17. Biofuels [229]

Commitment:

"[We will] ensure the compatibility of policies for the sustainable production and use of biofuels with food security and accelerate development and commercialization of sustainable second-generation biofuels from non-food plant materials and inedible biomass."

G8 Leaders Declaration on Global Food Security

Assessment:

Interim Compliance Score

Country	Lack of Compliance -1	Work in Progress 0	Full Compliance +1
Canada		0	
France		0	
Germany			+1
Italy	-1		
Japan			+1
Russia			+1
United Kingdom			+1
United States			+1
European Union			+1
Average Score			**+0.56**

Background:

G8 leaders did not identify the issue of biofuels as a priority prior to the 2008 Hokkaido-Toyako Summit. However, as food prices soared in early 2008, food security, including the production of biofuels, quickly become a primary concern.

A global shortage of rice and other grains, most adversely affecting individuals in Africa and other developing countries, preoccupied G8 leaders during the Hokkaido-Toyako Summit. Many factors may contribute to the rise in food prices, but the production of first-generation biofuels – which use food crops such as corn, rapeseed, palm, and soya beans to create fuel – was posited as a major cause. Many countries have increased first generation biofuel production as a renewable alternative to fossil fuels, but some argued that this may have diverted vital resources from food production, causing food shortage and price inflation.

As an alternative, G8 leaders looked to second-generation biofuels, which are made from non-food plant materials and inedible biomass. At the 2008 Hokkaido-Toyako Summit, the G8 came to a consensus that there is a need to "accelerate research on second-

generation biofuels, which do not require food crops as feedstock, in order to bring them into practical production".[942]

Due to the recent decline in oil prices, inflationary pressures in food prices have been alleviated to some extent. However, the production of second-generation biofuels is critical to support the future demand for energy. According to the assessment by the International Energy Agency, they are projecting a 4-5 per cent decline in oil demand next year, but expecting a much larger – 9.1 per cent – decline in oil production.[943] Such assessments confirm the pressing need for alternative sources of energy. Numerous problems surround the production of second-generation biofuels, inviting further research and development.

Commitment Features:

The commitment states a general goal – to ensure that biofuels production and use is compatible with food security – and a mechanism for achieving this goal. The mechanism, to "accelerate development and commercialization of sustainable second-generation biofuels," will be our focus in assessing compliance. The implied assumption is that second-generation biofuels, manufactured from non-food plant material and inedible biomass, are more compatible with food security than first-generation biofuels. Members must increase investment in the development and commercialization of second-generation biofuels. Any investment in first-generation biofuels cannot be considered compliance.

Scoring:

-1	Member does not invest in the development or commercialization of second-generation biofuels.
0	Member allocates resources to programs or policies that address either the development **OR** commercialization of second-generation biofuels, not both.
+1	Member allocates resources to programs or policies that address both the development **AND** commercialization of second-generation biofuels.

Lead Analyst: Kenta Hatamochi

Canada: 0

[942] In pursuit of Japan as a Low-carbon society , Japan Press Club (Tokyo), 9 June 2008. Date of Access: 10 November 2008. http://www.kantei.go.jp/foreign/hukudaspeech/2008/06/09speech_e.html.
[943] FT: IEA Projects 9.1% Decline Rate, Higher Oil Prices, 29 October 2008. Date of Access: 19 November 2008.
http://www.energyinvestmentstrategies.com/2008/10/29/ft-iea-projects-91-decline-rate-higher-oil-prices/.

Canada has partially complied with its commitment on second-generation biofuels. The Canadian government has invested in the development of second-generation biofuels. It has not, however, provided any significant support for commercialization.

On 29 August 2008, Secretary of State for Agriculture Christian Paradis announced a CND3 million contribution to the Industrial Oil Seed Network under the Agricultural Bioproducts Innovation Program.[944] This research could develop a new type of oilseed used exclusively for the production of petroleum substitutes.[945]

Canada has also made commitments regarding both international and domestic biofuel research. At the 2008 Canada-EU Summit, Canada agreed to cooperate on the development of second-generation biofuels and sustainable bioenergy.[946] On 2 September 2008, Canada's Minister of Industry, Jim Prentice, announced that the Government of Canada's 2008 Science and Technology Strategy will include biofuels research as one of its areas of focus.[947]

In most cases, however, Canada's support for biofuels development has not been focused on second-generation development. On 18 July 2008, the Government of Canada announced an investment of CAD25 million into Suncor Energy's St. Clair Ethanol Plant.[948] This plant will produce first-generation biofuels, undermining this commitment.

