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# WELL-TO-WHEELS Appendix 2 - Version 4.a

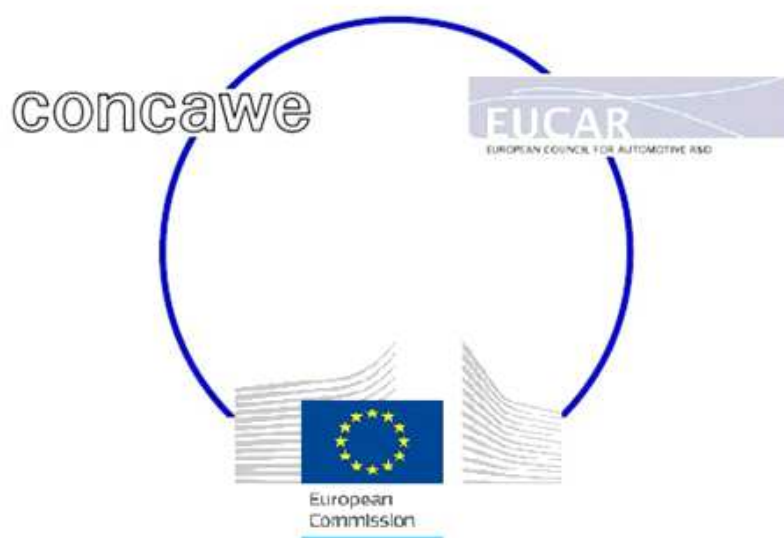
## Reference List

WELL-TO-WHEELS ANALYSIS OF FUTURE AUTOMOTIVE  
FUELS AND POWERTRAINS IN THE EUROPEAN CONTEXT

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**Editors:** Simon Godwin (EUCAR), Heather Hamje (CONCAWE), Alois Krasenbrink (JRC), Robin Nelson (CONCAWE), Kenneth D. Rose (CONCAWE)

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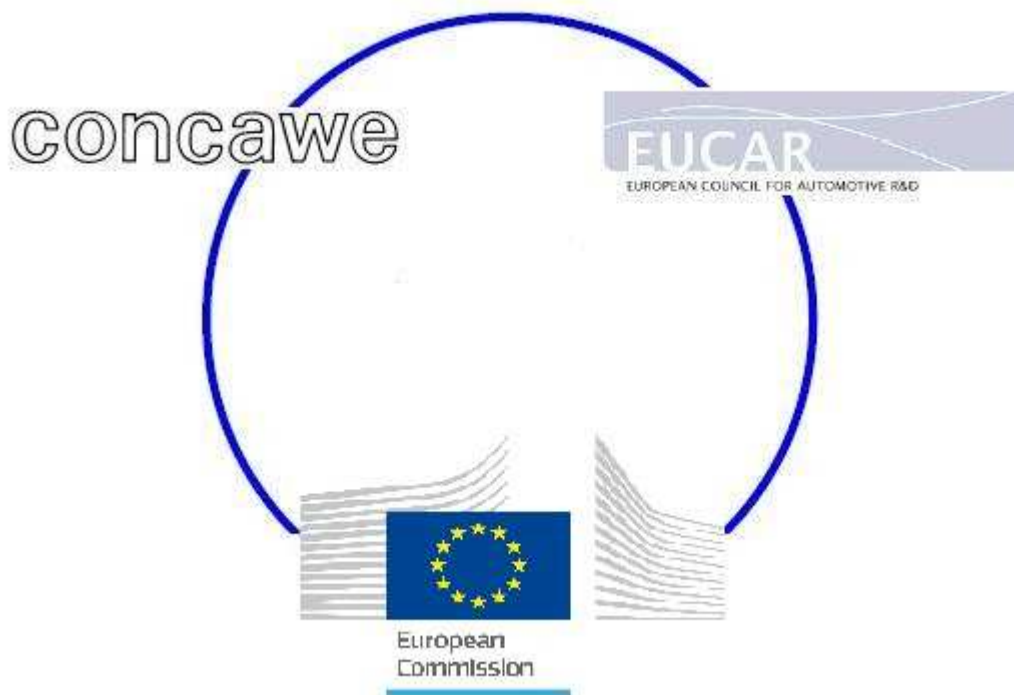
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# WELL-TO-WHEELS ANALYSIS OF FUTURE AUTOMOTIVE FUELS AND POWERTRAINS IN THE EUROPEAN CONTEXT



## WELL-to-WHEELS (WTW) REPORT APPENDIX 2 - Reference List

*Version 4, January 2014*

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**Notes on version number:**

This is version 4a of this report replacing version 3c published in July 2011.

