# RENEWABLE ENERGY

VOLUME III

RENEWABLE ENERGY TECHNOLOGIES

edited by Bent sørensen

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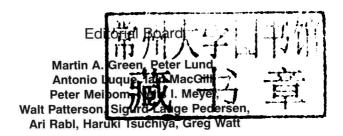
## Renewable Energy

#### Volume III

## Renewable Energy Technologies II

#### Edited by

#### Bent Sørensen





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# **Renewable Energy**

Volume III

### List of Abbreviations

Å angstrom (10<sup>-10</sup>m)
AC alternating current
AD anaerobic digestion

Btu British thermal unit (1055J)
BWEA British Wind Energy Association

CA constant amplitude

CEGB Central Electricity Generating Board
CETESB São Paulo State Environmental Agency

CFD computational fluid dynamics
CO<sub>2</sub>-eq carbon dioxide equivalent
COD chemical oxygen demand
CSM chopped strand mats
CSP concentrating solar power
CSTR continuously stirred tank reactor

DC direct current

DDWT direct-drive wind turbine

DEF Danske Elværkers Forening (Association of Danish Electricity

Works)

DFIG doubly fed induction generator

DHA docosahexaenoic acid DME dimethylether

DVES Dansk Vind Elektricitets-Selskab (Danish Wind Power Association)
EAWAG Swiss Federal Institute for Environmental Science and Technology

EMBRAPA Brazilian Agricultural Research Corporation

EMEC European Marine Energy Centre

EPA eicosapentaenoic acid FCV fuel cell vehicle FFA free fatty acid FFV flexible fuel vehicle FT Fischer-Tropsch

GEF Global Environment Facility
GGWT geared generator wind turbine

GHG greenhouse gas

GRP glass fibre-reinforced plastics HMF 5-hydroxymethyl-2-furfural HRT hydraulic retention time

ILO International Labour Organization

LEC levelized electricity cost MSW municipal solid waste

#### xxii Renewable Energy

mtoe million tons of oil equivalent

MTTF mean time to failure MTTR mean time to repair

NEDO New Energy and Industrial Technology Development Organization

(Japan)

O&M operation and maintenance

OFMSW organic fraction of municipal solid waste

OLR organic loading rate
OSP offshore solar pond

OTEC ocean thermal energy conversion

OWC oscillating water column
PALF pineapple leaf fibre
PHA polyhydroxy alkanoate

PLA polylactide

PM particulate matter PM permanent magnet

PUFA polyunsaturated fatty acid
R&D research and development
RANS Reynolds-averaged Navier–Stokes

RBD reliability block diagram rpm revolutions per minute

RTD research and technical development

SD standard deviation

SEAS Sydøstsjællands Elektricitets Aktieselskab

STE solar thermal electricity
TEP tidal electric power plant

TS total solids

UNICA Sugarcane Industry Association (Brazil)

VA variable amplitude
VFA volatile fatty acid
VS volatile solids

WAsP Wind Atlas Analysis and Application Program

WEC wind energy converter
WEG wind energy generator
WISPER WInd SPEctrum Reference

WT wind turbine

## **Contents**

	t of sigures, tables and boxes t of abbreviations	xxi
	lume III: Editorial Introduction nt Sørensen	1
	Part I Wind Energy	
1	Developments and Potential Improvements in Wind Power Utilization  J. T. Arnfred	15
2	Experience with Jacobs Wind-Driven Electric Generating Plant, 1931–1957  Marcellus L. Jacobs	25
3	Optimum Wind Energy Conversion Systems Ulrich Hütter	29
4	Design of Wind Power Plants in Denmark  J. Juul	50
5	Recent Developments and Potential Improvements in Wind Power Utilization for Use in Connection with Electrical Networks in Denmark J. Juul	67
6	Applied Aerodynamics of Wind Power Machines Robert E. Wilson and Peter B. S. Lissaman	71
7	On the Fluctuating Power Generation of Large Wind Energy Converters, With and Without Storage Facilities Bent Sørensen	121
8	Offshore Wind Energy Systems P. Musgrove	143

