



Bioenergy Australia is an alliance of organisations
fostering biomass for energy and products

Newsletter

May 2003

Bioenergy Australia Membership¹ Update

The Bioenergy Australia membership now includes 49 organisations, with a recent new member being the Oil Mallee Company Ltd. Bioenergy Australia wishes to further expand its membership and invites interested organisations to contact the Bioenergy Australia Manager, Dr Stephen Schuck on Ph/Fax 02 9416 9246 or email: sschuck@bigpond.net.au if your organisation is interested in joining this bioenergy forum. Bioenergy Australia has specifically set up a new membership tier to cater for universities and for organisations with an annual turnover of less than \$2 million per annum.

Bioenergy Australia 2003 Conference

The Bioenergy Australia 2003 Conference will be held **8-9 December 2003**, with a technical tour on **10 December**. The Conference venue is the Novotel Brighton Beach, Sydney. Expressions of interest are sought from potential sponsors, paper and poster presenters, and trade exhibitors. It is anticipated that this conference will have a number of international presenters and keynote speakers integrated into the program. Please contact Stephen Schuck, Bioenergy Australia Manager, Ph/Fax: 02 9416 9246, Email: sschuck@bigpond.net.au to express your interest.

IEA Bioenergy Participation by Australia

Bioenergy Australia is the vehicle for Australia's participation in the International Energy Agency's (IEA) Bioenergy program. Bioenergy Australia is providing Australia's annual membership fees and other support for five current Tasks:

- Task 30-*Short Rotation Crops for Bioenergy Systems*
- Task 31-*Conventional Forestry Systems for Sustainable Production of Bioenergy*
- Task 32-*Biomass Combustion & Co-firing*
- Task 36-*Energy from Integrated Solid Waste Management Systems*
- Task 38-*Greenhouse Gas Balances of Biomass & Bioenergy Systems*

¹ Founding members: RIRDC and the Australian Greenhouse Office. Membership now also includes DITR, BRS, CSIRO Energy Technology & Forestry and Forest Products, FPA of NSW/Clean Green Energy Company, Pacific Power, Delta Electricity, Macquarie Generation, Waste Service NSW, Brightstar Environmental & BEST, SEDTA, SPM/CPM, Forestry Tasmania, State Forests of NSW, Western Power Corporation, Alstom Power, Stanwell Corporation, CS Energy, Victorian Dept of Sustainability and Environment, AFFA, Tarong Energy, Country Energy, Rio Tinto R&TD, QFRI, Babcock and Brown, CVC REEF, ForestrySA, CALM, CSIRO Sustainable Ecosystems, Carter Holt Harvey, Novera Energy, Sugar Research Institute, Enecon Pty Ltd, BioEnergy Australia Ltd, Forest Products Commission of WA, Victorian Sustainable Energy Authority, WMAA, Ergon Energy, AGL, Resource NSW, MBAC Consulting Pty Ltd, Environment Australia, MLA Feedlot R&D Program, University of Newcastle and Oil Mallee Company Ltd.

These specific Tasks run from 2001-2003. Subgroups from the Bioenergy Australia membership have formed to participate in these Tasks, with each Task selecting a National Team Leader to co-ordinate involvement. National Team Leaders are: Task 30- Don McGuire, Forestry SA, Task 31- John Raison, CSIRO Forestry and Forest Products; Task 32- Peter Coombes, Delta Electricity; Task 36- Wesley Stein, CSIRO Energy Technology; and Task 38- Annette Cowie, State Forests NSW.

Bioenergy Australia is currently surveying its membership regarding task preferences for 2004-2006. Should you or your organisation wish to obtain information on IEA Bioenergy or on participation in IEA Bioenergy Tasks, please contact Steve Schuck, the Bioenergy Australia Manager and Australia's representative on the Executive Committee of IEA Bioenergy. Ph/Fax: 02 9416 9246, or email: sschuck@bigpond.net.au. IEA Bioenergy Task information and its recently updated Strategic Plan are available from web site: <http://www.ieabioenergy.com>. With sufficient additional support, Australia could possibly also participate in additional Tasks, such as the Liquid Biofuels, Thermal Gasification of Biomass, Socio-Economic Drivers in Implementing Bioenergy Community Projects and/or Pyrolysis of Biomass Tasks.

Bioenergy Australia Hosts IEA Bioenergy Executive Committee Meeting

Australia hosted the most recent IEA Bioenergy Executive Committee Meeting in Sydney on 29 April-1 May 2003 at the Intercontinental Hotel, Sydney. The Executive Committee oversees the operation of IEA Bioenergy. At the meeting, progress with current Tasks was reported and Tasks for the 2004-2006 triennium were endorsed. IEA Bioenergy is finalising a position paper 'Municipal Solid Waste and its Role in Sustainability' and a paper with the working title of 'Benefits of Bioenergy'. The MRET Panel were also provided with the opportunity of meeting with the overseas participants at the meeting to discuss bioenergy in IEA Bioenergy member countries. The meeting participants also visited four bioenergy facilities near Sydney, including the SWERF™ plant at Wollongong and the Camellia anaerobic digester (see item below).

IEA Bioenergy Meetings

Task 36 – *Energy from Integrated Solid Waste Management Systems* – held its most recent meeting in Sweden, 7-9 April 2003.

Task 30 – *Short Rotation crops for Bioenergy Systems* – is planning to hold its annual meeting in New Zealand and Australia in late November 2003, linking up with the Bioenergy Australia Conference, 8-9 December 2003.

Task 31 – *Conventional Forestry Systems for Sustainable Production of Bioenergy* – will be meeting in Flagstaff, Arizona, USA, 5-10 October 2003.

There will also be a combined Task 32, 33 and 36 meeting in Yokohama, Japan from 27-31 October 2003.

ExCo 52 is to be held in Campinas, Brazil on 29-30 October 2003.

Task 38 – *Greenhouse Gas Balances of Biomass & Bioenergy Systems* – meeting 25 September - 1 October, Sweden (with BIOMITRE workshop)

New Excise Arrangements for Biofuels

The Government has announced long-term reforms to the excise treatment of fuels, including biofuels. Fuels that will become excisable from 1 July 2008 will include liquefied petroleum gas (LPG), liquefied natural gas (LNG) and compressed natural gas (CNG) as well. The final excise rates to apply to fuels will be determined later this year, and will take into account factors such as the energy content of fuels. The new arrangements for ethanol include: continuing the effective zero excise rate for domestically produced ethanol under the existing excise and subsidy arrangements until 30 June 2008; adjusting the net effective excise rate for ethanol in a series of five even annual steps, commencing on 1 July 2008 and ending on 1 July 2012, and extending these arrangements to imported ethanol; and setting a new excise rate that will apply to ethanol from 1 July 2012.