Thus, Canada has been awarded a score of 0 for allocating resources toward the development of second-generation biofuels, but failing to aid in the commercialization of second-generation technologies.

Analyst: Andrew Wright

France: 0

France has partially complied with its commitment on second-generation biofuels. France has pursued research and development, but not commercialization.

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[944] The Government Of Canada Invests $3m In Oilseed Research, Agriculture and Agri-Food Canada (Ottawa) 29 August 2008. Date of Access: 30 December 2008. http://news.gc.ca/web/article-eng.do?crtr.sj1D=&mthd=advSrch&crtr.mnthndVl=8&nid=417109&crtr.dpt1D=6656&crtr.tp1D=&crtr.lc1D=&crtr.yrStrtVl=2008&crtr.kw=&crtr.dyStrtVl=1&crtr.aud1D=&crtr.mnthStrtVl=8&crtr.yrndVl=2008&crtr.dyndVl=31.

[945] The Government Of Canada Invests $3m In Oilseed Research, Agriculture and Agri-Food Canada (Ottawa) 29 August 2008. Date of Access: 30 December 2008. http://news.gc.ca/web/article-eng.do?crtr.sj1D=&mthd=advSrch&crtr.mnthndVl=8&nid=417109&crtr.dpt1D=6656&crtr.tp1D=&crtr.lc1D=&crtr.yrStrtVl=2008&crtr.kw=&crtr.dyStrtVl=1&crtr.aud1D=&crtr.mnthStrtVl=8&crtr.yrndVl=2008&crtr.dyndVl=31.

[946] 2008 Canada-EU Summit Statement, Office of the Prime Minister (Ottawa) 17 October 2008. Date of Access: 30 December 2008. http://pm.gc.ca/eng/media.asp?id=2283.

[947] Minister of Industry Accepts S&T Strategy's Sub-Priorities Recommended by the Science, Technology and Innovation Council, National Research Council Canada (Ottawa) 2 September 2008. Date of Access: 30 December 2008. http://www.nrc-cnrc.gc.ca/newsroom/news/2008/industry08_e.html.

[948] Government of Canada Invests $25 Million in Biofuels Production, ecoAction (Ottawa) 18 July 2008. Date of Access: 30 December 2008. http://www.ecoaction.gc.ca/news-nouvelles/20080718-eng.cfm.

On 25 July 2008, the Grenelle Environnement formally announced EUR400 million in new funding for the advancement of new energy technologies. This funding, which will support the research and development of new technologies, will be divided among several different sectors, one of which will be second-generation biofuels.[949]

In November 2008, the government further announced 50 measures for the development of renewable energies. Although second-generation biofuels were not included in these measures, the press release noted that a separate specialized program for second-generation biofuels will be released in the near future.[950]

While the government continues its support for the French National Research Agency, which is continuing to expand its bioenergy research projects, no significant new commitment in second-generation biofuels has been announced or implemented in this compliance cycle.[951]

Thus, France has been awarded a score of 0 for allocating resources only toward the research and development of second-generation biofuels, but not taking any action on their commercialization.

Analyst: Kayla Pries

Germany: +1

Germany has fully complied with its commitment on second-generation biofuels. It has invested in both the development and commercialization of second-generation biofuels.