9	Tests Performed on the 2MW Tvind WEC S. A. Jensen and E. T. D. Bjerregaard	150
10	Foundations for Offshore Wind Turbines Byron W. Byrne and Guy T. Houlsby	161
11	Composite Materials for Wind Power Turbine Blades Povl Brøndsted, Hans Lilholt and Aage Lystrup	182
12	Reliability Comparison of Direct-Drive and Geared-Drive Wind Turbine Concepts H. Arabian-Hoseynabadi, P. J. Tavner and H. Oraee	217
13	A Lightweight Low-Speed Permanent Magnet Electrical Generator for Direct-Drive Wind Turbines Markus A. Mueller and Alasdair S. McDonald	236
14	Modelling and Measuring Flow and Wind Turbine Wakes in Large Wind Farms Offshore R. J. Barthelmie et al	251
	Part II Biofuels	
15	Part II Biofuels  The Path Forward for Biofuels and Biomaterials  Arthur J. Ragauskas et al	271
	The Path Forward for Biofuels and Biomaterials	271 284
16	The Path Forward for Biofuels and Biomaterials Arthur J. Ragauskas et al  Household Biogas Use in Rural China: A Study of Opportunities and Constraints	
16	The Path Forward for Biofuels and Biomaterials Arthur J. Ragauskas et al  Household Biogas Use in Rural China: A Study of Opportunities and Constraints Yu Chen, Gaihe Yang, Sandra Sweeney and Yongzhong Feng  Anaerobic Digestion of the Organic Fraction of Municipal Solid Waste: Influence of Co-digestion with Manure	284

20	Role of Energy Policy in Renewable Energy Accomplishment: The Case of Second-Generation Bioethanol Kok Tat Tan, Keat Teong Lee and Abdul Rahman Mohamed	346
21	Harnessing Biofuels: A Global Renaissance in Energy Production? Kenthorai Raman Jegannathan, Eng-Seng Chan and Pogaku Ravindra	359
22	Plants as a Direct Source of Fuel Melvin Calvin, Esther K. Nemethy, Keith Redenbaugh and John W. Otvos	370
23	Biodiesel Production by Microalgal Biotechnology GuanHua Huang, Feng Chen, Dong Wei, XueWu Zhang and Gu Chen	378
24	Sustainable Bio-composites from Renewable Resources: Opportunities and Challenges in the Green Materials World A. K. Mohanty, M. Misra and L. T. Drzal	396
25	Methanol or Ethanol Produced from Woody Biomass: Which is More Advantageous? Fumio Hasegawa, Shinya Yokoyama and Kenji Imou	410
	Part III Other Sources for Conversion	
26	Part III Other Sources for Conversion  Small-Scale Hydropower in the UK  T. Kirk	419
	Small-Scale Hydropower in the UK	419
27	Small-Scale Hydropower in the UK T. Kirk  Green Electricity from Alpine Hydropower Plants Bernhard Truffer, Jochen Markard, Christine Bratrich	
27	Small-Scale Hydropower in the UK T. Kirk  Green Electricity from Alpine Hydropower Plants Bernhard Truffer, Jochen Markard, Christine Bratrich and Bernhard Wehrli  Geothermal Energy Focus: Tapping the Earth's Natural Heat	431
27 28 29	Small-Scale Hydropower in the UK T. Kirk  Green Electricity from Alpine Hydropower Plants Bernhard Truffer, Jochen Markard, Christine Bratrich and Bernhard Wehrli  Geothermal Energy Focus: Tapping the Earth's Natural Heat John W. Lund  Tidal Energy Update 2009	431

32	Wave Energy Utilization in Europe: Current Status and Perspectives  Centre for Renewable Energy Sources	487
33	A New Hybrid Ocean Thermal Energy Conversion-Offshore Solar Pond (OTEC-OSP) Design: A Cost Optimization Approach Paul J. T. Straatman and Wilfried G. J. H. M. van Sark	501
Ina	lex	515

