

OUTPUT FACTSHEET: STRATEGIES AND ACTION PLANS

Project Title: REEF 2W Increased renewable energy and energy efficiency by integrating, combining and empowering urban wastewater and organic waste management systems

WP Lead: adelphi

Authors: Anika Conrad, André Müller (adelphi)

Submission Date: 07/2019, revised: 01.04.2020

Contact:

André Müller

adelphi

Alt-Moabit 91

10559 Berlin, Germany

Phone: +49(30)8900068910

Email: mueллер@adelphi.de



Italian National Agency for New Technologies,
Energy and Sustainable Economic Development



Unioncamere
Veneto



ZAGREBAČKI
HOLDING d.o.o.



VEOLIA

Montefeltro
servizi



UNIVERSITY OF
CHEMISTRY AND
TECHNOLOGY
PRAGUE



REGIONALNA
ENERGETSKA
AGENCIJA
SJEVEROZAPADNE
HRVATSKE



Reinholdungsverband Trattnachtal
Biogas Trattnachtal GmbH

KOMPETENZZENTRUM
Wasser Berlin

Output factsheet: Strategies and action plans

Project index number and acronym	REEF 2W
Lead partner	adelphi
Output number and title	OT2.2 Regional Strategies
Responsible partner (PP name and number)	adelphi
Project website	https://www.interreg-central.eu/Content.Node/REEF-2W.html
Delivery date	31.07.2019

Summary description of the strategy/action plan (developed and/or implemented)

The main goal of the Regional Strategy for the Berlin case is to enable the Berlin Senate to accelerate the implementation of wastewater-to-energy solutions in wastewater treatment plants (WWTPs). This will enable WWTPs to become energy self-sufficient as well as to use their surplus energy to supply the market and to become important agents in the flexibilisation of the regional energy market. Thereby they will be enabled to contribute to key energy-related targets of the Berlin energy and climate protection programme (BEK 2030). In the case of the Berlin Pilot, the Regional Strategy has been developed in cooperation between the project partners adelphi and the Competence Centre for Water in Berlin gGmbH (KWB) and the Department for Environment, Transport and Climate Protection of the Senate in Berlin (SenUVK) in the course of several meetings.

The Regional Strategy is divided into three main steps: Definition of a vision, strategic goals and targets, strategic analysis that opposes barriers to the implementation of the selected REEF 2W solutions in the Berlin region with planned actions of the BEK 2030. The strategy concludes with a strategic formulation where a set of new actions is developed to make progress in reaching the afore-defined goals and to overcome current barriers.

The dialogue with the Berlin authorities and the water utility revealed that the wastewater sector plays an important role in Berlin's energy transition. This applies not only to the reduction of energy consumption and CO₂ emissions, but particularly to the provision of green biogas. The current infrastructural, political-legal and economic framework conditions make it unattractive for the Berlin water utility to increase sewage gas production significantly. Some of the key technologies, for instance, such as power-to-gas, are still in their infancy and thus not competitive.

As a result, important challenges were identified: The wastewater sector faces a conflict of objectives where energy and environmental policy requirements, water quality control requirements and cost minimisation requirements are in contradiction. Furthermore, funding periods that are insufficient for upscaled plants were criticised and legal barriers at national level were highlighted. The following main measures have been identified to address these barriers:

Formation of a working group on climate protection in the Berlin (waste)water sector: In order to enable the Berlin water utility to tap the energy potential in the long term and not to be hampered by conflicting goals, cooperation with various actors from politics and business is necessary, including representatives of the Senate Department for Economics, Energy and Businesses and from the energy and water sector in Brandenburg.

Municipal support for feeding sewage gas into the grid: Financial support and a guaranteed purchase for a certain volume and period at city level would promote the production and grid-compatible supply of biomethane - and thus counteract the barriers at federal level.

The Berlin Energy and Climate Protection Programme (BEK) 2030 of the Berlin Senate offers a concrete first possibility for a political implementation of the recommendations for action. The BEK 2030 is to be continued and revised after the first implementation period in 2021. The Berlin Senate is willing to consider the points of the regional strategy in this respect.

NUTS region(s) concerned by the strategy/action plan (relevant NUTS level)

The Regional Strategy was developed based on desk research and interviews with representatives of the Berlin Senate and Water Utility.

Meeting venues:

Brückenstraße 6, 10179 Berlin

Neue Jüdenstr. 1, 10179 Berlin

Country (NUTS 1) DE

Region (NUTS 2) DE30, Berlin

Expected impact and benefits of the strategy/action plan for the concerned territories and target groups

The strategy helps to foster the achievement of targets relating to climate change mitigation and the energy transition in different strategic and planning documents by the Berlin Senate such as the BEK 2030. It further offers insights on how energy-related actions concerning the wastewater sector can be strengthened to reach climate targets.