The new biodiesel arrangements include: the Government applying excise on biodiesel - whether pure or blended - at the same rate as diesel from 18 September 2003; providing domestic biodiesel producers and importers with a subsidy of 38.143 cents/ litre until 30 June 2008, with a net effective excise rate for biodiesel of zero over this period; adjusting the net effective excise rate for biodiesel in a series of five even annual steps, commencing on 1 July 2008 and ending on 1 July 2012; setting a fuel standard for biodiesel, after which biodiesel will be listed as an eligible alternative fuel for on-road grants under the Energy Grants Credit Scheme; and setting a new excise rate that will apply to biodiesel from 1 July 2012.

Ethanol Limits Enforced

The Federal Government has set a **10 percent blend limit** for ethanol in petrol, and has moved to enforce mandatory labelling of blended fuel. Testing has proven that 10 percent ethanol in fuel does not damage engines, and international figures show that the composition allows for a 25-30 percent reduction in carbon monoxide emissions by promoting a more complete combustion of the fuel, and up to 10 percent reduction in net CO₂ emissions. The **labelling will be enforced** by amendments to the Fuel Quality Standards Act 2000. Federal Government reports on the effects of blended fuels on engines are available at <http://www.ea.gov.au/atmosphere/transport/fuel/ethanol-report.html>

MRET Review Underway

The Mandatory Renewable Energy Target Review is currently taking place. Submissions, including the submission from Bioenergy Australia may be viewed online at: <http://mretreview.gov.au/submissions>. The outcome of the review process is expected later this year, after the Government considers its findings in formulating a National Energy Policy and the development of Australia's forward strategy on climate change. The *Renewable Energy (Electricity) Act 2000* established the MRET, which requires Australian electricity retailers and other large buyers of electricity to collectively source an additional 9,500GWh of electricity per year from renewable sources by 2010. Bioenergy Australia were granted an interview with the MRET Panel on 28 May 2003.

Funding from the Renewable Energy Commercialisation Program REID 7

The Australian government will provide \$1 million in funding for nine renewable energy projects under a \$6 million national program to develop the renewable energy industry. The Funds are being allocated from Round 7 of the Renewable Energy Industry Development (REID) subprogram of the Renewable Energy Commercialisation program, administered by the Australian Greenhouse Office. **Two bioenergy projects have been approved for funding** under REID 7:

- **National Association of Forest Industries** (\$150,000) to review the global use of wood waste as a source of renewable energy, identify the capacity of the Australian forest and timber industry to participate in the renewable energy industry and develop information and educational packages to raise awareness and address concerns of consumers, manufacturers, and the finance sector.
- **Australian Pork** (\$150,000) to investigate the technical and economic feasibility of converting pig wastes to electricity. The study results will be promoted to their association members, electricity utilities and the financial sector.

Some other projects receiving funding are:

- Australian & New Zealand Solar Energy Society (\$86,300) to develop a marketing strategy for coordinating information tours of renewable energy facilities.
- Global Sustainable Energy Solutions (\$99,700) to showcase renewable energy products and services to international markets, with a focus on meeting the needs of small- to medium-sized renewables firms.

Greenhouse Gas Abatement Program Round 3 Opens

The Minister for Environment and Heritage, Dr David Kemp and the Minister for Industry, Tourism and Resources, Mr Ian Macfarlane have announced the opening of Round 3 of the Greenhouse Gas Abatement Program (GGAP).

Intending applicants need to:

- Provide contact details to the GGAP Team by either filling in the contact details form on the AGO website at <http://www.greenhouse.gov.au/ggap/index.html> or by calling the GGAP Team on 02 6274 1864. The AGO will then provide a registration form.
- Complete the registration and return it to the AGO by 5 pm EST 26 June 2003. Registrants will be contacted by GGAP after they receive their registration forms. Applicants must submit a registration form to be eligible to apply.
- Submit completed applications by 5pm EST 21 August 2003. The Application Form will be forwarded only to those who are registered for Round 3. Unregistered applications will not be accepted.

[file:///outbind/%2F%2F7-00000000DA31B2DB2ABCBF11BDA7C633D662E1E864FB3900%2F - top](file:///outbind/%2F%2F7-00000000DA31B2DB2ABCBF11BDA7C633D662E1E864FB3900%2F-top)**Broadwater Bagasse Cogeneration Project Approved**

The 30MW cogeneration plant at Broadwater sugar mill was approved by Richmond Valley Council in December, after over 12 months of additional environmental and social impact assessments. The Rivertown Times reported that the revised development application was approved with 103 conditions to safeguard health concerns over bagasse mould, noise and environmental pollution. The approval has been followed by a Land and Environment Court appeal, lodged by the Broadwater Action Group and neighbouring Lismore Council. The developers, Sunshine Energy (a consortium of Delta Electricity and NSW Sugar) are still awaiting the outcome of the appeal.

SEDA Jobs Study

A report examining the potential economic contribution of sustainable energy is now available. Prepared by the Allen Consulting Group for the NSW Sustainable Energy Development Authority (SEDA), the report models the potential economic impact of sustainable energy options. Contrary to assertions by some commentators that reducing greenhouse emissions necessarily leads to economic loss, the report concludes that sustainable energy has strong potential to deliver economic as well as environmental benefits. With a broad-based package of measures in place, the report concludes that economic activity in NSW could increase by more than \$500 million annually, with up to 4,000 new jobs created (around one quarter of these in the sustainable energy industry and the remainder in the broader economy). These benefits depend critically on adopting a multi-pronged approach - rather than individual measures in isolation - so that the savings from improved energy efficiency can offset the added cost of increasing the share of renewable energy. The Sustainable Energy Jobs Report also examines global trends and uses case studies to highlight the importance of government support for the sustainable energy industry and key sustainable energy technologies. To view the full study, see: http://www.seda.nsw.gov.au/pdf/PDF_GH_DIS_PAGE6_182.pdf

New Regulations for Wood Fuelled Power Plants in NSW

A new Regulation to the *Protection of the Environment Operations Act* came into force for the burning of native forest biomass for electricity generation. The regulation concerns plants with a capacity of more than 200 kW. The Regulation prohibits the burning of native forest biomass in an electricity generating plant. Native forest biomass is defined as the biomaterial contained in Australian native trees. The Regulation also requires that all plants of more than 200 kW capacity which burn forest biomass keep records regarding generation and fuels used and submit annual reports to the NSW EPA. See Chapter 3B of the Regulation at: [http://www.legislation.nsw.gov.au/summarize/inforce/s/1/?SRTITLE="Protection%20of%20the%20Environment%20Operations%20\(General\)%20Regulation%201998"&nohits=y](http://www.legislation.nsw.gov.au/summarize/inforce/s/1/?SRTITLE=)

EarthPower Technologies Anaerobic Digester Opens

EarthPower Technologies, a subsidiary of Environmental Infrastructure Limited, has opened Australia's first food waste-to-energy plant at Camellia near Parramatta. The plant cost is reported to be \$36 million. The plant's anaerobic process uses waste food as a feedstock, and produces a high quality fertiliser by-product in addition to electricity. The plant is expected to process up to 80,000 tonnes p.a. of recycled food generated from the commercial and industrial food industry. Electricity from the plant's 3.5 MW capacity and Renewable Energy Certificates have been pre-sold to Bioenergy Australia member Country Energy, under a three-year, multi-million dollar agreement. EarthPower Technologies/Environmental Infrastructure Limited is currently evaluating other similar projects, as well as other renewable energy assets.

