

Case Study Analysis IMAGINE Low Energy Cities

- Dobrich -

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1) Case Study Dobrich

Introduction to the city of Dobrich

The City of Dobrich has a population of approximately 89,500. The municipality only includes the city center and its close surroundings, its suburbs and surrounding villages are part of another municipality. The city is part of the Dobrich District, located in the north east of Bulgaria, bordering at the Black Sea in the east and at the Romanian border to the north.

Energy policy

All power/competencies in energy efficiency reside on municipal level; the district (regional) level has little to no power to affect municipal energy policies. Therefore, there is no competition between the municipal and the district level for power and financial means. However, there are processes of cooperation between the regional and the local level (e.g. the district provides the municipality with information and assistance).

Local policies and plans have to comply with national plans, strategies and laws. The local authorities are the main actors responsible for the development and implementation of the national indicative targets for energy efficiency till 2020. These obligations are especially laid down in the national legislation.

At the moment the whole system for energy development and regeneration at supra-local level is heavily centralized. The (national) Ministry of Economy, Energy and Tourism is an important actor as it funds local projects. Furthermore, it also assesses, monitors and assists local authorities with project implementation through its regional bureaus.

Local policies:



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As a signatory of the Covenant of Mayors the Dobrich Municipality developed the SEAP “Energy Sustainable Dobrich 2020” (Dobrich Municipality 2010). The SEAP has become in properly continuation of the Municipal Energy Program 2008-2013.

The Municipal policy and priorities have to be purposed to create a program for energy performance of the residential buildings and urban regeneration of inner city public spaces, through the active participation of residents in cooperation with all stakeholders involved in the integrative and sustainable regeneration and development of the sustainable living environment.

Dobrich SEAP: Action Plan for Sustainable Energy Development 2010-2020

ENERGY GOALS

Common goal of reducing CO2 emissions by 2020 – at least 25 % compared to baseline in 2000

2020 Dobrich Municipality will achieve at least:

- 25% reduction in carbon emissions;
- 25% reduction in energy consumption;
- 20% share of renewables in total energy consumption.

MEASURES & ACTIONS

1. Efficient allocation of key personnel and major financial resources for the implementation of the Plan for Sustainable Energy development
2. Develop detailed plans for investments in energy Efficiency: renovation of municipal buildings, improving energy efficiency in the private housing sector and others.
3. Initiate a dialogue with potential entrepreneurs and preparation of the necessary flexible regulatory mechanisms to encourage private investment.
4. Identify and overcome critical barriers legislation on energy efficiency and planning initiatives for national authorities to address them.
5. Monitor progress closely - plan and launch new activities and initiatives where older are completed.

PRIORITIES & OBJECTIVES

PRIORITY 1: An integrated package of measures to improve the energy efficiency in municipal sector

- Objective 1.1: Improve energy efficiency in municipal buildings at least 30%
- Objective 1.2: Update of the street lighting of the town
- Objective 1.3: Increase the energy efficiency of public transport
- Objective 1.4: Increase the proportion of use of energy from renewable sources in the public sector

PRIORITY 2: Improving energy efficiency in buildings in the municipality

- Objective 2.1: Strengthening the processes of an overall renovation of housing buildings, priority of prefabricated buildings
- Objective 2.2: Increase public awareness and build culture of energy efficient behavior in the domestic sector



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Objective 2.3: Increase the proportion of energy used generated from renewable energy in housing

PRIORITY 3: Increasing energy efficiency in local industry

Objective 3.1: Promotion of business investment to build energy companies and infrastructure on the territory Dobrich Municipality

Objective 3.2: Increase the proportion of energy from renewable sources in the industry

Objective 3.3: Support for changing energy behavior in business:

PRIORITY 4: Introduction of energy management in the municipality

Objective 4.1: Increase local capacity for sustainable energy development:

Objective 4.2: Exploring the potential for energy efficiency and energy renewable sources and the possibilities for its utilization

Objective 4.3: Mobilize public support for the implementation of the plan action "a sustainable region 2020"

MONITORING

1. Coordination , control, report on the implementation and updating of the Action Plan

In the framework of the "Covenant of Mayors" in Dobrich Municipality an annual inventory of CO2 emissions in different sectors will be carried out. It is recommended that the team involved in the implementation of the Plan to systematically inventory and report to it at least once every two years, which means that every two years to be drafted "Activity Report" ("Action report") - without inventory (2,6,10,14,18 years) and "implementation Report" ("Implementation report") - an inventory (years 4,8,12,16,20) .The reports must include quantitative assessments of implemented measures included data on energy consumption and CO2 emissions, as well as analysis of the implementation of activities and measures set out in the Plan.