This Appendix was formerly included as part of the WTT Report, but has been moved to the WTW section and now includes all references from the WTW, WTT and TTW Reports.

## **Acknowledgments**

This JEC Consortium study was carried out jointly by experts from the JRC (EU Commission's Joint Research Centre), EUCAR (the European Council for Automotive R&D), and CONCAWE (the oil companies' European association for environment, health and safety in refining and distribution), assisted by experts from Ludwig-Bölkow-Systemtechnik GmbH (LBST) and AVL List GmbH (AVL).

For full acknowledgement of individual contributors, please see the main WTW, WTT and TTW report texts.

## References

References used in the study have been noted in the report texts and in the workbooks giving a detailed description of the individual pathways.

This tabulation provides a complete list of the references and sources used. References are listed in alphabetical order of their Short Names, with the right hand column showing where they are used.

Since most of the report text references appear in the WTT report, section numbers refer to that report unless specifically noted.

Short name	Full reference	WTT* report section or Pathway code
<b>Agostini 2011</b>	Agostini, A., Joint Research Centre (JRC), Petten, The Netherlands, 13 May 2011	OWCG
<b>Agostini 2011 (2)</b>	Agostini, A.; Giuntoli, J.; Edwards, R.; JRC-IET: Request for support on the identification of a methodology for accounting the avoided GHG emissions of manure digestion; November 9th 2011  JRC internal document	OWCG2
<b>Agostini 2012</b>	Agostini, A., Joint Research Centre (JRC), Petten, The Netherlands, 12 January 2012	OWCG2/OWCG 4/OWEL/OWHT
<b>Agostini 2013</b>	Carbon accounting of forest bioenergy - Conclusions and recommendations from a critical literature review. Agostini, Giuntoli, Boulamanti, EUR 25354, available on-line at <a href="http://iet.jrc.ec.europa.eu/bf-ca/publications">http://iet.jrc.ec.europa.eu/bf-ca/publications</a>	3.4.1
<b>Ahluwalia 2009</b>	Ahluwalia, R.K., Nuclear Engineering Division, Argonne National Laboratory (ANL); Hua, T.Q., ANL; Peng, J-K., ANL; Lasher, S., TIAX LLC ; McKenney, K., TIAX LLC; Sinha, J., TIAX LLC: Technical Assessment of Cryo-Compressed Hydrogen Storage Tank Systems for Automotive Applications; December 2009	GxLHx/WFHL1/EMEL1_LH1
<b>Akula 2010</b>	Prasada Rao Akula, Lakshmi Jandhyala, Frieder Herb, Akash Narayana, Development of Energy Management Strategies and Analysis with Standard Drive Cycles for Fuel Cell Electric Vehicles, SAE International, 2012-01-1609, 2012.	TTW 3.4.2.3
<b>Al-mulali 2013</b>	Al-mulali U, Gholipour Fereidouni H, JaniceYmLee J, at al., "Examining the bi-directional long run relationship between renewable energy consumption and GDP growth", Renewable and Sustainable Energy Reviews 22 (2013) 209-222	3.5.1
<b>Angloher 1999</b>	Angloher; J.; Dreier, Th.; Lehrstuhl für Energiewirtschaft und Anwendungstechnik Prof. Dr.-Ing. U. Wagner, TU München: Techniken und System zur Wasserstoffbereitstellung; Koordinationsstelle der Wasserstoff-Initiative Bayern (WIBA); Dezember 1999	GRHL1
<b>ARB 2009</b>	Prabhu, A.; Pham, Ch.; Glabe, A.; Duffy, J.; California Environmental Protection Agency, Air Resources Board (ARB): Detailed California-Modified GREET Pathway for Corn Ethanol; 2009	CRET2
<b>Atrax 1999</b>	Atrax Energi AB, DME from biomass, report for IEA-Alternative Motor Fuels Agreement, Feb. 1999	WxSD_ME_DE
<b>Baumann 2012</b>	Baumann, M, University of Stuttgart. Life Cycle Assessment of automotive Lithium-Ion batteries: State of the art and future developments. Battery+Storage, October 8th 2012.	WTT 2.4 WTW 2.1