Australian-French Partnership to Work on Rural Biomass Waste

The University of Sydney has received a grant from the Federal Government Innovation Access Program for a project entitled "Value-Added Materials from Australian and French Agricultural Waste". The French partner (Laboratoire de Chimie Agro-Industrielle) leads the world in developing technology for extracting high value-added products, such as gums, surface coatings and water-reversible adhesive films, from agricultural by-products. Leading edge technology was recently developed collaboratively by the French and Australian partners, dramatically reducing the amount of ethanol using selective flocculation. The project is expected to increase Australian rural industry income.

For more information, see: https://sciencegrants.dest.gov.au/IAP/ASP/Outcomes_CG2002R2.asp

NSW Greenhouse Gas 'Benchmarks' Legislation Commences

New 'Benchmarks' legislation for mitigating greenhouse gas emissions has commenced in NSW. *The Electricity Supply Amendment (Greenhouse Gas Emission Reduction) Act 2002* has introduced mandatory greenhouse gas reduction targets for electricity retailers and large energy users operating in NSW. As of 1 January 2003, liable parties are required to reduce greenhouse gas emissions to 5 percent below 1989/1990 per capita emission levels by 2007 – or pay a penalty of \$10.50 for each tonne of carbon dioxide by which they exceed their benchmark. For more information, see: <http://www.greenhousegas.nsw.gov.au/>

Biofacts

- The US Department of Energy's National Biomass Coordination Office is updating the *Biobased Fuels, Power, and Products State Profiles* for 2002. Nationwide, an estimated 182,000 people are employed in biomass-related industries, with estimated sales of over US\$23 billion. There are more than 1,100 plants producing power from biomass sources with a total generation capacity over 10,000 MW. There are over 346 facilities producing and distributing ethanol and biodiesel in the US with the ability to produce over 10,206 million litres a year of the renewable fuels.
- Currently, 238 million litres of ethanol is produced annually in Canada, with another 100 million litres imported from the US. Australian production is approximately 60 ML/a.
- The table below provides indicative heating values for several liquid fossil and biomass derived fuels:

Liquid Fuels	Net Heating Values	
	(MJ/kg)	MJ/litre
Fossil Fuels		
Crude oil	41.9	36.7
LPG	45.6	24.6
Propane	45.7	23.3
Butane	45.3	26.3
Gasoline	43.9	32.6
Kerosene	43.2	35.0
Aviation fuel	43.1	35.4
Heating oil	43.0	35.7
Automobile diesel	42.8	36.0
Liquefied natural gas	52.8	22.2
Biomass derived liquids		
Ethanol	27.6	21.9
Methanol	20.9	16.8

Biomass on the Internet

The Internet provides a valuable source of information on biomass and allied topics. Below are some Internet addresses to supplement the 1,000 odd addresses given in the previous seventeen issues of the Bioenergy Australia newsletters. These lists are consolidated as electronic links on Bioenergy Australia's web page at www.users.bigpond.net.au/bioenergyaustralia which includes an internal search feature.

MRET review

<http://www.mretreview.gov.au>

Coalition seeking to increase MRET target to 10 percent

<http://www.10x10.com.au>

Ethanol fuel reports – Australian govt reports

<http://www.ea.gov.au/atmosphere/transport/fuel/ethanol-report.html>

Benign Energy : The Environmental Implications of Renewables report

<http://www.iea.org/pubs/studies/files/benign/index.htm>

US Biomass Roadmap (energy and biobased products)

<http://newuses.org/pdf/FinalBiomassRoadmap.pdf>

Biobased Manufacturers Association

<http://biobased.com>

Murdoch University notes on bioenergy (mainly energy conversion)

<http://www.science.murdoch.edu.au/teach/n210/lects/fuel/biomas2.pdf>

The UK White Paper 'Our energy future – creating a low carbon economy'

<http://www.dti.gov.uk/energy/whitepaper/ourenergyfuture.pdf>
UK DTI home page
<http://www.dti.gov.uk/renewable/renew.htm>
IEA publications (including renewables and energy policies)
<http://www.iea.org/public/index.htm>
‘Thermochemical Conversion Of Swine Manure: Temperature And Pressure Responses’ paper
<http://www.age.uiuc.edu/bee/research/tcc/tccpaper1.htm>
BIOENERGY 2003 - International Nordic Bioenergy Conference
<http://www.finbioenergy.fi/bioenergy2003/>
Anaerobic digesters – Practically Green
<http://www.practicallygreen.com>
Why Waste-To-Energy Should Be In Any Country's Renewables Portfolio Standard article
http://www.energypulse.net/centers/article/article_display.cfm?a_id=272
Australian Greenhouse Office book of RECP Funded projects
<http://www.greenhouse.gov.au/renewable/recp/index.html>
Sydney Morning Herald article ‘Cane and chips a recipe for energy disaster: Greens’
<http://www.smh.com.au/articles/2003/04/22/1050777258119.html>
Energy Information Administration – renewable energy potential map of SE USA
http://www.eia.doe.gov/emeu/rep/rpmap/rp_so-atl.html
Foster Wheeler (gasification technology – Lahti)
<http://www.fwc.com/power/products/>
Growing Energy on the Farm: Biomass Energy and Agriculture – article
http://www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=129
Bioenergy Information Network (USA)
<http://bioenergy.ornl.gov/index.html>
Clean Energy – Jobs for America’s Future report
http://www.worldwildlife.org/climate/clean_energy_jobs.pdf
Kuenzel boiler design
<http://www.kuenzel.de>
Thermalysis for producing diesel from waste
<http://www.ozmotech.com.au/Thermalysis.html>
Biotrade: International Trade in Renewable Energy From Biomass by Agterberg and Faij
<http://www.chem.uu.nl/nws/www/publica/98040.pdf>
Biomass and Energy Crops II
<http://www.aab.org.uk/meetings/mtgs2001/biomass2.htm>
Forest Stewards Guild
<http://www.foreststewardsguild.org>
Conversion webpage
<http://www.convertit.com/Go/ConvertIt/>
Senter (Dutch agency with information on biomass Emission Reduction Unit trade)
<http://www.senter.nl/erupt/>
Anaerobic digestion of organic material
www.ad-nett.org
Coppice Resources Ltd (UK)
<http://www.coppiceresources.co.uk>
Ethanol Distillery Network
<http://www.distill.com/resources.html>
Renewable Fuels Association
<http://www.ethanolrfa.org/>
Global Warming site
<http://www.climatehotmap.org/>

Bioenergy List Archives
<http://www.crest.org/discussion/bioenergy/current/>

Energy Technology Austria (German)
<http://www.energytech.at>

IEA Bioenergy Liquid Fuels Task
<http://www.liquid-biofuels.com>

Honeywell Parralon 75 kW microturbine technology verification report
http://sri-rtp.com/Verification%20Info/Honeywell_CO_VR_final.pdf

