

CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS



Supporting bioenergy retrofits for the Ukrainian energy sector

Webinar 2 10 November 2021 Biomethane: transfer of technologies, policies and best practices from European experience





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 817999.

BIOFIT virtual business mission to Ukraine





Main goal:

Promote cooperation and exchange between European industry and private sector players with stakeholders from research, industry and the public sector in Ukraine on the topic of <u>bioenergy retrofits</u>



Bioenergy retrofits



The bioenergy retrofits studied in the BIOFIT project are technical measures applied to existing production plants that support bioenergy utilization as an alternative to fossil energy

The retrofit measures can result in either of the following:

- Using additional biomass as an input to the production plant
 - for primary bioenergy products
 - for process energy
- Producing additional output from biomass at the production plant:
 - transport biofuels

biomethane

- intermediate bioenergy carriers
- heat and/or electricity

Retrofitting often means lower capital expenditure, shorter lead times, faster implementation, less production time losses and lower risks



BIOFIT Overall Objective & Consortium



Support and initiate bioenergy **Project consortium:** retrofitting opportunities in five industry sectors btg (biomass technolom combined heat and power fossil firing power Ciemot Swedish BioFuels first-generation biofuels 102 fossil refineries BEST Bioenergy and energikontor HELLENIC pulp and paper PETROLEUM BIOCARBURANTES leading to an increase in the share of renewable energy in the final EU DBFZ DE CASTILLA Y LEÓN BIOENERGY energy consumption CERTH CENTRE FOR RESEARCH & TECHNOLOGY TechnipFMC



BIOFIT activities to support bioenergy retrofits



- Develop **10 concrete proposals (Case Studies)** for bioenergy retrofitting together with industry and market actors
- Obtain an overview of options for bioenergy retrofitting
- Involve, engage and support stakeholders and market actors, providing opportunity for dialogue, and developing best practices and tools
- Evaluate framework conditions (legal, institutional and political) to identify generic and industry-specific barriers and enablers
- Provide **advice to policy makers** at national and regional level to serve as input for more informed policy, market support and financial frameworks



BIOFIT project outputs





TECHNICAL OPTIONS FOR RETROFITTING INDUSTRIES WITH BIOENERGY

A HANDBOOK

BIOFIT

Bioenergy Retrofits for Europe's Industry		
RETROFIT (VEDØRE POWER STA (DENMARI	TION - UNIT1	BEST PRACT
KEY INFORMATION		
	ng Energy until 2017)	1
		1 Acres
		And the second
Retrofit measure: Ohange from coal to	o biomass combustion	
		11
		and the local division of the second
Capital Expenditure including lifetime extr 740 Million DKK (approx. 100 Millio	ension:	
TECHNICAL DATA	INITIAL STATE	AFTER RETROF
Electricity production capacity [MW]	250	258
Heat production capacity [MW]	350	370
Main fuel	Coal	Pellets
Estimated annual GHG emissions [tCO ₃ eq]	Not available	Not evailable
Estimated annual specific GHG emissions [gCO ₂ eq/kWh _{decter}]	Not available	Not available

BIOFIT DST



Projects

Search Company/Project Name/Project Location Country/Project Location City Submit

Company	Project Name	Project Location Country	
Alcogroup SA	Alcogroup Ghent	Belgium	Info
Alholmens Kraft	AK2 (Jakobstad Power Station or Pietarsaari Power Station)	Finland	Info
Atlantis Energy [SIMEC group]	Uskmouth Power	United Kingdom	Info
AustroCel Hallein GmbH	AustroCel Bioethanol	Austria	Info
Billerudkorsnas/Bomhus Energi AB	Korsnas Gavle	Sweden	Info
Biocarburantes Castilla y Leon (Vertex Bioenergy)	Vertex Bioenergy Babilafuente	Spain	Info
Boehringer Ingelheim Pharma KG	Boehringer	Germany	Info
Borregaard AS	Bioethanol upgrade	Norway	Info