## List of Figures, Tables and Boxes

#### **Figures**

III.1	Start of article by P. la Cour on his hydrogen-producing windmill	2
III.2	Start of article by A. Betz on new windmill research	3
III.3	Various types of wave energy converters	9
1.1	Characteristics of the experimental windmill and wind-rose	18
1.2	Experimental windmill at Askov	22
2.1	A Jacobs wind-driven generator	27
3.1	Definition of the rotor-stream element RTR-SEL, the dilatation	
	angle $\Psi$ at $x = 0$ , the velocities $v_{FFL}$ and $v_{DNW}$ , and the rotor-disc	
	velocity coefficient $k_{DSC}$	32
3.2	Experimental data for horizontal- and vertical-axis $c_{P,RTR}$ , $\lambda_{\omega,RTR}$	
	characteristics	32
3.3	Comparison of blade-shape function $\theta_{(1,r)}$ , plotted against $\lambda_{(\omega,r)}$	
	with operation limited by transverse buckling under own	
	weight and by Mach number	34
3.4	Stall at $\lambda_{\omega,RTR} < \lambda_{\omega,RTR}$ at $c_{PRTR,OPT}$ and vortex state at $\lambda_{\omega,RTR} > \lambda_{\omega,RTR}$	
	at $c_{pRTROPT}$ cause limitation	35
3.5	The 'blade-shape function' $\theta_{(1,r)}$ plotted against abscissa $\Phi_{DSC}$ = arc	
	cotan $\lambda_{DSC(t)}$ with $\zeta_{(t)}$ and $\lambda_{(\omega,t)}$ as parameters	36
3.6	$k_{DSC}$ , the rotor disc-velocity coefficient as a function of $\zeta_{RTR}$	
	(mean value), calculated data	38
3.7	Tip vortices: maximum tangential velocity decay and vortex	
	roll-up pattern downwind of a three-blade $\lambda_{\omega,RTR}$ = 3.6 at	
	$c_{pop_T}$ rotor model	39
3.8	The radially, axially trailing vortices generated at the rotor-blade	
	tips by a vortex-state vortex and forming a discontinuity layer between	
	free flow at velocity $\approx v_{FFL}$ and the flow with velocity $v_{DNW}$ in the	
	wake of the rotor. Definition of the turning point at r <sub>TPT</sub>	41
3.9	Schematic presentation of $c_{P,RTR}$ plotted against $\zeta_{RTR}$ for	
	$-1.3 < \zeta_{RTR} < +1.3$ at a given $\lambda_{\omega,RTR}$	42
3.10	Plot of several diagrams of general pitch $\Delta eta$ versus $\lambda_{\omega, RTR}$	
	from experimental data	42
3.11	Calculation of a rotor's torque coefficients $c_{T,RTR}$ near zero	
	$\lambda_{\omega,RTR}$ is quite reliable, for $c_{L,AFL}$ is sufficiently accurately	24.75
	$\lambda_{\omega,RTR}$ is quite reliable, for $c_{L,AFL}$ is sufficiently accurately defined at $\alpha_{AFL}$ close to 90°	43

#### x Renewable Energy

3.12	Comparison of losses if refinement parameters are not at	
	optimum values	44
3.13	Influence of Reynolds number on optimum lift-to-drag ratio	
	of several aerofoils	45
3.14	Loss due to non-optimum blade shape in per cent of $c_{P,RTR,OPT}$	45
3.15	$c_{D,RTR}$ against $\lambda_{o,RTR}$ for a low speed, $\lambda_{o,RTR,OPT} = 3.6$ and a	
	higher speed, $\lambda_{\omega,RTR,OPT} \approx 10$	46
3.16	Optimizing specific rated power: relative price of available	
	energy as a function of long-term average wind velocity	
	and specific rated power $\Pi_{OPT}$	47
3.17	Improvement of energy quality from WECs by feeding	
	energy supply from several units sufficiently far apart	
	from each other into the same power line	47
4.1	Map of western Europe with wind speeds and wind energies	51
4.2	Pilot mill near Vester Egesborg	53
4.3	Bogø mill	54
4.4	Gedser mill	54
4.5	Diagram of Gedser mill	55
4.6	Blade profile and efficiency curve	56
4.7	Curve 1, annual mean wind speed 5.95m/s, measured near	
	Vester Egesborg mill; curve 2, calculated annual output:	
	540kWh/m <sup>2</sup> of swept area	57
4.8	Curve 1, power coefficient curve; curve 2, effect curve	
	of Gedser mill; curve 3, wind energy calculated by the	
	formula $D^2 \times V^3 \times 0.000285$ , for $D = 24$ m	58
4.9	Design of blades used at Gedser mill	59
4.10	Axial pressure at Gedser mill, kg/m <sup>2</sup> per m <sup>2</sup> of swept surface	60
4.11	Design of machine room	62
4.12	Schematic diagram of mechanical operation and electrical circuit	64
6.1	Savonius rotor	72
6.2	Magnus effect	73
6.3	Darrieus rotor	74
6.4	Enfield-Andreau ducted rotor	74
6.5	Smith-Putnam wind turbine	75
6.6	Typical performance of wind power machines	77
6.7	Translating drag device	77
6.8	One-dimensional flow past a wind turbine	78
6.9	Stream-tube geometry	80
6.10	Effect of tip speed ratio on the induced velocities for flow	
	with an irrotational wake	82
6.11	Maximum power coefficient vs. tip speed ratio for a rotor	
	with a Rankine vortex wake	83
6.12	Propeller brake state	84
6.13	Rotor operation modes	85
6.14	Blade forces for various modes	86
6.15	Blade element coordinates	86