Växjö kommun, 2002; *Fossil fuel free Växjö*
<http://www.vaxjo.se/agenda21/>

Malay BIOGOLD site
<http://www.biomass-energy.com>

California Energy Commission. *Landfill Gas Powerplant*
http://www.energy.ca.gov/development/biomass/landfill_gas.html

Australian Venture Capital Journal
<http://www.vcjournals.com.au>

Industrial Water World article on codigestion
<http://www.industrialww.com>

Bioenergy International
<http://www.bioenergyinternational.com/>

Community Power Corporation (Biomax)
<http://www.gocpc.com/>

Australian Cane Farmers Association
www.acfa.com.au

Engineering Conferences, Courses and Events:
<http://www.engaust.com.au/conferences/default.htm>

“Plan Vivo” system for planning, managing and monitoring carbon sink credits earned by smallholders from agroforestry, plantation and forest restoration activities.
<http://www.eccm.uk.com/planvivo/>

Stirling engine paper
http://www.sunpower.com/tech_papers/pub76/isec99.html

Small steam/electric plant bioenergy plant (20 hp)
<http://www.webconx.com/steam.htm>

Department of Environment, Transport and the Regions (DETR) – Green Fuels Challenge -
<http://www.detr.gov.uk/environment/consult/greenfuel/gfuel/letter.htm>

Renewable Energy Policy Project (USA)
<http://www.repp.org>

TV Energy Limited (UK)
<http://www.tvenergy.org>

CREST reference page for Bioenergy
<http://www.crest.org/renewables/biomass-info/>

CREST reference page for Charcoal
<http://www.crest.org/renewables/biomass-info/carbon.shtml>

CREST reference page for Gasification
<http://www.crest.org/renewables/biomass-info/gasref.shtml>

Ankur Scientific, India (Biomass Gasification)
<http://www.ankurscientific.com>

GERBIO - German Biogas and Bioenergy Society
<http://www.biogas-zentrum.de>

African Rural Energy Enterprise Development (AREED)
http://www.energyhouse.com/programs_intro.htm

Organic Power gasifier (Norway)
<http://www.organicpower.com/company/technology.html>

Tata Energy Research Institute (India) gasifiers
<http://www.teriin.org/renew/tech/gasif/case.htm>

Charcoal and Activated Carbon Manufacture (CREST)
http://www.repp.org/articles/static/1/1011975672_7.html

Rictec wood waste gasifier
<http://www.rictec.com.sg/products/wood-waste-biomass-generator/index.php>

Sawdust Grinder
http://rictec.com.sg/products/sawdust_grinder/index.php

Pallet Grinder
http://rictec.com.sg/products/pallet_grinder/index.php

Sawdust Briquette Charcoal Making Machine
http://rictec.com.sg/products/sawdust_briquette_charcoal/index.php

Charcoal Kilns / Retorts
<http://rictec.com.sg/products/charcoal/index.php>

Cryofuel Systems, Inc.(landfill gas clean-up)
<http://www.cryofuelsystems.com/ProdService/ProductsServices.htm>

BioFuel Auction website (USA)
<http://www.gogobid.com>

Eco Puck Energy (gasification)
<http://www.ecopuck.com>

Wood boilers
<http://www.kuenzel.de/English/products/indexEP.htm>
<http://www.woodboilers.com/wood.html>

Pure Energy Corporation (USA – biodiesel)
<http://www.pure-energy.com>

Malahatenergy biomass gasifier technology
<http://www.malahatenergy.com/s/Technology.asp>

European Environment Agency – Renewable Energies Success Stories report (2.1 MB)
http://reports.eea.eu.int/environmental_issue_report_2001_27/en/

Renewable Power Association (UK)
<http://www.renewablepowerassociation.org>

Productivity Commission report on Biodiversity Economics and Policy
<http://www.pc.gov.au/research/commres/hpscib/index.html>

Densification of biomass
<http://www.techtp.com/projects/>

Forum for European-Australian Science and Technology Cooperation
<http://www.feast.org>

USA Biomass Research and Development Initiative
<http://www.bioproducts-bioenergy.gov/>

Gasifier Action Research Project (India)
<http://www.me.iitb.ac.in/garp/title.html>

An Evaluation of Air Pollution Control Technologies for Small Wood-Fired Boilers report
http://www.rsginc.com/resources/publications/documents/R_Wood_Bact_Sept_2001.pdf

USA Farm Bill Renewable Energy site
<http://www.rurdev.usda.gov/rd/farmbill/9006resources.html>

eCarbon News April 2003
http://www.greenhouse.crc.org.au/crc/ecarbon/enews_apr03.htm

Biomass Development Company
<http://www.biomassdev.com>

Biomass Gasification Reference List (CREST)
http://www.repp.org/articles/static/1/1011975339_7.html

Gasification System 200 kWe CHP discussion and draft specification
<http://crest.org/discussiongroups/resources/gasification/200kWCHP.html>

Charcoal making (small scale)
<http://www.velvitoil.com/Charlog.htm>

Cratech Biomass Integrated Gasification Gas Turbine paper
<http://www.epa.gov/appcdwww/apb/bioen98.pdf>

Ethanol fueled Ford Taurus fact sheet
http://www.ott.doe.gov/otu/field_ops/nve/pdfs/taurus.pdf

Landfill Methane Outreach Program (US)
<http://www.epa.gov/lmop/>

Biorecycle Australia
<http://www.biorecycleaustralia.com>

Methanol supply and its role in the commercialisation of SPFC vehicles executive summary
<http://www.huxley.ic.ac.uk/research/epmg/DavidEtsu-met.html>

Article on bioenergy in India
<http://education.vsnl.com/nimbkar/criticalmass.html>

Stoves – comprehensive list edited by Tom Miles
<http://www.trmiles.com/stoves/>

Gasifier stoves
<http://www.wattpower.com>
<http://www.chinadepot.com/stoveberlin.html>

Gasifier Stove system
<http://www.wattpower.com/wpindex6.html>

Fuel Quality website
<http://www.ea.gov.au/atmosphere/transport/fuel/index.html>

Road Transport study from UK which looks at biofuels and hydrogen
http://www.est.org.uk/est/documents/Fueling_Road_Transport_Jan_03.pdf

National Ethanol Vehicle Coalition Annual Meeting
<http://www.e85fuel.com>

Ethanol Industry Directory (USA by BBI)
<http://www.ethanolindustrydirectory.com>

German Biogas and Bioenergy Society GERBIO
<http://www.biogas-zentrum.de>

Caddet Renewable Energy InfoPoint (article on biofuels)
http://www.caddet-re.org//assets/REN14_02.pdf

SEDA Sustainable Energy Jobs Report - Executive Summary
http://www.seda.nsw.gov.au/pdf/PDF_GH_DIS_PAGE8_182.pdf