2. Methods for monitoring, analysis and evaluation of the technical , financial and organizational performance results of the Action Plan

First of all need to determine which elements (priorities, objectives, measures or activities) of the Plan will be subject to monitoring and evaluation. This should be the main objectives of the Action Plan - reducing energy consumption, reducing the cost of fuel and energy and reduce greenhouse gas emissions and improving the quality of services. Subject to monitoring may be also the investments and their profitability (return) and the number of the population is affected by the implementation of the Plan. On the basis of the agreed scope of monitoring to determine the necessary human and technical resources (specialists and equipment), and the budget is adequately funded.

Definition of indicators to assess the performance of the plan is crucial to the ultimate success and practical use of monitoring.

COMMUNICATION STRATEGY

The objectives of the communication strategy include the exchange of information, or change the behavior of certain selected target groups, while providing feedback on the implementation of the Action Plan for Sustainable Energy Development of Dobrich Municipality 2010 - 2020. Defined target groups of the communication strategy are the local politicians and municipal administration, households, local industries, students and children in kindergartens. Typical results of communication with the public is achieving transparency on energy and

environmental policy Municipality Dobrich, build mutual trust between the local administration and the local community, as well as strong public support for the implementation of the Plan.

Main goals

Stimulate dialogue and active involvement of all stakeholders at the local level to the processes of formation of good and transparent governance, including by providing opportunities for citizens and civil society to express their views on the management of the municipality.

Specific purposes

Providing a clear and accessible information to citizens and business processes on the municipal administration related with the implementation of the Action Plan. The specific objective has to be achieved by conducting a broad campaign to inform the public about little known functions and responsibilities of the municipal administration in the field of sustainable energy.

Target groups

The main target groups of the strategy are the local authorities, representatives of the public and the public, civil society structures, business structures. A directional communication could form stable concepts and evaluation criteria among the priority target audiences, ensuring a much greater achievement of the final objectives. Therefore, in order to achieve lasting change in mainstream attitudes efforts need to be concentrated to ensure effective communication with target audiences in the nature of the reference groups with regard to major population groups.

To achieve the objectives of the communication strategy of these groups can be represented as follows: Economic and socially active citizens, young people, a group of citizens expressing skepticism about the activities and achievements of the local authority; Disadvantaged groups, non-governmental, industry and other representative organizations, media - local and national, with a focus on regional and specialized media, the general public.

Further local activities:

- Municipal "Energy Efficiency Information Centre"
- Municipal Energy Programme (first version from 2001)
- Annual "Intelligent Energy Days" (Sept)
 - o Opening of information centre
 - o Exhibition
 - o Decision of energy programme
- Competition children's' drawings in local schools
- Information via municipal website
- Local media coverage
- Surveys of public opinion on municipal website
- Promotion of bike riding in schools
- Opening of Municipal Energy Efficiency Office in Dobrich on 13 July 2000 (Elena Anastasova) (initiative by Eco Energy)

Actors

Interview partners: Elena Anastasova and Lilyana Sabeva, employees of Dobrich Municipality, Elena: city energy manager, Lilyana: Mayor's office

Municipal Energy Efficiency Officer => Elena Anastasova

Main tasks and obligations as City energy manager

- Energy management, European and national project management and administration;
- Coordination of local initiatives for energy efficiency, renewable energy sources and awareness raising of the local population;
- Working on National Operational Programmes, public procurement, regional energy planning and monitoring;
- Management of activities connected with sustainable energy policy;
- Implementation of the Municipal energy programs and strategies;
- Activities in the field of street lighting, construction of power infrastructure and electricity supply, trolley bus transport, etc.;
- Maintaining of the database on current energy consumption in all 75 municipal buildings;
- Management of investigation of energy efficiency and certification of municipal buildings;
- Energy efficiency management in buildings and industrial systems;
- Consultant in the Municipal Information Bureau for EE and RES issues;

