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Low carbon fuel companies unite to present opportunities to reduce greenhouse gas emissions in transport ahead of COP21

- For the first time ever, eleven leading low carbon fuel companies from around the world have joined forces to publish a comprehensive guide of sustainable fuel technologies available today that can drive down emissions in the transport sector.
- The guide helps countries and businesses identify the most suitable low carbon fuel technologies that can enable them to meet their climate commitments beyond Paris.
- Today, only 3% of transportation fuels are low carbon. According to the International Energy Agency (IEA), 10% of fuels must be low carbon by 2030 if we are to satisfy economic growth while staying below 2°C.

GENEVA [November 24 2015] - Today, eleven leading low carbon fuel companies present a <u>comprehensive guide</u> that identifies a variety of available and accessible low carbon fuel solutions.

The guide was developed to help countries and businesses identify the most suitable low carbon fuel technologies that will enable them to implement their climate commitments following this year's climate talks in Paris. The initiative is part of the World Business Council for Sustainable Development (WBCSD) Low Carbon Technology Partnerships Initiative (LCTPi) whose outcomes will be presented at COP21.

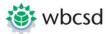
Peter Bakker, President and CEO of WBCSD said:

"As governments across the globe commit to their climate action pledges in Paris, they will be looking for solutions to help them deliver on those promises. This guide presents tangible and scalable technologies that are opportunities just waiting to be seized".

Low carbon fuels are essential to achieving environmental, social and economic goals. The challenge is significant given that the share of low carbon fuels among transportation fuels must grow from 3% to 10% by 2030 according to IEA.

Feike Sijbesma, CEO and Chairman of the Managing Board of Royal DSM said:

"Thanks to the Low Carbon Technology Partnerships initiative of the WBCSD, countries and companies now have an accessible guide to review the opportunities provided by the various low carbon fuel technologies. DSM is committed to the development of plant-residue-based cellulosic ethanol as a viable, commercially attractive alternative to gasoline as we are moving from the fossil age to the (bio-)renewable age. Together with our partner POET, we apply our proprietary technology to convert agricultural residue on a commercial scale, allowing it to be replicated at facilities around the world. Advanced, sustainable biofuels can reduce greenhouse gas emissions with up to 95%, compared to fossil fuels. The Paris climate summit needs to be a turning point in the relationship between humanity and our environment."



The guide was put together in recognition of the need to accelerate deployment of all available low carbon fuel solutions. This includes both mature, conventional technologies, and early stage technologies that will be ready (or have the strong potential to be ready) for commercial deployment in the coming few years.

Peder Holk Nielsen, CEO of Novozymes said:

"With transportation accounting for 25% of energy-related carbon dioxide, it is critical to significantly reduce emissions within this sector to remain below the 2°C climate warming. Biofuels are the only existing liquid alternatives to fossil fuels available at scale today and hold the potential to provide 30% of transportation fuels by 2050 – with advanced biofuels from waste and residues reducing lifecycle emissions on an average of 80-90% compared to fossil equivalents.

"Stable and long term policies such as blending mandates are critical to the successful deployment of these low carbon fuel technologies that should be a critical component to each country's climate strategy."

Low Carbon Transport Fuel LCTPi companies have identified a clear set policy and financial barriers that could be removed in order to facilitate deployment at scale. For example, governments can help build investor confidence by offering stable, long-term and transparent policies. Several climate action pledges of governments, including Brazil and the European Union already refer to the opportunity of low carbon fuels.

Zoltan Reng, CEO of Pannonia Ethanol said:

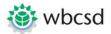
"Governments and the private sector need to work together to achieve the necessary reductions in greenhouse gas and to release the substantial pent up investment potential of the industry. To date policy uncertainty in Europe has blocked this essential investment. As an industry leader in Europe, Pannonia Ethanol has demonstrated its willingness and ability to work with Government and with EU institutions to build a sustainable bioethanol industry for Europe."

Robert Wright, Secretary-General of the European renewable ethanol association (ePURE) said:

"With global transport emissions projected to double by 2050, low carbon fuels are an essential tool in the global fight against climate change because they can easily be used in the existing vehicle fleet to reduce greenhouse gas emissions from transport. Policy support for low carbon fuels, such as Europeanproduced renewable ethanol with its 60% GHG savings compared to petrol, must be strengthened to ensure they can compete in a fuel market which is dominated by low oil prices. This new guide correctly identifies the need for clear, consistent and stable government policies to increase the uptake of alternative transport fuels and help drive long-term investments in this sector."

Jim Lane, Editor of Biofuels Digest said:

"No one has yet produced a sharper, in-depth summary of the imperative for low-carbon fuels, the state of their development, and the critical policy supports needed to ensure their deployment. Without a transport solution, there is no climate solution, and the children of today will be direct beneficiaries of these science-based policies, if they are employed and enforced."



Notes to Editors

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About WBCSD & the Low Carbon Technology Partnerships Initiative (LCTPi)

At COP20, WBCSD launched the Low Carbon Technology Partnerships initiative (LCTPi) with SDSN (Sustainable Development Solutions Network) and IEA (International Energy Agency). Supported by the French Presidency of COP21, the LCTPi is part of the Lima-Paris Action Agenda. It aims to present a series of concrete action plans at COP21 for the large-scale development and deployment of low-carbon technologies.

It is a unique initiative whose size and scale is unprecedented. Over 140 companies and 47 partners have joined together to collaborate on low-carbon action plans designed to reach ambitious targets on emissions reduction.