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<b>Berglin 1999</b>	Berglin, N.; Eriksson, H.; Berntsson, T.; Department of Heat and Power Technology, Chalmers University of Technology, Goteborg, Sweden: Performance evaluation of competing designs for efficient cogeneration from black liquor; prepared for the 2nd Biennial Johan Gullichsen Colloquium, Helsinki, Finland, September 9-11, 1999	WWEL
<b>BOC 1997</b>	Hydrogen Infrastructure Report; prepared for Ford Motor Company Dearborn, Michigan by Directed Technologies, Inc. Arlington, VA; Air Products and Chemical Allentown, PA; BOC Gases Murray Hill, NJ; The Electrolyser Corp., Ltd. Toronto CDN; Praxair, Inc. Tonawanda, New York; July 1997; Under Prime Contract No. DE-AC02-94CE50389; Purchase Order No. 47-2-R31148 to the U.S. Department of Energy, Office of Transportation Technologies	GPLCHb
<b>Börjesson 2004</b>	Berglund, M.; Börjesson, P., Energy and Environmental Systems Studies, Lund University, Lund, Sweden: Assessment of energy performance in the life-cycle of biogas production; September 2004	OWCG1//OWH T1/OWEL1
<b>Börjesson 2005</b>	Börjesson, P.; Berglund, M., Environmental and Energy Systems Studies, Dept. of Technology and Society Lund University, Lund, Sweden: Environmental system analysis of biogas systems - Part 1: fuel-cycle emissions; January 2005	OWCG1/OWHT 1/OWEL1
<b>BMU 2004</b>	Klima-Bündnis der europäischen Städte mit indigenen Völkern der Regenwälder/ Alianza del Clima e.V.: Erneuerbare Energien - Mit gutem Beispiel voran:16 Vorzeigeprojekte aus ganz Deutschland; Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU) 2004. www.klimabuendnis.org	WxEH_HE
<b>BP 2012</b>	BP Statistical Review of World Energy, June 2012	3.1.1
<b>Brandt 2011</b>	Brandt, A., Upstream greenhouse gas (GHG) emissions from Canadian oil sands as a feedstock for European refineries, Department of Energy Resources Engineering, Stanford University, Stanford, January 2011	3.1.1
<b>Breyer 2011</b>	Breyer, Ch, Reiner Lemonine Institut gGmbH, Berlin, Germany.; Rieke, S.Solar Fuel GmbH, Stuttgart, Germany; Sterner, M., IWES, Kassel, Germany; Schmid, J., IWES, Kassel, Germany: Hybrid PV-Wind-Renewable Methane Power Plants - A Potential Cornerstone of Global Energy Supply; preprint to be published of the 26th European Photovoltaic Solar Energy Conference, 5-9 September 2011, Hamburg, Germany	RECG1
<b>Brunner 2011</b>	Brunner, T., BMW Group: BMW efficient dynamics hydrogen - prospects and challenges: extracts concerning cryo-compressed H2 storage & refueling; F-CELL, 27 September 2011	GxLHx/WFHL1/ EMEL1_LH1
<b>Businessweek 2013</b>	Business week, Iogen Focusing on Biofuels in Brazil After Selling Enzyme Unit, <a href="http://www.businessweek.com/news/2013-01-31/iogen-focusing-on-biofuels-in-brazil-after-selling-enzyme-unit">http://www.businessweek.com/news/2013-01-31/iogen-focusing-on-biofuels-in-brazil-after-selling-enzyme-unit</a> . (accessed 10/07/2013)	3.4.11
<b>CAPRI 2012</b>	Kempen, M., University Bonn: CAPRI energy results; 01 March 2012	SBET/WTET1-5/BRET2/CRET 2/CRETus / LREB1/SOFA
<b>CA LCFS</b>	<a href="http://www.arb.ca.gov/fuels/lcfs/lcfs.htm">http://www.arb.ca.gov/fuels/lcfs/lcfs.htm</a> (accessed 18/03/2013)	3.4.1
<b>Chin 1991</b>	Chin, F.Y., Department of Veterinary Services, Kuala Lumpur, Malaysia: Palm Kernel Cake (PKC) as a Supplement for Fattening and Dairy Cattle in Malaysia; 1991; <a href="http://www.fao.org/ag/AGP/agpc/doc/Proceedings/manado/chap25.htm">http://www.fao.org/ag/AGP/agpc/doc/Proceedings/manado/chap25.htm</a>	POFA
<b>CONCAWE 2012</b>	CONCAWE (2012) EU refinery energy systems and efficiency. Report No. 3/12. Brussels: CONCAWE	App 3