On 3 December 2008, the German Advisory Council on Global Change released Future Bioenergy and Sustainable Land Use, which states that biofuels can meet 10 per cent of the world's energy needs.[952] In the report, the authors advocate the use of second-generation biofuels primarily created from waste products, such that food security is not endangered.[953] The Federal Environment Minister, Sigmar Gabriel, announced the Ministry's support for this report and asserted that they had already been acting on

[949] Grenelle Environnement: The search for demonstration projects is on! The government will spend 400 million euros over 4 years, Ministry of Ecology, Energy, Sustainable Development and Planning (Paris) 25 July 2008. Date of Access: 12 December 2008. http://www.developpement-durable.gouv.fr/article.php3?id_article=3530.
[950] Grenelle Environnement : 50 steps to develop renewable energy, Ministry of Ecology, Energy, Sustainable Development and Planning (Paris) 17 November 2008. Date of Access: 12 December 2008. http://www.developpement-durable.gouv.fr/article.php3?id_article=3901.
[951] Sustainable Energy & Environment, Agence Nationale de la Recherche (Paris) Date of Access: 12 December 2008. http://www.agence-nationale-recherche.fr/EDEUK.
[952] Submission on Report of "Future Bioenergy and Sustainable Land Use," German Advisory Council on Global Change (Berlin) 3 December 2008. Date of Access: 11 December 2008. http://www.wbgu.de/wbgu_jg2008_presse_engl.html.
[953] Bioenergy Has Potential But It Must Be Sustainable, Federal Research Ministry (Berlin) 3 December 2008. Date of Access: 11 December 2008. http://www.bundesregierung.de/nn_6538/Content/EN/Artikel/2008/12/2008-12-03-zukunftsfaehige-bioenergie__en.html.

reorienting their biofuels strategy.[954] As a result, the Federal Research Ministry determined that more research into the balance between food security and fuels was needed. Thus, they announced that EUR200 million will be made available over the next few years for research on bioenergies.[955]

In December 2008, the public Karlsruhe Institute for Technology, in partnership with Air Liquide Group, announced plans to build a pilot second-generation biofuels plant.[956] The new plant supports the commercialization of second-generation biofuels.

Germany has also reaffirmed its position regarding second-generation biofuels through several public statements and policies. On 22 October 2008, the federal cabinet announced a new bill that amends the legal basis for the promotion of biofuels.[957] The new bill focuses on the sustainability of biofuel production in order to reduce competition between the food and energy sector. Germany delayed the mandatory increase of the percentage ratio of biofuels to be integrated into vehicle fuel.[958] The bill also noted that the production of second-generation biofuels has less of an impact on the environment and they would thus be given an advantage under its new benefit calculation system in the future.[959]

Further, Germany assumed a leadership role concerning biofuels at the recent International Conference on Bioenergy in Brazil, which discussed food security and biofuels. In particular, German delegates urged other members to set international environmental and social standards for biofuels, without which there can be no true progress.[960]

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[954] Bioenergy Has Potential But It Must Be Sustainable, Federal Research Ministry (Berlin) 3 December 2008. Date of Access: 11 December 2008. http://www.bundesregierung.de/nn_6538/Content/EN/Artikel/2008/12/2008-12-03-zukunftsfaehige-bioenergie__en.html.

[955] Bioenergy Has Potential But It Must Be Sustainable, Federal Research Ministry (Berlin) 3 December 2008. Date of Access: 11 December 2008. http://www.bundesregierung.de/nn_6538/Content/EN/Artikel/2008/12/2008-12-03-zukunftsfaehige-bioenergie__en.html.

[956] Second generation biofuels: A new technological step, Lurgi, 22 December 2008. Date of Access: 9 February 2009. http://www.lurgi.com/website/index.php?id=125&L=1&tx_ttnews[tt_news]=203&tx_ttnews[backPid]=27&cHash=01e20481fe.

[957] Act amending the promotion of biofuels, Federal Ministry of the Environment (Berlin) 22 October 2008. Date of Access: 11 December 2008. http://www.bmu.de/gesetze_und_verordnungen/gesetzesentwuerfe/parlamentarisches_verfahren/doc/42435.php.

[958] Daniela Kuhr, "Less biofuel" Sueddeutsche Zeitung (Munich) 22 October 2008. Date of Access: 11 December 2008. http://www.sueddeutsche.de/automobil/196/315089/text/.

[959] Federal cabinet decides to amend law to promomte biofuels, Federal Ministry of the Environment (Berlin) 22 October 2008. Date of Access: 11 December 2008. http://www.bmu.de/pressemitteilungen/aktuelle_pressemitteilungen/pm/42433.php.