LCTPi is a collaborative platform that brings together WBCSD's Action2020 Business Solutions, SDSN's Deep Decarbonisation Pathways and IEA's Technology Roadmaps to:

- Accelerate the diffusion of existing technologies by removing technological, market and social barriers and introducing required policy and financial instruments
- Develop Public Private Partnerships (PPPs) on the Research, Development, Demonstration and Deployment (RDD&D) of potentially game changing new technologies.

About Peter Bakker, President & CEO of WBCSD

Peter Bakker is the President and CEO of the World Business Council for Sustainable Development. Mr. Bakker is a distinguished business leader who until June 2011, was the CEO of TNT NV, the Netherlandsbased holding company of TNT Express and Royal TNT Post. Under his leadership TNT rose to the forefront of Corporate Responsibility via a ground-breaking partnership with the UN World Food



Program and ambitious CO₂ reduction targets from its Planet Me initiative, holding multiple-year topranking positions in the Dow Jones Sustainability Index.

Mr. Bakker is the recipient of Clinton Global Citizen Award (2009); SAM Sustainability Leadership Award (2010); and has been an Ambassador Against Hunger for the UN World Food Programme since 2011. In addition he is the Chairman of War Child Netherlands.

About Royal DSM

Royal DSM is a global science-based company active in health, nutrition and materials. By connecting its unique competences in Life Sciences and Materials Sciences DSM is driving economic prosperity, environmental progress and social advances to create sustainable value for all stakeholders simultaneously. DSM delivers innovative solutions that nourish, protect and improve performance in global markets such as food and dietary supplements, personal care, feed, medical devices, automotive, paints, electrical and electronics, life protection, alternative energy and bio-based materials. DSM and its associated companies deliver annual net sales of about €10 billion with approximately 25,000 employees. The company is listed on Euronext Amsterdam.

About Feike Sijbesma, CEO and Chairman of the Managing Board of Royal DSM

Feike Sijbesma (Dutch, 1959) studied medical (molecular) biology at the University of Utrecht and business administration at Erasmus University in Rotterdam.

In 1987, he joined the Industrial Pharmaceuticals division of Gist-brocades, where he was responsible for strategic planning and business development. From 1990 to 1993, he was appointed the division's Marketing and Sales Director. Thereafter (1993) he was given leadership of Savoury Ingredients, later on a business unit of Gist-brocades' Food Specialties Division. In 1995, he was made director of that division and joined the Gist-brocades' Executive Committee. Following the acquisition by DSM in 1998 he became Director of the business group DSM Food Specialties.

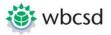
In 2000, Feike joined DSM's Managing Board of Directors. He became CEO & Chairman of the Managing Board on 1 May 2007.

About Novozymes

Novozymes is the world leader in biological solutions. Together with customers, partners and the global community, the company improves industrial performance while preserving the planet's resources and helping to build better lives. As the world's largest provider of enzyme and microbial technologies, its bioinnovation enables higher agricultural yield, low-temperature washing, energy-efficient production, renewable fuel and many other benefits that we rely on today and in the future.

About Peder Holk Nielsen, CEO of Novozymes

In April 2013, Peder Holk Nielsen, born 1956, took over as the second CEO of Novozymes since the IPO. Peder has dedicated his career to the field of industrial biotechnology, beginning in 1984 as a Product Manager in the Enzymes Division of Novo A/S. Through the years, Peder has worked in many different parts of the business, not only shaping the company as it is today but also solidifying the market insight and research capabilities that will foster Novozymes of tomorrow. Peder's career path quickly took him into a succession of leadership roles. From 1987 he became head of the New Business Development



Group. He took over as Vice President in R&D in 1990. In 1995 Peder joined the management team of the enzyme business in Novo Nordisk A/S initially as Vice President of Development and Quality anagement, and from 1999 he led Sales and Marketing in the enzymes business. He held this position until the demerger of Novozymes from Novo Nordisk. With the creation of Novozymes in 2000, Peder continued running the operational side of the business as Executive Vice President, responsible for sales, marketing and supply chain activities. In 2007 he assumed leadership for all of Enzyme Business, including production, procurement, development and quality management. During his many years in the management teams of the Novozymes business, Peder has focused his attention on developing organizations and processes that effectively can turn customer insights into product ideas and deliver solutions that excite Novozymes' customers. Often he has been directly involved in leading such ventures as was the case when Novozymes built its partnerships in biomass conversion. Peder Holk Nielsen holds a Ph.D. and a M.Sc. in Chemical Engineering from the Technical University of Denmark and a B.Com. in International Business Management from Copenhagen Business School. Peder serves on the Board of Directors of Hempel A/S, a leading developer and supplier of coatings, and of LEO Pharma A/S, a leading company in dermatological and thrombotic treatments.

About Pannonia Ethanol

Pannonia Ethanol produces fuel ethanol and animal feed. The company is part of Ethanol Europe Renewables Limited, owned by the Turley family from Ireland, and is located in Dunaföldvár, Tolna County, Hungary. The facility purchases more than 1,000,000 tons of corn annually from farmers to produce 450 million litres of renewable ethanol, 325,000 tons of Dried Distillers Grains with Solubles (DDGS), a high protein animal feed, and 10,000 tons of corn oil, a great animal feed ingredient. The leading renewable ethanol producer in Central and Eastern Europe, the enterprise adds nearly €500 million to Hungary's GDP annually and supports 2000 jobs, mostly in rural areas, 93% in the service and industrial sectors and 7% on farm jobs.

About Zoltan Reng, CEO of Pannonia Ethanol

Zoltan Reng is CEO of Pannonia Ethanol, Europe's largest ethanol and DDGS producing plant. The plant is owned by the Turley family and located in Hungary. It is one of the world's most efficient and environmentally friendly ethanol refineries. Zoltan is an architect by profession and developed the original plant on time and on budget.