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<b>Coo 2011</b>	Coo, Y.M.; Muhamad, H.; Hashim, Z.; Subramaniam, V.; Puah, C.W.; Tan, Y.: Determination of GHG Contributions By Subsystem In The Oil Palm Supply Chain Using The LCA Approach; Int J. Life Cycle Assess, 2011	POFA
<b>Crutzen 2007</b>	N <sub>2</sub> O release from agro-biofuel production negates global warming reduction by replacing fossil fuels. P. J. Crutzen, A. R. Mosier, K. A. Smith, and W. Winiwarter. Atmos. Chem. Phys. Discuss., 7, 11191–11205, 2007. <a href="http://www.atmos-chem-phys-discuss.net/7/11191/2007/acpd-7-11191-2007.pdf">http://www.atmos-chem-phys-discuss.net/7/11191/2007/acpd-7-11191-2007.pdf</a>	3.4.2
<b>Da Silva 2010</b>	Da Silva VP, van der Werf HMG, Spies A, Soares SR, 2010, "Variability in environmental impacts of Brazilian soybean according to crop production and transport scenarios", Journal of Environmental Management, Vol. 91, issue 9 (September 2010), pp.1831-1839	SYxx
<b>De Camillis 2010</b>	DE CAMILLIS, C., RAGGI, A. & PETTI, L. (2010) Developing a Life Cycle Inventory data set for cattle slaughtering. DASTA working paper. Universita' degli Studi "G. d'Annunzio". Pescara, Italy. (pp 5-6 on the allocation procedure)	TOxx
<b>Dienhart 1999</b>	Dienhart et. al. Analyse von Einsatzmoeglichkeiten..., DLR, Stuttgart 6/99	GRCG1/GRCG2 /GRLG1/WTET4 / GxEL/KOEL/ OWEL/WxEL/ GxEH_HE/GxHT /GRxH/ GRELx_CHx
<b>DOE 2002</b>	Fossil Energy International: An Energy Overview of Columbia; October 2002; <a href="http://www.fe.doe/international/colbover.html">http://www.fe.doe/international/colbover.html</a>	KOxx/KOCHx_C Hx
<b>Dreier 1999</b>	Dreier, Th., Technische Universität (TU) München, Lehrstuhl für Energiewirtschaft und Anwendungstechnik Prof. Dr.-Ing. U. Wagner: Techniken und Systeme zur Wasserstoffbereitstellung; München, Dezember 1999	3.5.2 XXXX_CHx
<b>Dreier 2000</b>	Dreier, Th.: Ganzheitliche Systemanalyse und Potenziale biogener Kraftstoffe; IfE Schriftenreihe, Heft 42; herausgegeben von: Lehrstuhl für Energiewirtschaft und Anwendungstechnik (IfE), Technische Universität München, Ordinarius: Prof. Dr-Ing. Ulrich Wagner; 2000; ISBN 3 - 933283 - 18 - 3	SCET1 Prop table
<b>EBB 2009</b>	European Biodiesel Board (EBB), 21 July 2009. EBB data supplied by Robert Edwards, Joint Research Centre (JRC), Ispra, Italy, 21 July 2009	xxFA/ROFE
<b>EC 2009</b>	<i>EU Energy Trends to 2030, update 2009</i> <a href="http://ec.europa.eu/clima/policies/package/docs/trends_to_2030_update_2009_en.pdf">http://ec.europa.eu/clima/policies/package/docs/trends_to_2030_update_2009_en.pdf</a>	3.5.1
<b>Edwards 2010</b>	Indirect Land Use Change from increased biofuels demand. Comparison of models and results for marginal biofuels production from different feedstocks, R. Edwards, D. Mulligan, L. Marelli, JRC Scientific & Technical Report, EUR 24485 EN, 2010, ISBN 978-92-79-16391-3, DOI 10.2788/54137	3.4.1
<b>EEA 2004</b>	Assessing the potential impact of large-scale biomass production on agricultural land use, farmland habitats and biodiversity EEA/EAS/03/04	3.4.2
<b>EFMA 2008</b>	European Fertiliser Manufacturer Association (EFMA), 2008	SBET/WTET1-5/ / /LREB1/ROFA/ ROFE
<b>EHN 2003</b>	EHN: A 25 MW plant for straw combustion; 2003, www.ehn.es	WTET4
<b>Ekbom 2003</b>	T. Ekbom et al. 'Technical and commercial feasibility study of black liquor gasification with methanol/DME production as motor fuels for automotive	WWSD2/ME2/ DE2/WWCH3