SEDA Sustainable Energy Jobs Report - Full Report
http://www.seda.nsw.gov.au/pdf/PDF_GH_DIS_PAGE6_182.pdf

UK energy white paper, Our Energy Future - Creating a Low Carbon Economy
<http://wire0.ises.org/wire/Publications/Whitepap.nsf/H/O?Open&0006411A>

Global Research Alliance (CSIRO, TNO, VTT et al)
<http://www.research-alliance.net>

Combustion properties of biomass
<http://www.woodgas.com/proximat.htm>
<http://www.ecn.nl/phyllis/info.asp>

Sustainable Technology Solutions Ltd (UK)
<http://www.sustainabletechnology.co.uk>

2nd World Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection (Rome)

<http://www.etaflorence.it>

International Conference on Co-utilization of Domestic Fuels (CDF)

<http://plaza.ufl.edu/aesgreen/ICCDF/ShortSummary.doc>

<http://plaza.ufl.edu/aesgreen/ICCDF/CompSummary.doc>

Tar Measurement Standard for biomass

<http://www.tarweb.net>

International Developments

UK White Paper Released

The UK Government's new energy white paper *Our energy future – creating a low carbon economy*, published on 24 February, calls for a 60 percent reduction in carbon dioxide emissions, and for increased use of renewables and energy efficiency. It defines a long-term strategic vision for energy policy, combining environmental, security of supply, competitiveness and social goals. The Paper is available at: <http://www.dti.gov.uk/energy/whitepaper/ourenergyfuture.pdf>

Bioenergy Funding in Britain

The British Government has allocated a total of £100 million over 3 years to bioenergy projects, in addition to the benefits to the renewables industry from the UK Renewables Obligation. £4.5 million in grants has recently been allocated to 11 bioenergy projects. These projects are aimed to significantly increase the output from energy crops, such as willow, as well as forestry residues.

United Nations International Best Practice Guide in Anaerobic Digestion

UK-based Environmental Biotechnology Limited has secured a contract with the UN to prepare an International Best Practice Guide on Anaerobic Digestion. The overall concept is to demonstrate that anaerobic digestion is a viable global technology at industrial scale, and that there are a range of successful examples based on different design parameters, using different industrial and agricultural feedstocks around the world. The different financial mechanisms that led to successful implementation (grants, preferential loans, BOT schemes etc.) will also be considered. See: <http://ebl.co.uk/ibpg/>

US Biobased Manufacturers Association Formed

The Biobased Manufacturers Association has recently been formed as a not-for-profit organisation for the purpose of providing a single voice with lobbying rights in Government, and a collective voice in the marketplace, to secure funding for new programs and assistance in market penetration for biobased products. For more information, see: <http://www.biobased.com>

Energy Crop Plantation Researched in USA for Co-Firing

In an effort to find a way to use co-firing to convert fast-growing eucalyptus trees and other crops into renewable energy fuel sources for electric utilities in the South-Eastern United States, the Common Purpose Institute is working with the University of Florida, electric utilities, agriculture interests, and engineering firms researching a 130-acre "energy crop plantation" in central Florida - the largest such plantation in the United States. The "super trees" used for the project are the result of decades of research performed by the University of Florida and Shell Energy; the fuel generated from these energy crops possesses almost no sulfur, contains half the nitrogen coal contains, and has the potential to reduce greenhouse gas emissions. For more information, see: <http://www.treepower.org> and <http://www.serve.com>

Ford Introduces the Model U

Ford in the USA has introduced its Model U concept SUV (Sports Utility Vehicle), which features a hydrogen engine and uses biomass-derived materials. These materials include: Polylactide or PLA, a biopolymer from Cargill Dow derived from corn, used for the Model U's canvas roof and carpet mats; corn-based fillers as a partial substitute for carbon black in rubber tyres; several soy-based components including polyurethane seating foam and polyester resin that is reinforced with fibreglass, used to make the tailgate. In conjunction with Model U, the team from Ford Research and Advanced Engineering is working with Shell Global Solutions to test a biobased lubricant from sunflower seeds. For more information, see: <http://www.ford.com>

Last of Major California Refiners Announces a Switch from MTBE to Ethanol

Following community concerns about the use of MTBE in petrol, ChevronTexaco Corp announced that it will switch from MTBE to ethanol in its blends in the southern California market between January and May 2003. ChevronTexaco will complete the switch from MTBE to ethanol in southern California by May and will stop using MTBE statewide by the end of the year. By joining ConocoPhillips, BP, Shell, and ExxonMobil, Chevron's announcement means that more than 80% of California gasoline will soon be blended with ethanol. For more information, see: <http://www.ethanolrfa.org/pr030109.html>

DynaMotive Announces Successful Completion of 15 Tonne per Day Pilot Plant Program

DynaMotive Energy Systems announced that it has successfully completed its pilot plant program having confirmed the technology's scalability and reliability as well as the capacity to replicate the technology enhancements achieved. The plant has exceeded design parameters operating on a continuous basis at 50% above its nominal design capacity. The Company also announced full focus of its resources to the construction of a 100 tonne per day commercial plant in Canada. For more information, see: <http://www.DynaMotive.com>

Ensyn Technologies Receiving Funding for New Canadian Bio-oil Facility

Ensyn Technologies, developers of technology that converts wood and other biomass to fuel and chemicals, has announced a C\$3.4 million investment from the Ontario Government in its new,

state-of-the-art bio-refinery to be built in Renfrew, Ontario. Construction of the largest RTP™ bio-refinery built to date is expected to begin at Renfrew's newly established Innovation Centre later this year, with the bio-refinery slated to begin operations about a year later. The bio-refinery will take wood waste from local mills, industrial processors and forest operators and convert it into a bio-oil, from which a range of natural chemical products will be extracted. The liquid product that remains after these higher-value products are extracted will be used as a fuel to produce renewable electricity for local consumers. See: <http://www.ensyn.com>