[960] International conference on bioenergy in Brazil, Federal Ministry of the Environment (Berlin) 21 November 2008. Date of Access: 11 December 2008. http://www.bmu.de/pressemitteilungen/aktuelle_pressemitteilungen/pm/42641.php.

Thus, Germany has received a score of 0. Despite new research funds on the sustainability of biofuels, Germany is not pursuing commercialization.[961]

Analyst: Kayla Pries

Italy: -1

Italy has failed to comply with its commitment on second-generation biofuels.

On 17 July 2008, The Ministry of Agriculture introduced a requirement that biofuels must make up two per cent of total fossil fuel usage.[962] Further, during the December 2008 United Nations Climate Change Conference in Poznán, Poland, Italy agreed to the biofuels directive sustainability criteria, which "stipulates requirement for carbon dioxide performance in the biofuel chain."[963] These commitments encourage the use of biofuels, but not necessarily second-generation biofuels compatible with food security.

Further, on 12 December 2008, The Minister of the Environment, Stefania Prestigiacomo, declared that current Italian policies for biofuel production are inadequate. She specifically noted that the Government of Italy must take "responsibility to ensure more carbon-free energy policies for the country, by using all the existing technologies and investing in research and development concerning renewable energy, capable to accelerate and extend the economic value of a sustainable development's choice."[964]

Thus, Italy has been awarded a score of -1. Italy has not yet addressed the research, development or commercializationof second-generation biofuels.

Analyst: Naregh Galoustian

Japan: +1

Japan has fully complied with its commitment on second-generation biofuels.

On 4 December 2008, the Forestry Agency of Japan announced it would spend USD5.2 million to create a marketplace for carbon dioxide emission credits earned through the production of biofuel from wood chips.[965] The marketplace will facilitate the sale of

[961]Increasing Importance of Renewable Energies (Berlin) 31 July 2008. Date of Access: 11 December 2008. http://www.bmu.de/english/current_press_releases/pm/42210.php.
[962] Mixing biofuels, Zaia: "Players finally have the tools to comply with the law," Ministry of Agricultural, Food and Forestry Policies (Rome) 17 July 2008. Date of Access: 13 December 2008. http://www.politicheagricole.gov.it/comunicazione/comunicati/20080717_emanata_circolare_mipaaf_biocarburanti.htm.
[963] Italian position on the climate energy package clear, Ministry for the Environment, Land and Sea (Rome) 19 November 2008. Date of Access: 13 December 2008. http://www.minambiente.it/index.php?id_doc=1234&id_oggetto=2.
[964] A great victory for the environment and for Europe, Ministry for the Environment, land and Sea (Rome) 12 December 2008. Date of Access: 13 December 2008. http://www.minambiente.it/index.php?id_doc=1243&id_oggetto=2.
[965] Government to Stimulate Economy of Mountain Areas by Promoting Biofuels, Associated Press (Tokyo) 4 December 2008. Date of Access: 5 December 2008. http://www.breitbart.com/article.php?id=D94RH6304&show_article=1.

biofuel from forestry industries to energy consumers.[966] Energy consumers will receive emission credits through their use of biofuels. The primary goal of the project is to establish the profitability and sustainability of second-generation biofuels.[967] This project supports commercialization.

On 18 November 2008, the Ministry of Agriculture committed USD32 million over the next five years to subsidize the construction and operation of an ethanol production facility from agricultural biomass.[968] Kawasaki Heavy Industries and a state corporation are dividing the cost of construction and operation.[969] The Ministry predicted that the project could yield ethanol at a commercially viable cost of production.[970]

On 20 November 2008, in a Joint Statement at the 20th Asia-Pacific Economic Cooperation (APEC) ministerial meeting in Lima, Peru, Japan reiterated its support for the development and commercialization of second-generation biofuels. In a statement, Japan addressed the critical issue of food security in the context of first-generation biofuels.[971]

Japan has launched new projects to promote both the development and commercial success of second-generation biofuels. Thus, Japan has been awarded a score of +1.

Analyst: Shakir Rahim

Russia: +1

Russia has fully complied with its commitment on second-generation biofuels. Russia has taken steps to encourage both the development and commercialization of second-generation biofuels.