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	uses-BLGMF' Report for DG-TREN Altener programme Dec. 2003, download from <a href="http://www.nycomb.se">www.nycomb.se</a>	
<b>Ekbom 2005</b>	Ekbom, T. Berglin, N. and Logdberg, S. " Black liquor gasification with motor fuel production - BLGMF II - A techno-economic feasibility study on catalytic Fischer-Tropsch synthesis for synthetic diesel production in comparison with methanol and DME as transport fuels." Report P21384-1 for the Swedish Energy Agency. <a href="http://www.nykomb.se/pdf/BLGMF_II.pdf">www.nykomb.se/pdf/BLGMF_II.pdf</a>	WWSD2/ WWCH3
<b>El Cerrejon 2002</b>	El Cerrejon Norte Coal Mine, Colombia; <a href="http://www.mining-technology.com/projects">http://www.mining-technology.com/projects</a>	KOxx/KOCHx_C Hx
<b>Ekbom 2003</b>	T. Ekbom et al. 'Technical and commercial feasibility study of black liquor gasification with methanol/DME production as motor fuels for automotive uses-BLGMF' Report for DG-TREN Altener programme Dec. 2003, download from <a href="http://www.nycomb.se">www.nycomb.se</a>	3.4.11 WWEL
<b>ENEA 2004</b>	ENEA, Fraunhofer ISI, Riso National Laboratory: HYPOGEN Pre-feasibility Study; Brussels, 29 October 2004	KOEL
<b>EP ILUC 2013</b>	European Parliament 20-02-2013, Workshop on Sustainable Biofuels: addressing indirect land use change (ILUC); <a href="http://www.europarl.europa.eu/document/activities/cont/201302/20130214ATT61071/20130214ATT61071EN.pdf">http://www.europarl.europa.eu/document/activities/cont/201302/20130214ATT61071/20130214ATT61071EN.pdf</a> (accessed 10/07/2013)	3.4.1
<b>ESU 1996</b>	Hischier, R.; Martin, A.; Frischknecht, R., Eidgenössische Technische Hochschule, Gruppe Energie – Stoffe – Umwelt (ESU) Zürich, Schweiz: Ökoinventare von Energiesystemen, 3. Auflage; Bundesamt für Energiewirtschaft (BEW), Projekt- und Studienfonds der Elektrizitätswirtschaft; Juli 1996	Common process T1
<b>ETSU 1996</b>	Gover, M. P.; Collings, S. A.; Hitchcock, G. S.; Moon, D. P.; Wilkins, G. T.: Alternative Road Transport Fuels - A Preliminary Life-cycle Study for the UK, Volume 2; A study co-funded by the Department of Trade and Industry and the Department of Transport; ETSU, Harwell March 1996	GRMB1/LRLP1/ WTET1-5/ LREB1
<b>EU 2009 (1)</b>	Official Journal of the European Union, L140/16 and L140/88, 5.6.2009	3.4.1
<b>EU 2009 (2)</b>	Official Journal of the European Union, L151/19, 17.6.2010	3.4.1
<b>EUROSTAT 2001</b>	Hard Coal and Coke, Imports 1998 - 2000; Statistics in focus; Environment and Energy; Eurostat 2001	KOxx/KOCHx_C Hx
<b>EUROSTAT 2013</b>	Source: Eurostat online data code: nrg_105a, nrg_105m	3.5.1
<b>FAPRI 2012</b>	FAPRI 2012 US and World Agricultural Outlook <a href="http://www.fapri.iastate.edu/outlook/2012/">http://www.fapri.iastate.edu/outlook/2012/</a>	3.4.10
<b>FAO 2010</b>	FAO prodstat database 2010; <a href="http://faostat.fao.org/site/339/default.aspx">http://faostat.fao.org/site/339/default.aspx</a>	SCET1
<b>FfE 1996</b>	Bauer, H.; Schmittinger, C.: Prozeßkettenanalyse und Verfügbarkeit von Erdgas als Kraftstoff für Kraftfahrzeuge; Endbericht; Forschungsstelle für Energiewirtschaft (FfE) Oktober 1996	GRxx/GRxH/ GRELx_CHx
<b>FfE 1998</b>	Dreier, T.; Geiger, B.; Lehrstuhl für Energiewirtschaft und Kraftwerkstechnik, TU München (IfE); Saller, A., Forschungsstelle für Energiewirtschaft (FfE): Ganzheitliche Prozeßkettenanalyse für die Erzeugung und Anwendung von biogenen Kraftstoffen; Studie im Auftrag der Daimler Benz AG, Stuttgart und des Bayerischen Zentrums für Angewandte Energieforschung e.V. (ZAE); Mai 1998	SBET/ROFA/RO FE/WxCH2