Highly involved in development, implementation and evaluation of the SEAP

Interview partner: Todor Tonev or Elena Simeonova, employees of the Dobrich Local Agency for Energy Management (DLAEM)

DLAEM – Dobrich Local Agency for Energy Management (

<http://www.dlaem.org/en/index.html>)

Source: <http://www.managenergy.net/actors/2376>

Aims:

- Energy programming and planning at the local and regional level;
- Increasing the awareness and capacity of all community stakeholders (local and regional authorities, business entities, NGOs, media, students, citizens, consumers) about efficient energy use and energy management;
- Sectorial and horizontal initiatives for the promotion of the rational energy use, energy saving technologies and renewable energy sources;
- Development and implementation of energy saving projects on the territory of Dobrich municipality;

Areas of expertise: changing citizens' behaviour, dissemination of information, advice on specific energy issues, energy auditing, promotion of technology, energy efficiency in buildings, small wind farms, solar energy.

Local authorities have the opportunity to collaborate with the “**Supporting structures**” devoted to the energy issues. By our point of view, we have very successful cooperation with important players as:

- EcoEnergy (Bulgarian Municipal Network for Energy Efficiency) - Sofia;
- UBBSLA (Union of the Bulgarian Black Sea Local Authorities) – Varna;
- BREC (Black Sea Regional Energy Center) – Sofia;
- NAMRB (National Association of the Municipalities of the Republic of Bulgaria) – Sofia;
- Other organizations.

All municipal energy strategic documents have been drawn up jointly with the exclusive expertise of the Supporting structures.

Dobrich Municipality leads a transparent policy and local stakeholders are involved in energy issue through:

- Reception days – the mayor, all deputy mayors and the Chief Architect
- Municipal Council Sessions are open and every citizen can express socially important issues
- Municipal EE/RES Bureau** within the information center in the administrative building;
- Hot Line, Green Line**

Furthermore the citizens’ participation consists in expressing various proposals on the EE/RES topic.

Interview partner: Teodora Petkova, employee of Dobrich municipality, municipal ecological expert, deputy chairman of the Bulgarian Environmental Association, project manager of the construction of a new depot for municipal waste

Bulgarian Environmental Association - Environmental department of the Dobrich municipality

Interview partner: Kina Dragneva, municipal councilor, head of the municipal kindergartens which were renovated through the ESCO scheme

Interview partner: Mr. Ovcharov, manager of the Dobrich Ytong manufacture, Xella Bulgaria is local partner of the municipality in the field of energy efficiency, participate in awareness raising activities during the Municipal Energy Days, communication & collaboration with private sector, communicative measures of the SEAP targeted at societal actors