On 8 September 2008, Russian officials met at the V Baikal Economic Forum and agreed that the Corporation of Biotechnologies would sign a RUR1.1 billion investment

[966] Government to Stimulate Economy of Mountain Areas by Promoting Biofuels, Associated Press (Tokyo) 4 December 2008. Date of Access: 5 December 2008. http://www.breitbart.com/article.php?id=D94RH6304&show_article=1.
[967] Government to Stimulate Economy of Mountain Areas by Promoting Biofuels, Associated Press (Tokyo) 4 December 2008. Date of Access: 5 December 2008. http://www.breitbart.com/article.php?id=D94RH6304&show_article=1.
[968] Japan to Back Third Farm Waste Ethanol Project, Reuters (Tokyo) 18 November 2008. Date of Access: 6 December 2008. http://www.reuters.com/article/rbssIndustryMaterialsUtilitiesNews/idUST30138220081118.
[969] Japan to Back Third Farm Waste Ethanol Project, Reuters (Tokyo) 18 November 2008. Date of Access: 6 December 2008. http://www.reuters.com/article/rbssIndustryMaterialsUtilitiesNews/idUST30138220081118.
[970] Japan to Tack Third Farm Waste Ethanol Project, Reuters (Tokyo) 18 November 2008. Date of Access: 6 December 2008. http://www.reuters.com/article/rbssIndustryMaterialsUtilitiesNews/idUST30138220081118.
[971] Joint Statement of the Twentieth APEC Ministerial Meeting, Asia Pacific Economic Cooperation (Lima) 20 November 2008. Date of Access: 4 December 2008. http://www.mofa.go.jp/policy/economy/apec/2008/joint.pdf.

agreement with the Administration of the Irkutsk region in order to produce biofuels.[972] After the agreement, the executive of the Corporation of Biotechnologies, Igor Cheremnov, said that the Corporation plans to create 30 new enterprises for biofuel production within the next eight years.[973] The project specifically supports second-generation biofuels.

On 31 October 2008, the Corporation of Biotechnologies presented its plan for biofuels production at the Russian Academy of Science.[974] A member of the Russian Academy of Science, Valentin Parmon, announced his support for the plan and confirmed that they are already working on a project in Siberia which aims to improve the production of second-generation biofuels.[975]

Thus, Russia has been awarded a score of +1. Russia has allocated moderate resources to the development and commercialization of second-generation biofuels.

Analyst: Arina Shadrikova

United Kingdom: +1

The United Kingdom has fully complied with its commitment on second-generation biofuels. The UK has supported both the development and commercialization of second-generation biofuels.

On 15 October 2008, Transport Minister Andrew Adonis stated that "biofuels will only have a role to play in [tackling climate change] if they are sustainably produced."[976] He pledged GBP6 million to the Carbon Trust to aid in the advancement of advanced biofuels technology.[977] The funding will partly be used to fund the Algae Biofuels Challenge, announced on 30 October 2008, which is intended to "support the development and commercialization of microalgae biofuel technologies."[978]

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[972] The First Biofuels Plant in LakeBaikal, German Energy Agency (Berlin) 24 September 2008. Date of Access: 6 December 2008. http://www.energieforum.ru/ru/archiv_novostej/pervyii_biotoplivnyii_zavod_u_baiikala_481.html.

[973] The Corporation 'Biotechnology' in Russia Will Build 30 Plants to Produce Biofuels with Total Capacity of 2 Million Tonnes, Regnum News Agency (Moscow) 9 September 2008. Date of Access: 6 December 2008. http://www.regnum.ru/news/1052390.html.

[974] The Members of the Russian Academy of Sciences Discussed the Projects on Second-Generation Biofuel Production, CNews (Moscow) 1 November 2008. Date of Access: 5 December 2008. http://rnd.cnews.ru/tech/news/line/index_science.shtml?2008/11/01/325806.

[975] Russia Will Produce the Oil from the Plants, German Energy Agency (Berlin) 5 December 2008. Date of Access: 6 December 2008. http://www.energieforum.ru/ru/archiv_novostej/rossija_budet_proizvodit'_neft'_iz_travy_506.html.