6.16	Blade element states for various blade pitch angles	87
6.17	Ducted windmill geometry	90
6.18	Actuator disc	92
6.19	Vortex lattice system for a multi-bladed rotor	93
6.20	Idealization of vortex system of a two-bladed rotor	94
6.21	Rotor blade element	95
6.22	Velocity diagram for a rotor blade element	95
6.23	Working states of a rotor	97
6.24	Calculated performance of the Smith-Putnam wind turbine	100
6.25	Power output versus wind speed for the Smith-Putnam	
	wind turbine, $\theta_p = 0^{\circ}$	100
6.26	Velocity diagram	101
6.27	Vortex shedding of cross-wind-axis actuator	106
6.28	Vortex system of single-bladed cross-wind-axis actuator	107
6.29	Flow system for a cross-wind-axis turbine	108
6.30	Troposkien, circle and caternary of equal length	111
6.31	Rotor in a wind gradient	113
6.32	Blade velocity diagram	113
6.33	Percentage reduction in power output due to wind gradient	118
7.1	Power coefficient and corresponding power output for four	
	typical WEG designs	122
7.2	Frequency distributions of power in wind and of WEG (a),	
	as well as of wind speed, for Gedser and Risø	123
7.3	Dependence of power output on height, based on 10 years	
	of Risø data, assuming WEG (a) efficiency	124
7.4	Monthly average efficiency of WEG (a) at 56m, based on	
	10 years of Risø data	124
7.5	Hourly output from WEG (a) without storage, and with	
	24-hour storage operated at baseload or relative to actual load,	
	based on Risø 56m data for the period 15-25 January 1961	125
7.6	Yearly mean fluctuation about average output for WEG	
	(a) sited at Risø and mean fluctuation about actual load	126
7.7	Number of charge/discharge cycles as a function of storage	
	capacity, for baseload or actual load-following operation,	
	based on WEG (a), sited at Risø	127
7.8	Power durations curves for WEG (a) system with or without	
	storage, sited at Risø	128
7.9	Relative variation of monthly electricity demand in Denmark,	
	and of power output from WEG (a), sited at Risø	129
7.10	Relative distribution of Danish electricity demand on hours of	
	the day and of power output from WEG (a), sited at Risø	130
7.11	Power minus load duration curves for WEG (a) system with	
	and without storage, sited at Risø	131
7.12	1974 power duration curve for the Vermont Yankee nuclear	
	power plant (boiling water reactor), with and without a	
	hypothetical storage	132

#### xii Renewable Energy

7.13	Distribution of yearly capacity factors, based on 24 US light	100
	water reactors in 1973	132
7.14	Distribution of yearly power output for WEG (a), sited at	
	Risø, over a 10-year period	133
7.15	Individual power duration curves for three selected US reactors,	/
	and their combined power duration curve	134
7.16	Power duration curve for a system of WEGs with rated power	~ ~ ~
	300W/m <sup>2</sup> , placed at one or several German sites	134
7.17	Power duration curves for WEG (a) system with 10-hour	
	storage (1.36kWh/m²), as a function of the energy recovery	
	efficiency of the storage facility	135
7.18	Power duration curve for WEG (a) without storage,	
	at Gedser, Denmark	136
7.19	Power duration curve for WEG (a) system with short- and	
	long-term storage	137
7.20	Nuclear plant capital cost (excluding initial fuel) in fixed prices,	
	for US reactors completed before 1975, and their cost as estimated	
	by the ordering utility company at the time of contract signing	139
7.21	Schematic visualization of a wind energy/hydrogen conversion	
	system integrated into a decentralized energy supply system,	31.70
	with contributions to electricity as well as heating and fuel uses	140
8.1	Shallow waters off the Wash	144
8.2	Schematic diagram of 2.5MW-rated windmill having 70m diameter	145
8.3	Wind velocity duration distribution	145
8.4	Artist's impression of the Kaman megawatt windmill	146
9.1	Main dimensions of the Tvind-WEC	151
9.2	Survey of sensors	152
9.3	Measuring points on the rotor blades	153
9.4	Diagram of the data transmission system	154
9.5	Rotor shaft torque at different positions with fixed rotor	155
9.6	Time history of wind speed at hub height, rotor position signal,	
	strain from sensor no. 1E043 and rotor shaft torque	156
9.7	Time history of rotor position signal and rotor shaft torque,	
	'time window A', and definition of peak-to-peak value of rotor	
	shaft torque during one cycle of revolution	157
9.8	Time history of rotor position signal and rotor shaft torque,	
	'time window B'	157
9.9	RMS spectrum of rotor shaft torque averaged during a period	
	of 5 minutes	158
9.10	Amplitudes of rotor shaft torque at different blade frequencies	158
9.11	RMS spectrum of strain measured on blade 1	159
9.12	Power curve for tip pitch angle of 5.2° with wind speed	-
	measured at hub height	159
9.13	Efficiency of rotor	160
10.1	Wind turbines at Blyth, Northumberland, UK	162
10.2	Proposed UK offshore wind-farm sites	163

