Bio-FlexGen

The Bio-FlexGen website

Dec 20, 2021

Deliverable Number
D6.2

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037085.

Technical References

Project acronym	Bio-FlexGen
Project full title	Highly-efficient and flexible integration of biomass and renewable hydrogen for low-cost combined heat and power generation to the energy system
Call	H2020-LC-GD-2020
Grant number	No. 101037085
Project website	https://bioflexgen.eu/
Coordinator	Susanne Paulrud

Deliverable No.	D6.2
Deliverable nature	DEC
Workpackage (WP)	6
Task	Design, texts and launch of the Bio-FlexGen website
Dissemination level [1]	PU (website)
Number of pages	10
Keywords	Website, launch, target groups, monitoring
Authors	Regina Schwald
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Due date of deliverable	M4
Actual submission date	Dec. 20, 2021

[1] PU = Public
PP = Restricted to other programme participants (including the Commission Services)
RE = Restricted to a group specified by the consortium (including the Commission Services)
CO = Confidential, only for members of the consortium (including the Commission Services)

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Document history

V	Date	Beneficiary	Author
V1	13.12.2021	ESCI	Regina Schwald
V2	20.12.2021	ESCI	Regina Schwald

Summary

Summary of Deliverable

The project website www.bioflexgen.eu is the main reference point for the online content and project outreach activities and functions as a 'Content-Hub'. That means all the communication actions are focused to generate links to visit the Bio-FlexGen website/community. The website is created to reach out to the Bio-FlexGen target groups in the most efficient way.

This project is highly technical and specialised. Thus, the website will serve as a key tool to introduce the topic to someone who has no initial knowledge in related fields of technology. The second goal is to inform the Bio-FlexGen stakeholders, researchers, possible early adopters about the project's highlights, key technologies and results. This will raise their interest and direct them to follow and engage if they would like to gather more detailed information. Therefore, the website needs to fulfil two distinct purposes: Raise awareness among the general public and display detailed information on the project. To achieve this, ESCI has developed the Bio-FlexGen website with a multilayered structure *(see Figure 1 on page 5*). The homepage (or landing page) gives a short introduction to the project's topic, the main goals and solutions. To make the project information more visual and "tangible", the homepage will also display an animated film. It was created by one of the partners – Phoenix Biopower - and will be updated in January to feature the novel technological approaches.

The 'Key technologies' page features descriptions of the respective Bio-FlexGen technologies tailored for five target groups. Overall, the aim is to keep the website simple to navigate, interesting and easy to understand.

Disclaimer

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1 The Bio-FlexGen website

1.1 The website structure

Bio-FlexGen is a very technical, complex project which is quite challenging for communication. Therefore, ESCI decided on a tailor-made structure to address the five different target groups in the most efficient way. There are five sub-sections under "Solutions" to guarantee adequate user-oriented information and thus enhance outreach and traffic of the website:

1. General Public
2. Scientific community
3. Technology companies/associations
4. The energy sector
5. Policy makers/regulators

Figure 1: Structure of the Bio-FlexGen website

Project	Solutions	Outcome	Contact	Social Media Icons
About	**Key Technologies for five target groups:**	Acad. Publications	Contact form	Twitter, LinkedIn, youtube
Expected Impact	General Public	Deliverables		
News	Scientific community	Info material (press releases, brochure, etc.)		
Partners	Technology companies/associations			
	Energy sector			
	Policy makers/regulators			

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1.2 The website content

According to the structure and the target groups, the following content was created:

Figure 2: Overview of the content of the Bio-FlexGen website

Pages		Description
Project		A brief presentation of the main objectives, the expected results, key technologies, news and events with the integrated Twitter feed, as well as information about the partners will be provided here.
Solutions		To provide custom-made content for the five respective target groups, there will be five pages for the general public, the scientific community, technology companies/associations, the energy sector, policy makers/regulators
Technology companies/associations		To make sure that the innovative aspects of Bio-FlexGen are properly communicated to the respective target-groups
General Public		This EU-funded project contributes to a more cost-efficient and sustainable usage of energy. District Heating systems based on renewable energy and heat waste utilisation have a lower environmental impact. These systems rely on local resources, attract new projects, employment, investments and turn-over
Scientific community		The project technology enables CHP production with a high electricity output, useful for municipalities and for industries. Information of laboratory scale research methods and results under pressurised conditions
The energy sector		The project technologies increase resource & energy efficiency with