[976] Adonis Sets Out More Cautious Approach to Biofuels, Department for Transport (London) 15 October 2008. Date of Access: 10 December 2008. http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=381333&NewsAreaID=2.

[977] Adonis Sets Out More Cautious Approach to Biofuels, Department for Transport (London) 15 October 2008. Date of Access: 10 December 2008. http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=381333&NewsAreaID=2.

[978] Algae Biofuels Challenge: Launch Event, Carbon Trust (London) 30 October 2008. Date of Access 10 December 2008. http://www.carbontrust.co.uk/NR/rdonlyres/77C2F2E5-3AA6-43A5-9F43-55C7E02162E3/0/ABCLaunchEventUpdated.pdf.

On 16 July 2008, ministers from the Department for Food and Rural Affairs specified how GBP10 million, which had already been announced, would be utilized to build commercial scale anaerobic digestion demonstrator plants that can create fuel from organic waste.[979] Minister Phil Woolas confirmed that "this is a high priority for [the British] government."[980]

The British Government has also been active internationally in soliciting cooperation in developing environmentally sustainable biofuels. On 10 November 2008, the UK and China signed the Sustainable Agriculture Innovation Network (SAIN).[981] One of the four initial areas of focus for the SAIN is to "expand use of agricultural biomass and livestock manure for biogas, liquid biofuels, and organic fertilizer production."[982]

Thus, the United Kingdom has been awarded a score of +1 for its funding of and commitment to the development and commercialization of environmentally sustainable second-generation biofuels.

Analyst: Andrew Wright

United States: +1

The United States has fully complied with its commitment on second-generation biofuels.

On 22 December 2008, the DOE created a Funding Opportunity Announcement (FOA) that will operate over the next six years and will provide a maximum of USD200 million for original and demonstration-scale biorefinery projects.[983] This FOA is limited to second-generation biofuels.[984]

The primary goal of the FOA is large-scale commercialization in the short- to medium-term.[985] The DOE emphasized the role of the FOA in implementing the 2007 Energy

[979] Defra Ministers Give Boost to Biogas, Department for Environment, Food and Rural Affairs (London) 16 July 2008. Date of Access: 10 December 2008. http://www.defra.gov.uk/news/2008/080716c.htm.
[980] Defra Ministers Give Boost to Biogas, Department for Environment, Food and Rural Affairs (London) 16 July 2008. Date of Access: 10 December 2008. http://www.defra.gov.uk/news/2008/080716c.htm.
[981] China and UK Strengthen Partnership on Sustainable Agriculture, Department for Environment, Food And Rural Affairs (London) 10 November 2008. Date of Access: 10 December 2008. http://nds.coi.gov.uk/content/detail.asp?ReleaseID=383731&NewsAreaID=2.
[982] China and UK Strengthen Partnership on Sustainable Agriculture, Department for Environment, Food And Rural Affairs (London) 10 November 2008. Date of Access: 10 December 2008. http://nds.coi.gov.uk/content/detail.asp?ReleaseID=383731&NewsAreaID=2.
[983] DOE Announces Funding Opportunity of up to $200 Million for Pilot and Demonstration Scale Biorefinery Projects, Department of Energy (Washington) 22 December 2008. Date of Access: 23 December 2008. http://www.energy.gov/news/6817.htm.
[984] DOE Announces Funding Opportunity of up to $200 Million for Pilot and Demonstration Scale Biorefinery Projects, Department of Energy (Washington) 22 December 2008. Date of Access: 23 December 2008. http://www.energy.gov/news/6817.htm.
[985] DOE Announces Funding Opportunity of up to $200 Million for Pilot and Demonstration Scale Biorefinery Projects, Department of Energy (Washington) 22 December 2008. Date of Access: 23 December 2008. http://www.energy.gov/news/6817.htm.