Through the resulting improved cooperation, the exchange of new findings from cutting-edge research projects will be accelerated and thus awareness of the energy potential in the wastewater sector towards politicians increased. The different involved departments of the Senate responsible for climate protection and wastewater treatment will be able to extend their technical knowledge on energy-related aspects in the wastewater sector. This information is usually not easily accessible to them. At the same time, cooperation and planning across departments of the Senate and sectors will be improved. By involving BWB and other stakeholders in the review processes of key Senate planning documents, an alignment of plans to the interests of affected sectors will be enabled.

Moreover, the strategy offers insights on how energy-related actions concerning the wastewater sector can be strengthened to reach the climate targets of Berlin in time or even faster.

Sustainability of the developed or implemented strategy/action plan and its transferability to other territories and stakeholders

Sustainability is here defined as the degree to which project outputs are further used during the project period and beyond by partners and other actors. This includes concrete measures (including e.g. institutional structures, financial resources, policy improvements etc.).

As part of the REEF 2W project, the project partners for the Berlin context and the Berlin Senate signed a joint declaration of intent for further cooperation on the implementation of REEF 2W solution concepts particularly with regard to the recommended and jointly identified actions within the strategy formation. This declaration will be valid beyond the end of the project and foster ongoing cooperation. Thus, the current recommendations for action of the Regional Strategy are to be continuously further developed and supplemented with lessons learned from ongoing and new research projects.

The co-development of the strategy is likely to strengthen the cooperation between BWB and the Berlin Senate. This cooperation is essential to drive energy-related measures in the water and wastewater sector.

Lessons learned from the development/implementation process of the strategy/action plan and added value of transnational cooperation

The following lessons learned should be considered in future strategic cooperation between BWB and other stakeholders and Berlin Senate and the further development of action plans:

- To initiate a strategy for governmental institutions, it is necessary to initiate contact. Governmental institutions are usually busy and hard to convince for spending time on matters that bring no immediate payback. The same is valid for utility operators (in this case the BWB). The signing of the declaration of intent between adelphi and KWB and the Berlin Senate as well as the establishment of contacts from the beginning of the project was crucial for successful cooperative development of the strategy.
- The REEF 2W solution concepts benefit from the interaction and integration of different sectors (waste sector, wastewater sector, energy sector etc.) and infrastructures (gas, power and heat grid). Thus, in order to reach the set climate targets by Berlin, involvement of the different departments of the Berlin Senate with different disciplinary foci as well as other actors from different sectors (BWB, Stadtwerke) is crucial.

References to relevant deliverables and web-links If applicable, pictures or images to be provided as annex

The Development of the Regional Strategy (DT2.5.1) is an important element of the project REEF 2W, closely relating to other project deliverables. The most important ones are the Feasibility study for the Berlin pilot site Schönerlinde (DT2.3.2) and the Position paper (DT2.5.3). Furthermore, without the good cooperation and the signing of the MOU (DT2.5.2), the elaboration of the Regional Strategy would not have been as successful. Other important documents and weblinks, which were developed externally and which contributed essential information to the elaboration of the strategy are, for example, the strategy platform (<https://www.powertogas.info/startseite/>) and roadmap for power-to-gas applications from the German energy agency (dena 2017). The regional strategy was based on existing planning documents of the Berlin senate, such as the Berlin Energy and Climate Protection Programme (BEK) 2030 (SenUVK 2018) and the Climate protection agreement between the State of Berlin Senate Department for Urban Development and Environment and Berlin water utility (BWB and SenUVK 2016).

A. References

BWB; SenUVK (2016): Klimaschutzvereinbarung zwischen dem Land Berlin Senatsverwaltung für Stadtentwicklung und Umwelt und den Berliner Wasserbetrieben. Berlin: SenUVK. Available online at https://www.berlin.de/senuvk/klimaschutz/aktiv/vereinbarung/download/20160614_ksv-bwb_senstadtum.pdf, checked on 1/30/2020.

dena (2017): Roadmap Power to Gas. Baustein einer Integrierten Energiewende. With assistance of C. Golling, R. Heuke, H. Seidl, J. Uhlig. Edited by Deutsche Energie-Agentur GmbH (dena). Available online at https://www.powertogas.info/fileadmin/dena/Dokumente/Pdf/9215_Broschuere_Baustein_einer_Integrierten_Energiewende_Roadmap_Power_to_Gas.pdf, checked on 6/20/2019.

SenUVK (2018): Berliner Energie- und Klimaschutzprogramm (BEK) 2030. Senatverwaltung für Umwelt, Verkehr und Klimaschutz. Available online at https://www.berlin.de/senuvk/klimaschutz/bek_berlin/download/BEK-2030-Beschlussfassung.pdf, checked on 6/20/2019.