10.3	An offshore wind turbine and a jack-up rig drawn to the same	
10.0	scale showing typical loads	166
10.4	Proposed structures for offshore wind-turbine applications:	
	(a) piled foundations; (b) suction caisson multi-foundation	
	structure; and (c) suction caisson monopod	166
10.5	Suction installation mechanism	167
10.6	Design of a quadruped structure	169
10.7	Design of a monopod foundation	170
10.8	A yield surface for flat footings on sand	172
10.9	Three-degrees-of-freedom loading at the University of Oxford	174
10.10	Six-degrees-of-freedom loading on a disc of diameter D	174
10.11	Constant-vertical-load cyclic-moment tests: (a) laboratory result	
10.11	and (b) theoretical result using a single-surface-plasticity model	175
10.12	Pseudo-random vertical cyclic-load tests: (a) time history;	
10,12	(b) load-displacement response	177
10.13	Monotonic tests passing through the extreme points of cyclic tests	178
10.14	'Continuous hyperplasticity' simulation of the result shown in	
	Figure 10.11	178
11.1	The world's largest wind turbine at Risoe National Laboratory	
	test site, Høvsøre, Denmark	184
11.2	Cross-section principle of a rotor blade giving the nomenclature	
	of the different blade construction elements	185
11.3	Development in rotor blade weight versus length	186
11.4	Diagram showing stiffness versus density for all materials	187
11.5	Principle and photo of a Hütter flange, illustrating how the	
	fibre rovings are wound around steel bushes to form the flange	193
11.6	The Tvind blades were built in a one-sided mould; sandwich	
	spars and webs form the upper contour of the blade	194
11.7	Principle of the Nibe blades	195
11.8	Tape winding of a spar for the Nibe wind turbines	195
11.9	Set-up for resin infusion test of a root-end section of a large	
	rotor blade at LM Glasfiber, Lunderskov, Denmark	197
11.10	Tensile test set-up with measurement of longitudinal and	
	transverse strains by video extensometry	200
11.11	Microbuckling initiated in compression between two porosities	201
11.12		202
	Wöhler diagram showing 50 per cent regression lines based on	
	data from the OPTMAT database	205
11.14	Haigh diagram based on the fitted data in Figure 11.13	206
	Combining Figure 11.13 and Figure 11.14 gives a	
	three-dimensional illustration of the relationship	
	between Haigh diagrams and Wöhler diagrams	206
11.16	Thermoplastic composite rotor blade sections manufactured	
	in a one-shot vacuum consolidation technique using the	
	aluminium mould shown in the middle	210
12.1	W/T main sub-assemblies	221

