislation, the absolute ownership of all renewable energy resources was vested in the Republic, treating it as any other natural resource. One of the main objectives of the SEA is to identify, assess and develop renewable energy resources with a view to enhance energy security, deriving economic and social benefits to the country. Development of NRE commenced with the commissioning of the first Small Hydro Power plant in 1996. By 2010, the NRE stake in the national gross generation increased to 6.8%.

Technology	Unit	1996	2000	2005	2007	2008	2009	2010
			In	stalled Capac	ity			
Major hydro	MW	1,137	1,137	1,207	1,207	1,207	1,207	1,207
Thermal	MW	309	685	1,115	1,115	1,455	1,475	1,660
NRE	MW	1	16	89	115	146	182	217
Total	MW	1,448	1,838	2,411	2,437	2,808	2,864	3,084
Hydro	%	78.6	61.9	50.1	49.5	43.0	42.2	39.2
Thermal	%	21.4	37.3	46.2	45.7	51.8	51.5	53.8
NRE '	%	0.1	0.9	3.7	4.7	5.2	6.4	7.0
			Gross Ge	eneration to	the Grid		13.0	
Major hydro	Gwh	3,063.7	2,812.8	3,222.5	3,602.9	3,700.5	3,355.6	4,988.5
Thermal	Gwh	1,124.1	3,512.4	5,339.3	5,894.8	5,848.8	6,062.5	5,063.3
NRE	Gwh	2.7	43.1	279.7	345.1	434.6	548.5	728.5
Total	Gwh	4,190.4	6,368.3	8,841.6	9,842.8	9,983.9	9,966.6	10,780.2
Hydro	%	73.1	44.2	36.4	36.6	37.1	33.7	46.3
Thermal	%	26.8	55.2	60.4	59.9	58.6	60.8	47.0
NRE	%	0.1	0.7	3.2	3.5	4.4	5.5	6.8



#### Sri Lanka Sustainable Energy Authority

Call us on:

+94-11-267-7445

E-mail us to: info@energy.gov.lk

Visit us at: www.energy.gov.lk

Drop in at: 3G 17, BMICH, Bauddhaloka Mawatha Colombo 00700, Sri Lanka