Forthcoming Events

- **Bioenergy Australia 2003 Conference**, Novotel Brighton Beach, 8-10 December 2003. Contact Stephen Schuck for further details and for expressions of interest to present, exhibit and/or sponsor.
- NSW Waste Management Conference & Expo 2003, *What's Working: Reduction, Recovery and Technology*, 4-6 June 2003, Australian Technology Park, Eveleigh, Sydney NSW. Hosted by the Waste Management Association of Australia - NSW Branch. Contact: Annette Howarth, Ph: 02 4632 7567, Email: enquiries@nswwasteconference.com.au, Web: <http://www.nswwasteconference.com.au/>
- *Grid Connection of Embedded Generation*, Electric Energy Society of Australia, Friday, 6 June 2003, Brisbane. Web: <http://www.qld.ieaust.org.au/>, Ph: 07 38225049.
- LAMNET (Latin American Thematic Network on Bioenergy) Fifth Workshop: *International Seminar on Bioenergy and Sustainable Rural Development*, Morelia, México 26 to 28 June 2003. Information at: <http://www.bioenergy-lamnet.org/>
- OECD Workshop on *Biomass and Agriculture*, 10-13 June 2003, Vienna, Austria. Web: <http://www.oecd.org/agr/env>
- *Energy Risk and Trading*, 16-18 June 2003, Four Points Sheraton, Sydney. Web: http://www.powergenerationworld.com/2003/risk_AU/
- 19th Annual International Fuel Ethanol Workshop & Trade Show, 16-19 June, Sioux Falls, South Dakota. Email: conferences@bbiethanol.com Web: <http://www.bbiethanol.com/few>
- *Assessing the Sustainability of Biobased Products*, 26-27 June 2003, Norman, OK, USA. Web: <http://www.ou.edu>
- Biogas International 2003 Conference, *Anaerobic Digestion of Waste and Energy Crops*, Augsburg, Germany, 27-28 June 2003. Web: <http://www.biogas-zentrum.de>
- RenExpo 2003, 27-29 June 2003, Messezentrum Augsburg, Germany. Web: <http://www.energy-server.com>
- SEDA Biodiesel Forum 2003: Moving Towards a Viable Biodiesel Industry, Friday 25 July 2003. Level 44, Grosvenor Place, George Street, Sydney. Booking forms soon available from http://www.seda.nsw.gov.au/events_02.asp
- Power Generation World 2003, 18-20 August 2003, Sydney Convention & Exhibition Centre http://www.utilicon.com.au/2003/powergen_AU/
- Renewable Energy, 18-20 August 2003, Sydney Convention & Exhibition Centre Web: http://www.powergenerationworld.com/2003/renew_AU/
- 2nd Australian Alternative Fuels Conference, 25-26 August 2003, Brisbane Marriott Hotel, Queensland. Contact IBC Conferences, Ph: 02 9080 4307 Web: <http://www.ibcoz.com.au/fuels>
- Bioenergy 2003, International Nordic Bioenergy Conference and Exhibition 2003, 2-5 September, Jyväskylä, Finland. Web: <http://www.finbioenergy.fi/bioenergy2003/>
- Solar 2003, 26-29 November 2003, University of Melbourne, Web: <http://www.destinationrenewables.com.au>
- UNFCCC COP-9, Ninth Conference of the Parties to the UN Framework

Convention on Climate Change, 1-12 December 2003, Milan, Italy. Contact: UNFCCC Secretariat, Ph: +49-228-815-1000, Fax: +49-228-815-1999, E-mail: secretariat@unfccc.int
Web: <http://www.unfccc.int/>

- 2nd World Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection, 10-14 May 2004, Rome, Italy. Preliminary Call for Papers - Deadline: 10 October, 2003. Web: <http://www.etaflorence.it>
 - World Bioenergy 2004, *Conference and Exhibition on Biomass for Energy*, Jönköping, Sweden, 2-4 June 2004. Web: <http://www.elmia.se/bioenergy>
 - World Energy Congress (WEC): *Delivering Sustainability*, Sydney 5- 10 September 2004. Web: <http://www.tourhosts.com.au/energy2004>
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Residues

- Bioenergy Australia Manager Dr Stephen Schuck has been appointed to the statutory 'Fuels Standards Consultative Committee' to represent the interests of the alternative and renewable fuel industry on the Committee. The appointment is for three years. The Committee is a statutory consultative mechanism, which the Minister is required by the Fuel Quality Standards Act 2000 to consult before granting an approval to vary a fuel standard, before determining a fuel standard, before making a decision to enter in, or remove from the Register of Prohibited Fuel Additive, a fuel additive, or class of fuel additives, or in preparing guidelines for more stringent standards under Section 22 of the Act.
- Stephen Schuck gave a presentation on bioenergy at the Business Council for Sustainable Energy Conference in Brisbane 10 April 2003. He is also scheduled to give presentations on bioenergy at the REGA Conference in Victoria, 26-27 June 2003, and to the Terrapinn Renewable Energy Conference in Sydney on 20 August 2003.
- Australia Post is planning to release a set of postage stamps depicting renewable energy sources in 2004, including bioenergy. Stephen Schuck, the Bioenergy Australia Manager has assisted Australia Post with photo material for the stamp series.
- The *Renewable Energy Commercialisation in Australia* book is available at <http://www.greenhouse.gov.au/nav/new.html>
- The Moama Biodiesel Refinery (on NSW/Vic border) which produces 70,000 litres/day of biodiesel from canola oil feedstock, is reported to be up for sale.
- Collection of both measured and calculated energy contents of biomass can be found at: <http://www.woodgas.com/proximat.htm> and <http://www.ecn.nl/phyllis/info.asp>
- A report by Mark Diesendorf for the WWF entitled *Australia's Polluting Power: Coal-fired electricity and its impact on global warming* can be accessed at <http://www.wwf.org.au>
The report notes large point sources of emissions, and expresses concern regarding geo and ocean sequestration of carbon dioxide.
- The Electricity Restructuring Group (ERGO), based at UNSW's School of Electrical Engineering and Telecommunications, maintains a website at <http://www.ergo.ee.unsw.edu.au>. Papers on the web site include: Hugh Outhred, *Some Strengths and Weaknesses of Electricity Industry Restructuring in Australia*, to appear in the Proceedings of IEEE PowerTech 03, Bologna, 23-26 June 2003; Iain MacGill, Hugh Outhred and Karel Nolles, *National Emissions Trading for Australia: key design issues and complementary policies for promoting energy efficiency, infrastructure investment and innovation*, ERGO draft discussion paper 0303, April 2003; a presentation by Hugh Outhred, *Complementary measures to emission trading for the electricity industry*, presented at the National Emissions Trading Policy Workshop, Melbourne, 16 April 2003; an ERGO report by Iain MacGill and Hugh Outhred, *Beyond Kyoto – Innovation and Adaptation: A critique of*

the PMSEIC assessment of emission reduction options in the Australian stationary energy sector, April 2003.