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<b>Flessa 1998</b>	H.Flessa et.al. Freisetzung und verbrauch der klimarelevanten spurengase N <sub>2</sub> O und CH <sub>4</sub> beim anbau nachwachsende rohstoffe. Deutsche Bundestiftung Umwelt, Osnabruek (1998)	WFxx/ WFELx_CHx																														
<b>Foster Wheeler 1996</b>	Foster Wheeler: Decarbonisation of Fossil Fuels; Report Nr. PH2/2; Prepared for the Executive Committee of the IEA Greenhouse Gas R&D Programme; March 1996	3.3 GxCH2/GxCH2 C																														
<b>GEMIS</b>	<p>GEMIS (Global Emission Model of Integrated Systems <a href="http://www.oeko-institut.org/service/gemis/index.htm">http://www.oeko-institut.org/service/gemis/index.htm</a>;</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Versions</th> <th>Pathways</th> </tr> </thead> <tbody> <tr> <td>2000</td> <td>4.0</td> <td>WDEL/RESD</td> </tr> <tr> <td>2001</td> <td>4.0.7.0</td> <td>CRETus</td> </tr> <tr> <td>2002</td> <td>4.1.3.2</td> <td>GMCG1/GPCG1a-b/GRCG1-1c/GRCG2/GRLG1/SGCG1/ WTET2BRET2/CRET2/WW-WFET1/ KOxx/KOELx_CHx/GPME_DE/WxSDME_DE/ GxEL/WxEL/NUEL/COHT/GxHT/WxHT/GxEH_HE/WxEH_HE/ GxxHx/GxELx_CHx</td> </tr> <tr> <td>2004</td> <td>4.2.1.0</td> <td>OWEL/NUEL</td> </tr> <tr> <td>2005</td> <td>4.3.0.0</td> <td>WCG5/WTET3/STET1/KOSD_ME_DE/ WxEL/NUEL/COHT/GxHT/OWHT/OWEL/GxEH_HE/WxEH_HE</td> </tr> <tr> <td>2007</td> <td>4.4.2.0</td> <td>OWCG1/OWCG2/OWCG4/WTET3/OWHT1/OWEL1/NUEL/WxHT</td> </tr> <tr> <td>2009</td> <td>4.5.0.0</td> <td>NUEL</td> </tr> <tr> <td>2010</td> <td>4.6.0.0</td> <td>NUEL</td> </tr> <tr> <td>2011</td> <td>4.7.0.0</td> <td>FOEL /OWEL/GxEL/NUEL/GxHT/GxEH_HE</td> </tr> </tbody> </table>	Year	Versions	Pathways	2000	4.0	WDEL/RESD	2001	4.0.7.0	CRETus	2002	4.1.3.2	GMCG1/GPCG1a-b/GRCG1-1c/GRCG2/GRLG1/SGCG1/ WTET2BRET2/CRET2/WW-WFET1/ KOxx/KOELx_CHx/GPME_DE/WxSDME_DE/ GxEL/WxEL/NUEL/COHT/GxHT/WxHT/GxEH_HE/WxEH_HE/ GxxHx/GxELx_CHx	2004	4.2.1.0	OWEL/NUEL	2005	4.3.0.0	WCG5/WTET3/STET1/KOSD_ME_DE/ WxEL/NUEL/COHT/GxHT/OWHT/OWEL/GxEH_HE/WxEH_HE	2007	4.4.2.0	OWCG1/OWCG2/OWCG4/WTET3/OWHT1/OWEL1/NUEL/WxHT	2009	4.5.0.0	NUEL	2010	4.6.0.0	NUEL	2011	4.7.0.0	FOEL /OWEL/GxEL/NUEL/GxHT/GxEH_HE	
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<b>GEMIS 2000/ GEMIS 4.0</b>	GEMIS 4.0 Database and Calculation Model of the Oeko-Institut, Darmstadt	WDEL/RESD																														
<b>Germer 2008</b>	Germer, J   Sauerborn, J, Estimation of the impact of oil palm plantation establishment on greenhouse gas balance, Environment, Development and Sustainability Environ. Dev. Sustainability. Vol. 10, no. 6, pp. 697-716. Dec 2008	3.4.10																														
<b>GHW 2001</b>	Brand, R., A., Gesellschaft für Hochleistungselektrolyse zur Wasserstofferzeugung mbH (GHG); personal communication 2001	3.5.2 RExx/ XXXX_CHx																														
<b>GM 2002</b>	GM Well-to-Wheels Analysis of Energy Use and Greenhouse Gas Emissions of Advanced Fuels/Vehicles Systems. A European study. LBST, September 2002	WTT 1. and WTW 1.																														
<b>GHW 2004</b>	Brand, R., A., Gesellschaft für Hochleistungselektrolyse zur Wasserstofferzeugung mbH (GHW): Introduction of an Efficient, Innovative Pressure Module Electrolyser (PME) of High Capacity and Low Cost, for the Sustainable Fuel and Electricity Storage Market; HYFORUM 2004, Beijing, China, May 2004	3.5.2 RExx/ XXXX_CHx																														
<b>Gogolek 2012</b>	Gogolek, P., Experimental Studies on Methane Emissions from Associated Gas Flares, Natural Resources Canada, Canmet ENERGY, Ottawa, 2012	3.1.1																														
<b>Grass 2001</b>	Graß, R., Universität Kassel, Institut für Nutzpflanzenkunde: Produkton von	OWCG5																														