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		seasonal flexibility and reduce emissions, thus increasing companies' competitiveness and reducing their environmental impact
Policy makers/regulators		District heating systems based on renewable energy and heat waste utilisation have a lower environmental impact compared to traditional energy sources. BTC will radically decrease costs for plannable renewable electricity and negative emissions. Flexible generation BTC is being verified at TRL5 and scale-up to TRL7 is required to aid Energy Transition
Contact		A contact form, as well contact details of the project coordinator and communication WP Leader will be provided here.
Social Media Icons		Links to Bio-FlexGen profiles on social media platforms such as Twitter, LinkedIn and YouTube will be provided to ensure the highest visibility of the project on the web and to increase the project's outreach. Additionally, the project Twitter feed will be placed prominently on the home page.

1.3 The website domain

The following website-domain has been decided within the Bio-FlexGen consortium: https://bioflexgen.eu/. It was activated for the launch of the website on Dec 20, 2021.

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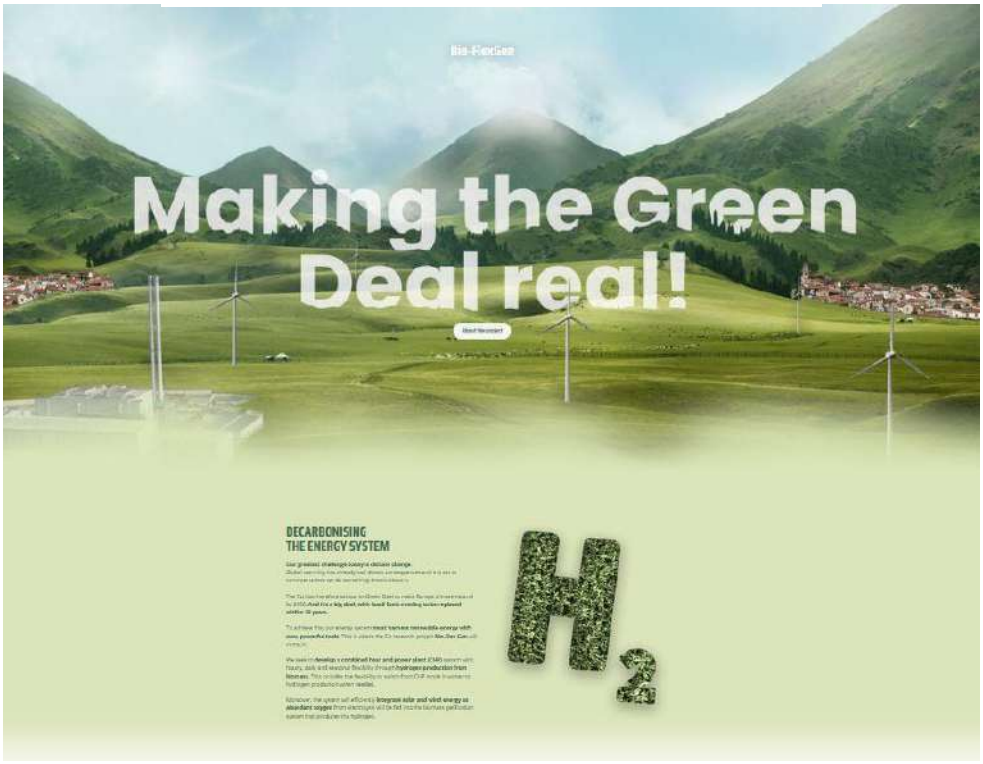
2 The website design

The overall design aims at capturing the modern, innovative nature of the project and present it in accordance with the topics of CHP, flexible turbine technology and green hydrogen. What is more, the design is appealing for all the target groups and stakeholders, e.g. for the general public as well as scientists and policy makers.