- *Experience Curves: A Tool for Energy Policy Analysis and Design* - Papers from the Workshop at IEA Headquarters in Paris on 22-24 January 2003 are now available on the IEA website at: <http://www.iea.org/workshop/2003/extool-excetp6/index.htm>. The workshop was organised jointly by the EU project "Experience curve: a tool for energy policy programmes assessment" (EXTOOL) and the international network on Experience Curves for Energy Technology Policy (EXCETP). The sixth in the series since creation of EXCETP, the workshop's objective was to assess progress with experience curves analysis to date and chart the course for future work. Twenty papers were presented to an audience of 80 participants from 17 countries.
- The Electric Energy Industry Export Council has recently released market studies which provide a summary of the electricity and renewable energy opportunities in Malaysia, Thailand and Vietnam. See: http://www.electricenergyaustralia.org/council_publications.php?PHPSESSID=4078992d66c3ba82360f635b7a98b892
- Lecture notes from two Murdoch University lectures on bioenergy, with a focus on energy conversion technologies, are available at: <http://wwwscience.murdoch.edu.au/teach/n210/lects/fuel/biomas2.pdf>
- The New Uses Council has introduced an updated and expanded website to explain and promote the US transition to a biobased economy. See: <http://NewUses.org>
- The Biomass Research and Development Technical Advisory Committee has released its *Roadmap for Bioenergy and Biobased Products in the United States*. See: <http://www.bioproducts-bioenergy.gov/pdfs/FinalBiomassRoadmap.pdf>
See also: http://www.bioproducts-bioenergy.gov/pdfs/BioVision_03_Web.pdf
- The full report of *Hardwood Plantations Quantifying Conservation and Environmental Service Benefits* is available at: <http://www.rirdc.gov.au/reports/AFT/02-83.pdf>
- Novera energy's Narrabri cotton trash waste-to-energy project has been postponed from mid-2003 completion to end-2003/early-2004.
- The Federal Government has provided a grant of \$250,000 to the Business Council for Sustainable Energy to engage an officer to assist with the implementation of the Renewable Energy Action Agenda, which was developed in 2000.
- The Australian Renewable Energy Technology Roadmap can be seen at: <http://www.industry.gov.au/retr>. Similar USA Roadmaps are available at: http://www/content/controlfiles/display_details.cfm?objectid=6601A51D-FA7D-47B8-AE3395DE3C6CD9CD
- The latest issue of the Renewable Energy InfoPoint is available at: http://www.caddet-re.org//assets/RE1_03.pdf
- Kema-Xenergy has drafted a step-by-step guide of potential interest to biomass producers. It contains detailed information on fundamental strategies for planning and executing a community relations campaign; instructions for developing core messages and collateral material (e.g. fact sheets, presentations, graphics and web sites) needed for outreach and education; descriptions of various outreach activities as well as a timeline for the execution of a campaign. Email: swoodhouse@kema-xenergy.com Web: <http://rs6.net/tn.jsp?t=vabt7un6.klbnkun6.4pfa6un6&p=http%3A%2F%2Fwww.xenergy.com%2Fxenhome.nsf%2Fhtmldocs%2FGuidebook>
- The US Department of Energy's FY 2003 budget for its Biomass Program is approximately \$US 114 million.
- An Internet Conference with 10 discussion sessions, some bioenergy related, has been running from February-June 2003. Review discussion messages from earlier sessions on topics:

Peri-urban Agriculture and Forestry (66 subscribers) at:

<http://segate.sunet.se/archives/et-venus.html> and

Urban waste management (75 subscribers):

<http://segate.sunet.se/archives/et-w10.html>

- Proceedings of Joint IEA/OECD Workshop *Promoting International Collaboration on Bioprocesses, Bioproducts and the BioBased Economy* - Ottawa, 3-6 March 2003 is available at : http://library.iea.org/dbtw-wpd/exec/dbtwpub.dll?BU=http%3A%2F%2Flibrary.iea.org%2Fsearchsyntax%2FkbaseGet.htm&QB0=AND&QF0=ID&QI0=93&MR=20&TN=work&DF=work-recordt&RF=work-record&DL=0&RL=0&NP=1&AC=QBE_QUERY
- To view the Proceedings of the International Conference on Co-utilization of Domestic Fuels, University of Florida, 5-6 February 2003 see: <http://plaza.ufl.edu/aesgreen/ICCDF/CompSummary.doc>
- The papers and presentations from the recent AETF Seminar "National Emissions Trading" are now available from: <http://www.aetf.net.au/topics.html?DocumentName=ContentStore|MediaReleases|Mar12Presentations.html>
- The final SEDA corporate plan for 2002-2005 is available at: http://www.seda.nsw.gov.au/about_corp_plan.asp
- A brochure (available in English or French) entitled *From Biogas to Energy, a European Review: Regulatory, Fiscal, Economic and Political Context* is available at: <http://www.solagro.org/site/069.mv>
- A bibliography study (French) entitled *Fate of Pathogens and Micropollutants During Organic Wastes and By-Products Anaerobic Digestion - A Review* is available at: <http://www.solagro.org/site/034.html>
- An issue of the Renewable Energy InfoPoint includes articles on *Progress in the Biofuels Sector*: http://www.caddet-re.org/assets/REN4_02.pdf
- BBI has released its 2003 Ethanol Industry Directory: <http://www.ethanolindustrydirectory.com>
- The Australian Venture Capital Guide 2003 is a complete guide to 179 sources of private equity and related financing for growth companies, including 146 suppliers of professional venture capital, 16 business introduction services, 8 suppliers of product development funding, 15 New Zealand venture capital firms, 1 Papuan New Guinea firm, and 9 equity investors in unlisted infrastructure. For further information, phone 02 9713 7608.
- The USDA has created a website for biobased products and the Bioenergy Coordination Council: <http://www.ars.usda.gov>
- Oil and Gas Advisory published an article entitled *High Oil, Gas Prices Creating Brighter Future for Alternate Fuel Developers* featuring the role of DynaMotive and BioOil in the future of alternate fuel: <http://www.oilandgasadvisory.com/default.cfm>
- The RIRDC-sponsored report by Enecon Pty Ltd on ethanol from wood is available at: <http://www.rirdc.gov.au/reports/AFT/02-141sum.html>. RIRDC has also recently produced a complimentary 16 page glossary summary of the main report. Contact Charlotte Keller of RIRDC on Ph: 02 6272 3736 for a copy.
- Proceedings of the First International Ukrainian Conference on Biomass for Energy, 23-26 September, Kyiv have been issued on a compact disk. E-mail: conference@biomass.kiev.ua Web: <http://www.biomass.kiev.ua>
- A PhD thesis by Roland Siemons from the University of Twente, The Netherlands, entitled *A Development Perspective for Biomass-Fuelled Electricity Generation Technologies - Economic Technology Assessment in View of Sustainability* can be viewed at: <http://www.siemonsholding.uwnet.nl/>. Email Stephen Schuck for a 7 page summary (PDF).