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	Energiepflanzen in der ökologischen Kreislaufwirtschaft; Internationales Biogas & Kompetenzzentrum (IBBK) Tagung, 2001	
<b>Gray 2001-2005</b>	Gray, D.; Tomlinson, G.; Mitretek Systems (MTS): Coproduction: A Green Coal Technology; MP 2001-28 Mitretek; Technical Report for the U.S. Department of Energy (DOE) under a subcontract with Concurrent Technology Corporation (CTC), contract number DE-AM26-99FT40465; March 2001  Gray, D., personal communication, 21 July 2005	3.3 KOSD_ME_DE
<b>Greenfield 2002</b>	Landinger, H., GreenField Deutschland GmbH, Türkenfeld, Germany, personal communication November 2002	xxCG
<b>GREET 2011</b>	Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model; Argonne National Laboratory, Transportation Technology R & D Center; version 1, 2011	CRET2/CRETus
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<b>IEA 2005</b>	"Low Emission Fuels- the impact of CO <sub>2</sub> Capture and Storage on selected pathways" A report produced for the IEA Greenhouse Gas R&D programme, 2005	GRSD1C/ /GRDE1C  3.6
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<b>IEA 2012</b>	Oil Information 2012 with 2011 data, International Energy Agency (IEA), Paris, France, 2012	3.1.1
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<b>IFA 2010</b>	International fertilizer Association: fertilizer use by crop 2006/7 <a href="http://www.fertilizer.org/ifa/Home-Page/STATISTICS">http://www.fertilizer.org/ifa/Home-Page/STATISTICS</a> accessed June 2010; FAOSTAT production data 2007	POFA
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<b>IPPC 2007 (3)</b>	IPCC Fourth Assessment Report, For GHG coefficients, see Technical Summary, Table TS-2, Page 33. <a href="http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-ts.pdf">http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-ts.pdf</a>	2.6.1
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<b>IPPC 2007 (1)</b>	IPCC 4 <sup>th</sup> Assessment Report: Climate Change 2007. Working Group III: Mitigation of Climate Change. <a href="http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch3s3-2-1-6.html">http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch3s3-2-1-6.html</a> (accessed 18/03/2013)	3.4.1
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Abstract

The JEC research partners [Joint Research Centre of the European Commission, EUCAR and CONCAWE] have updated their joint evaluation of the well-to-wheels energy use and greenhouse gas emissions for a wide range of potential future fuel and powertrain options.

This document reports on the fourth release of this study replacing Version 3c published in July 2011.

The original version was published in December 2003.

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