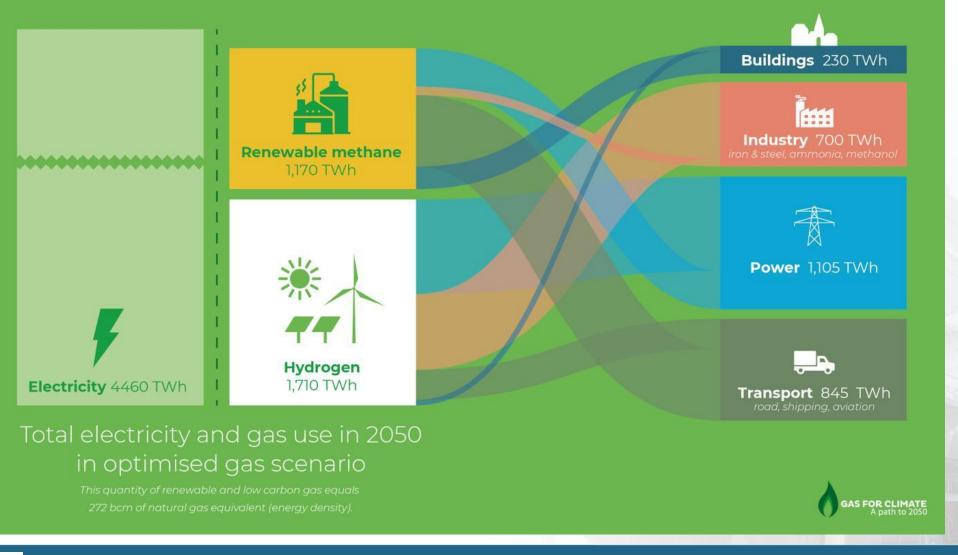


Visit: https://www.biofit-h2020.eu/



Renewable methane by 2050







www.biofit-h2020.eu

Today's agenda



Time (CET)	Topic	Speaker(s)
10:00	Welcome & Introduction to the BIOFIT project (10' min)	Manolis Karampinis, Research Associate, Centre for Research and Technology Hellas (CERTH)
10:10	Prospects of Biomethane Production in Ukraine (20' min)	Georgii Geletukha, Head of Board, Bioenergy Association of Ukraine (UABIO)
10:30	Biomethane market in Germany: status, uses, incentives and success cases (30' min)	Dirk Bonse, Head of Division "Renewable Gases", Fachverband BIOGAS
11:00	Connecting with European biogas stakeholders: the DiBiCoo stakeholder platform (15' min)	Dominik Rutz, Head of the Bioenergy & Bioeconomy Unit, WIP Renewable Energies
	Coffee break (15' min)	
11:30	Current technological status of biogas upgrading (30' min)	Michael Beil, Deputy Head of Bioenergy System Technology department, Fraunhofer Institute for Energy Economics and Energy System Technology IEE
12:00	Green gas allrounder PlanET (30' min)	Alexey Mozgovoy, Business Development Manager International Biomethane, PlanET Biogastechnik
12:30	Organic energy worldwide (30' min)	Vladimir Bogatov, International Sales Manager, WELTEC BIOPOWER
13:00	Final Q&A / Conclusions (30' min)	Manolis Karampinis, Research Associate, Centre for Research and Technology Hellas (CERTH) & Georgii Geletukha, Head of Board, Bioenergy Association of Ukraine (UABIO)
13:30	End of event	



Previous event





Time (CEST)	Presentation title	Speaker(s)
11:00	Welcome & Introduction to the BIOFIT project (10' min)	Manolis Karampinis, Research Associate, Centre for Research and Technology Hellas (CERTH)
11:10	Setting the sector scene in Ukraine (20' min)	Georgii Geletukha, Head of Board, Bioenergy Association of Ukraine (UABIO)
11:30	Considerations for converting fossil fired steam or ho water boilers to biomass powder combustion (30' min)	t Björn Forsberg, CEO & Global Market Manager, WTS AB Powder Burners
12:00	Utilizing present equipment for sustainable fuel conversions (30' min)	Johanna Lindén, CEO, Petro Bio AB
12:30	Coffee break (15' min)	
12:45	Coal to biomass conversions (30' min)	Preben Messerschmidt, Project Director, Power, Ramboll
13:15	Boiler conversions to Bubbling Fluidized Beds (BFBs) (30' min)	Joonas Hämäläinen, Sales Manager, Rebuilds and Conversions, Valmet
13:45	Experiences with bioenergy in district heating (15' min)	Kamila Wagieca, Director Energy & Public Affairs department, Veolia
14:00	Final Q&A / Conclusions (30' min)	Manolis Karampinis, Research Associate, Centre for Research and Technology Hellas (CERTH) & Georgii Geletukha, Head of Board, Bioenergy Association of Ukraine (UABIO)
14:30	End of event	

Programme & presentations available here: <u>https://uabio.org/events/10791/</u> Press release: <u>https://uabio.org/en/news/uabio-news/11525/</u>





Дякую за yeary! / Thank you for your attention!

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