Figure 3: Screenshots of the Bio-FlexGen website



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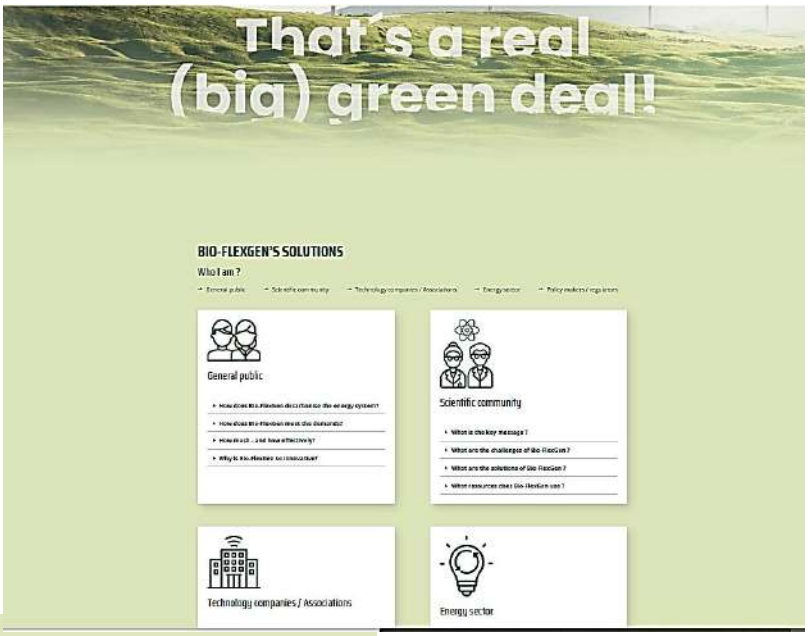


Key message

Bio-FlexGen: A novel CHP plant (system) with hourly, daily and seasonal flexibility for a modern grid based on :

- H_2 production from biomass and the flexibility to switch from CHP mode in the winter season to H_2 production mode when needed.
- Abundant O_2 from electrolysis for the biomass gasification system for H_2 production, achieving highly-efficient integration of solar and wind energy in the system.

The Bio-FlexGen challenges:

Renewable energies from solar and wind fluctuate with the weather. Thus, there are major challenges for combined heat and power plants from renewables:

Scalable CHP solutions are needed to provide:

1) Security of supply

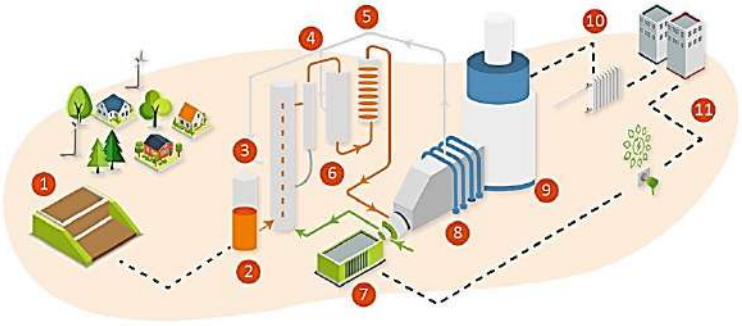
2) Cost-effective plants and affordable energy

3) Flexible and robust energy for the total energy mix

The core of the project:

Bio-FlexGen scientists aim at increasing the flexibility of biomass-fired TopCycle (BTC) technology.

The underlying concept of the project is shown in the flowchart below. There are two main user types: district heating and industrial applications.



1 : Biomass
2 : Feeder
3 : Gasifier
4 : Gas cooler
5 : Hot gas filter
6 : Top Cycle gas turbine
7 : Generator
8 : Heat recovery steam generator
9 : Flue gas condenser
10 : Heat
11 : Electricity

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3. Monitoring of the website

The achievement of Bio-FlexGen communication targets will be measured through a methodology relying on powerful monitoring tools. Other than the regular press and specialised traditional media, the project website and social media will be monitored. ESCI uses a software called MATOMO that assesses how the Bio-FlexGen website performs. It tracks all the available data about the website's traffic and the reached audience. The website will be monitored regarding common metrics and the total number of sessions during different project periods. Overall, the most interesting quantities are:

- Total number of visits (clicks and Impressions)
- Average session and visit duration
- Language and location of visitors
- Number of frequent and one-time visitors
- Visiting prime time regarding day and hour of the day

Highlights of these activities will be also included in the Good Practices on Communication and Dissemination Actions report (D6.8).

4. Conclusion

Due to the tailor-made structure of the website, the appealing design and the constant monitoring, the website will be the the visual “anchor” of Bio-FlexGen. It also represents a contemporary approach to presenting complex technical research projects. **Making the Green Deal real** – and understandable for each target group and stakeholder.

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