#### xiv Renewable Energy

12.2	Generator simple Markov model	222
12.3	Reduced generator Markov model	223
12.4	Geared generator concept WT (existing system) RBD	224
12.5	Modified geared generator concept WT reliability diagram	225
12.6	Simplified reliability diagram of modified geared generator WT	225
12.7	State-space diagram of modified geared generator WT	226
12.8	Reduced state-space diagram of modified geared generator WT	227
12.9	Modified direct-drive WT reliability diagram	227
12.10	Reduced state-space diagram for modified direct-drive WT	228
12.11	GGWT modified system (converter failure)	229
12.12	Modified RBD for WT with a DFIG	229
12.13	State-space diagram for modified DFIG system	230
12.14	Reduced state-space diagram for modified DFIG system	230
12.15	Reduced state-space diagram for modified WT with a DFIG	231
13.1	Section of a conventional permanent magnet generator showing	
	(a) shear stress and (b) normal component of Maxwell stress	237
13.2	Shear and normal stress for air-gap flux densities 0.1-0.9T	237
13.3	Electromagnetic development of 'C' core generator	238
13.4	Cross-section of double-sided axial-flux machine	240
13.5	Steel 'C' core module with magnets	240
13.6	(a) Conventional permanent magnet radial-flux generator;	
	(b) 'C' core machine	242
13.7	Lowering the 'C' core stator to meet the rotor is simpler and	
	safer than for a conventional PM machine	243
13.8	The 20kW, 100rpm prototype generator on a test rig at the	
	University of Edinburgh	244
13.9	No-load voltage at 100rpm	244
13.10	Efficiency results for prototype generator at 50, 60, 70, 80, 90	
	and 100rpm at part and full loads	245
13.11	Generator mass and air-gap radius based on the 'C' core concept	
	for a range of wind turbine power ratings	247
14.1	(a) Location of the Horns Rev wind farm and (b) layout of	
	the wind farm	259
14.2	Normalized power at each turbine in a central row (west to east)	
	at Horns Rev from observations	260
14.3	Normalized power at the fifth turbine in the first and second	
	rows of the wind farm centred on 270° for wind speeds of	
	$8.0 \pm 0.5 \text{m s}^{-1}$	260
14.4	Comparison of models and measurements for Horns Rev	
	(direction 270°, Case 1 in Figure 14.1)	262
14.5	Comparison of models and measurements for Horns Rev	
	(direction 221°, Case 2 in Figure 14.1)	263
14.6	Comparison of models and measurements for Horns Rev	
	(direction 312°, Case 3 in Figure 14.1)	264
15.1	The fully integrated agro-biofuel-biomaterial-biopower	
	cycle for sustainable technologies	273

15.2	Overview of plant traits that can be targeted by accelerated	
	domestication for enhanced plant biomass production	
	and processing	274
15.3	Key global biomass resources from agricultural residues, wood	
	and herbaceous energy crops	276
15.4	Dehydration-decarboxylation chemistry of hexoses	279
16.1	Number of biogas plants installed in China	286
17.1	Reactor set-up for co-digestion and treatment of 100 per cent	
	OFMSW with recirculation of process water	296
17.2	Methane yield of OFMSW and manure in different mixtures	
	in batch experiment after 44 days of incubation	298
17.3	Biogas yield, VS reduction, VFA concentration and pH in	
	reactor R1 and R2	301
17.4	Ratio of supernatant to total liquid volume used for dilution	
	of influent OFMSW of R1 and ammonia concentration in the	
	effluent of R1 and R2	303
18.1	Resource and energy efficiency for production of biofuels from	
	selected energy crops	310
18.2	Production of biofuels and by-products from wheat, rape seed	
	and willow (short-rotation energy forest), expressed as GJ	
	per hectare and year	312
18.3	Average life-cycle emissions of greenhouse gases from fossil	
	fuels for vehicles and biofuels based on current production	
	conditions in Sweden	313
19.1	Energy balance of ethanol production from different feedstocks	323
19.2	Sugarcane harvest burning phase-out	327
19.3	Average agrochemical consumption in different crops	330
19.4	Location of new mills as expected in the expansion plan	
	(December 2005)	332
19.5	Percentage of sugarcane in Brazilian municipalities	332
19.6	Main crops in São Paulo State	333
19.7	Employment numbers from Proalcool, the Brazilian	
	Ethanol Program: jobs per unit of energy produced	
	and investment for job creation	339
20.1	First- and second-generation bioethanol processing steps	348
20.2	Biomass sources suitable to be used as feedstock for	
	second-generation bioethanol	349
21.1	Contribution of bioethanol from various countries	360
21.2	Global Production of bioethanol and biodiesel	361
21.3	Schematic diagram of heterogeneous enzymatic biodiesel process	367
22.1	Euphorbia regis jubae, Euphorbia balsamifera and Euphorbia	
	canariensis from Tenerife, Canary Islands	371
22.2	Euphorbia lathyris: a potential 'energy farm' candidate	372
22.3	Scheme for extraction of separated fractions from	5 Sept.
	Euphorbia lathyris	373
23.1	Reaction process of the FFA biological synthesis system	382