Independence and Security Act (EISA), which aimed to produce 21 billion gallons of biofuels per annum by 2022.[986]

On 8 October 2008, the US Department of Agriculture and the DOA released the National Biofuels Action Plan (NBAP).[987] The NBAP is the primary cross-departmental national strategy towards sustainable biofuels. The strategy addresses the development and commercialization of first- and second-generation biofuels. It outlines: "cost-effective methods of producing cellulosic biofuels from non-food based feedstock;" methods to "advance these next generation biofuels to commercialization;" and "sustainability" as an integral short-term objective.[988] The prioritization of these objectives encourages the development and commercialization of second-generation biofuels.

On 10 September 2008, the DOE granted USD4.4 million to fund research and development in six second-generation biofuels projects based at US universities.[989] The projects represent multiple second-generation biofuels, including lignocelluloses biomass, syngas, and algae.[990] University contributions will supplement DOE funding for the projects, increasing total funding to USD5.7 million. The DOE emphasized the Renewable Fuel Standard contained within the EISA in its decision to provide funding.[991]

Thus, the United States has been awarded a score of +1 for its significant policy and monetary support for the development and commercialization of second-generation biofuels.

Analyst: Shakir Rahim

European Union: +1

The EU has complied with its commitment on second-generation biofuels.

On 11 December 2008, EU Commissioner for the Environment Stavros Dimas announced that the European Investment Fund had pledged EUR80 million through the Global Energy Efficiency and Renewable Energy Fund platform for the development and commercialization of sustainable renewable energies such as second-generation

[986] DOE Announces Funding Opportunity of up to $200 Million for Pilot and Demonstration Scale Biorefinery Projects, Department of Energy (Washington) 22 December 2008. Date of Access: 23 December 2008. http://www.energy.gov/news/6817.htm.
[987] USDA & DOE Release National Biofuels Action Plan, Department of Energy (Washington) 7 October 2008. Date of Access: 11 December 2008. http://www.energy.gov/news/6633.htm.
[988] USDA & DOE Release National Biofuels Action Plan, Department of Energy (Washington) 7 October 2008. Date of Access: 11 December 2008. http://www.energy.gov/news/6633.htm.
[989] DOE to Invest up to $4.4 Million in Six Innovative Biofuels Projects at US Universities, Department of Energy (Washington) 10 September 2008. Date of Access: 2 December 2008. http://www.energy.gov/news/6525.htm.
[990] DOE to Invest up to $4.4 Million in Six Innovative Biofuels Projects at US Universities, Department of Energy (Washington) 10 September 2008. Date of Access: 2 December 2008. http://www.energy.gov/news/6525.htm.
[991] DOE to Invest up to $4.4 Million in Six Innovative Biofuels Projects at US Universities, Department of Energy (Washington) 10 September 2008. Date of Access: 2 December 2008. http://www.energy.gov/news/6525.htm.

biofuels.[992] With this investment, the EU estimates that second-generation biofuels may be commercialized by 2015, but their high costs as opposed to first-generation biofuels will decrease only by 2020.[993]

Although the European Commission had suggested in the 2007 Biofuels Progress Report that the current directive on biofuels in force should be amended to allow further incentives to second-generation biofuels, the EU has not done so.[994] Furthermore, the Seventh Framework Program, started in 2007 and expected to last until 2013, remains the primary European-funded research initiative on biofuels development to which EUR1.935 billion has been issued.[995]

Thus, the EU has been awarded a score of +1 for moderate investment in the development and commercialization of second-generation biofuels.

Analyst: Naregh Galoustian

[992] GEEREF – An Innovative Platform to Fight Climate Change and Global Poverty (Poznanm Poland) 11 December 2008. Date of Access: 13 December 2008. http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/703&format=HTML&aged=0&language=EN&guiLanguage=en.
[993] Biofuels Progress Report, Commission of the European Communities (Brussels) 1 October 2008. Date of Access: 30 December 2008. http://www.biomatnet.org/publications/2105com.pdf.
[994] Biofuels Progress Report, Commission of the European Communities (Brussels) 1 October 2008. Date of Access: 30 December 2008. http://www.biomatnet.org/publications/2105com.pdf.
[995] Food, Agriculture and Fisheries, Biotechnology, European Commission Research (Brussels) September 2006. Date of Access: 13 December 2008. http://ec.europa.eu/research/fp7/index_en.cfm?pg=food.