- The Executive Summary of a study conducted for the UK DTI Fuel Cell Programme by David Hart et al of the T H Huxley School of Environment, Earth Sciences and Engineering, Centre for Environmental Technology, Imperial College, UK, entitled *Methanol supply and its role in the commercialisation of Solid Polymer Fuel Cell vehicles* is available at: <http://www.huxley.ic.ac.uk/research/epmg/DavidEtsu-met.html>
- Visit the link below for your free subscription to Refocus magazine: <http://www.subscription.co.uk/cc/refocus/bc682>
- UC Davis has been developing a digester for racetrack straw that is about 80% straw and 20% manure: <http://danr.ucop.edu/calag/01SO/specrpt2.html>. See also: http://res2.agr.ca/initiatives/manurenet/en/man_digesters.html
- PAMI in Canada has been promoting the use of straw as cover for manure storage: <http://www.pami.ca/PDFs/Pami730.pdf>
- A comparison of emissions from small wood-fired boilers and fossil-fuelled boilers is discussed in some detail in a report entitled *An Evaluation of Air Pollution Control Technologies for Small Wood-Fired Boilers*. The report was prepared for four US New England State Agencies. See: http://www.rsginc.com/resources/publications/documents/R_Wood_Bact_Sept_2001.PDF
The report also summarises the feasibility and cost of wood-fired boiler air emission control technologies in the context of the Best Available Control Technology (BACT) requirements if they were to be applied to small wood-fired boilers.
- A database on gasification of biomass has been put online by IIT Bombay India. This database is called SARGOB (State of the Art Report on Biomass Gasification): <http://www.me.iitb.ac.in/garp/home.html>
- Methanol fuel cells have gained prominence recently, with applications from portable electronic devices such as video cameras to motor vehicles. The following are involved in methanol fuel cell development:
Manhattan Scientifics: <http://www.mhtx.com/>
Hpower : <http://www.hpower.com/>
The Hydrogen & Fuel Cell Investor: <http://www.h2fc.com/companies.html>
Ballard: <http://www.ballard.com/default.asp>
IdaTech: <http://www.idatech.com/>
Plug Power: <http://www.plugpower.com/home.cfm>
Daimler Chrysler: http://www.daimlerchrysler.com/index_e.htm?/products/products_e.htm
- Information on a wide variety of oil crops and biofuel sources such as tallow, and their physical characteristics and yields is available at: http://journeytoforever.org/biodiesel_yield.html
- The US Department of Energy's Energy Information Administration released in November 2002 its *Renewable Energy Annual 2001* providing comprehensive information on renewable energy statistics in the USA. For the **first time in recent history, bioenergy production has overtaken hydro generation in the USA**. See: <http://tonto.eia.doe.gov/FTPROOT/renewables/060301.pdf> and http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/rea_sum.html
- A report by the Union of Concerned Scientists, USA entitled *Growing Energy on the Farm: Biomass Energy and Agriculture* is available at: http://www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=129
- The Bioenergy Information Network website provides a gateway to biomass resource analyses and delivery systems information in the USA: <http://bioenergy.ornl.gov/index.html>
- The World Meteorological Organisation, a United Nations Agency, has announced that globally, 2002 was the second hottest year on record.
- *Benign Energy: The Environmental Implications of Renewables* report is available at: <http://www.iea.org/pubs/studies/files/benign/index.htm>

- The Victorian Government has granted \$50,000 for the state's first official biodiesel trial plant to a partnership between the Alternative Technology Association (ATA), the Shire of Yarra Ranges, Alternative Fuels and Energy, Goldiesel and Fastfuel. The partnership will build and run a large scale biodiesel plant in Mt Evelyn, north east of Melbourne. The plant be ready to sell biodiesel, made from waste cooking oils from local businesses, to contracted users in the near future. The plant's output will be up to 20,000 litres per week.
- The Orbital Engine Company has released the results of tests commissioned by Environment Australia on the effects of ethanol blends on a garden trimmer engine and an outboard motor. See the full report at: <http://www.ea.gov.au/atmosphere/transport/fuel/ethanol/index.html>
- Green Star Products has announced that the largest biodiesel plant in the US is now being assembled in California. The production capacity of this plant is expected to be 132.3 million litres per year at full production. The company says that this is significant when considering that the entire US production of biodiesel in 2002 was only 56.7 million litres.
- RE Focus reports Wärtsilä Biopower has received orders to build seven bioenergy plants for Sweden, Russia and Baltic countries, with total capacity of 56 MW.
- A Canadian agency is seeking funding requests for a Ca\$100 million fund that supports technologies to reduce GHG emissions. Sustainable Development Technology had two funding rounds last year, with 500 requests seeking \$876 million, and eligible technologies include alternative energy, biomass and renewable fuels.
- The US Florida Public Service Commission has released its final report on renewable energy technologies in Florida. Due to lack of hydro, geothermal, and wind resources, biomass is one of the leading options for renewable energy in that state. The final renewables report entitled *An Assessment of Renewable Electric Generating Technologies for Florida* has been submitted to the Legislature and is now available on the PSC web site at: http://www.psc.state.fl.us/industry/electric_gas/Renewable_Energy_Assessment.pdf
- Sydney-based Great Pacific Capital has acquired the major share of Envirostar, which went into administration late last year. Envirostar has been renamed Green Pacific Energy.
- Forests in Australia cover more than 164 million hectares, seven million hectares more than was reported five years ago. Total plantation area has increased by more than 50 percent over the last 5 years - from just over 1 million hectares to nearly 1.6 million hectares.
- The following small-scale gasifiers are operating in the UK:
 - * Shawton Engineering subsidiary Biomass Engineering Ltd has commissioned a 75-100kWe gross unit in the Ballymena ECOS Millennium Centre. Fuels have included willow, spruce, poplar, sawmill bark strippings, pine, oak, beech and palletwood. Biomass Engineering have a 55 kWe unit at their works (coupled to gas engines and a gas turbine combustor) and a 250 kWe downdraft being commissioned.
 - * Ventec (known as Waste to Energy Ltd) has sold a gasifier to Anglican Water, operating on sewage sludge for 250 kWe output, and a similar sized one to BLC. Waste to Energy Ltd cooperate with the UK University of Newcastle.
 - * Compact Power, Waste Gas Technology, Rural Generation Ltd and Enniskillen College gasifiers are operational.
 - * The Blackwater Valley museum is a 200 kWe NFFO contract. However the gasifier is reported to currently generate 80kWe. Work is ongoing to upgrade the facility to 200 kWe. B9 have also installed a 136 kWe unit at Sutton in England, which is reported as undergoing commissioning.

Opportunities Corner

The Bioenergy Australia Manager would like to assist and facilitate biomass and bioenergy projects and businesses by providing information and industry contacts to link project developers,

resource managers, energy companies and sources of finance. If you or your organisation are interested in such assistance, please contact Stephen Schuck for a free listing.

- Biospot Consultancy offers leachate treatment, anaerobic digestion of waste, fuel ethanol production from waste, waste to energy (inception to complete project management including approval from stakeholders). Biospot has recently announced it is in a joint venture with Waste Service NSW for leachate treatment. For more, see: <http://www.biospot.com.au>
Contact: Dr. Rajinder Malik, Ph: 02-94765476 (Mob: 0408466491)
- AgroTech Communications Inc. has announced a joint project with Sparks Companies Inc. of Memphis to produce a comprehensive multi-client study entitled "An Assessment of the Opportunities and Potential of the Emerging Biobased Economy." For more or a copy of the prospectus, contact: Dan Manternach, AgroTech VP for Business Development and Marketing, E-mail: dmanternach@agrotechfiber.com

Back Issues of Bioenergy Australia Newsletters – Downloadable from the Bioenergy Australia homepage: <http://www.users.bigpond.net.au/bioenergyaustralia>

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Bioenergy Australia Newsletter is interested your organisation's bioenergy related activities. Please send all press releases, article leads, and conference announcements to Stephen Schuck. Fax: (02) 9416 9246 Email: sschuck@bigpond.net.au.

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