Dobrich Ytong manufacture

Municipal Energy Days

Communicative measures of the SEAP targeted at awareness raising

2) Transition Activities in Dobrich

Cluster	Activity	Manifestation	Description	Assessment
Strategic	Problem structuring	National legislation	Makes increasing energy efficiency and renewable energy generation a municipal responsibility, requires the development of local energy action plans as basis for implementing energy efficiency measures	<ul style="list-style-type: none"> Energy transition framed as technical problem of efficiency and renewable energy generation by national legislation, main focus on the energy efficiency of (municipal buildings and technical infrastructures) Connection with the topics of infrastructure renewal and public health (indoor climate conditions of buildings) by national legislation Connection with topics of air quality on the local level and climate mitigation on the regional level Aspects of individual behaviour, consumption, values not covered/addressed <ul style="list-style-type: none"> Keep up and extend the communication with local stakeholders Analyse/thematise the role of individual behaviour, consumption and values in energy transition
	Envisioning	-	No abstract overall long-term vision	<ul style="list-style-type: none"> Lack of an overall long-term vision which could integrate and bundle different administrative activities <ul style="list-style-type: none"> Develop long-term goals and discuss these with local stakeholders
	Exchange of perspectives	Workshops, events, information campaigns, etc.	Mainly information provision of citizens, stakeholders, municipal staff using different communication formats, targeted at awareness raising and education	<ul style="list-style-type: none"> Low level of participation and cooperation in goal, strategy and plan development Exchange of perspectives with selected stakeholders as part of the cooperative development of experiments No exchange of perspectives on strategic level <ul style="list-style-type: none"> Communicate long-term goals to citizens and stakeholders
		Exchange of perspectives with selected stakeholders	Cooperative development of demonstration projects (experiments) allows exchange of perspectives on project level	
Tactical	Thematic visions	Goals of SEAP	Overall mid-term goals for 2020: reduction of local CO ₂ emissions by 25%, reduction of energy consumption by 25% (compared to 2000) and 20% share of renewable energy sources	<ul style="list-style-type: none"> Mid-term goals of (technical) energy transitions Thematic vision(s) and goals not integrated due to the lack of an overall, long-term vision <ul style="list-style-type: none"> Orient and integrate sectoral goals, strategies and plans towards long-term goals Individualize EU mid-term goals to local specifics
	Agenda	Goals, priorities and actions of SEAP	Overall mid-term goals for 2020: reduction of local CO ₂ emissions by 25%, reduction of energy consumption by 25% (compared to 2000) and 20% share of renewable energy sources, definition of four priority fields of action with definition of sub-goals and measures	<ul style="list-style-type: none"> Transition agenda mainly characterized by technical aspects of energy transition Transition agenda oriented towards EU goals and programmes <ul style="list-style-type: none"> Avoid parallel structures between SEAP and local energy plan
		Goals and actions of local energy plan	The legally required local energy plan is currently being developed, it will contain goals and measures to increase energy efficiency and renewable energy generation	
		Urban development strategy, local programme for environmental protection	Define goals and measures to guide the future urban development and local environmental protection measures, urban development strategy is currently being updated, oriented towards the timeframe of 2020	
	Networks	EcoEnergy, Union of Bulgarian Black Sea Local Authorities	City networks on regional and national level dealing with the topic of energy efficiency (among others)	<ul style="list-style-type: none"> City networks (cooperations) crucial for municipal capacity building in energy transition (exchange and learning, bundling of resources, administrative in-

		Communication and cooperation between LA and local stakeholders	On-going processes of exchange and cooperation between LA and selected local stakeholders (private actors), mainly as part of project development and implementation (experiments)	<p>terrelations)</p> <ul style="list-style-type: none"> No institutionalized networks of local citizens and/or stakeholders Informal cooperation with selected local stakeholders on projects with win-win-situations for LA and stakeholders <ul style="list-style-type: none"> Keep up active involvement in city networks
Operational	Experiments	Cooperative energetic refurbishment of municipal buildings	Cooperative development and implementation of energy efficiency measures on municipal buildings, successful projects used for education and awareness raising (among citizens, municipal staff, other Bulgarian municipalities)	<ul style="list-style-type: none"> Transition experiments that fits the transition activities in Dobrich and promote the energy transition process Technical demonstration project embedded in innovative forms of project development, implementation and financing, connected with measures of awareness raising and education <ul style="list-style-type: none"> Develop new forms of cooperation with private actors which allow the generation of win-win-situations and the exploitation of synergies to enable more technical demonstration projects
	Implementation	Let by municipal plans such as the SEAP	Selection of projects and measures for implementation guided by municipal plans	<ul style="list-style-type: none"> Implementation let by municipal plans Low level of cooperation with stakeholders in plan implementation (only as part of experimental projects) Focus on technical measures on (municipal) buildings and technical infrastructures
Reflexive	Monitoring/Evaluation	Local emission inventory as basis for evaluation SEAP	Baseline emission inventory including energy consumption of all municipal buildings	<ul style="list-style-type: none"> Monitoring only captures tactical and operational activities (plans and projects) Monitoring only captures technical measures that directly affect energy consumption of buildings and CO₂ emissions
	Adaptation/Adjustment	On project level	Evaluation of projects and measures, regular update of municipal plans	<ul style="list-style-type: none"> Adjustment of sectoral plans, targets and projects likely

Strategic Activities

Problem structuring

On the local level of the City of Dobrich, the topic of energy transition is linked with two related fields of action. On the one hand, measures to increase energy efficiency and savings are considered to be part of municipal infrastructure and building renewal activities (INTERVIEWS 12, 15). This is, among others, expressed in the aim of improving the indoor climate conditions of buildings with these kinds of measures. Furthermore, the legislation of the national Health Ministry is applicable when energy efficiency measures at buildings are planned and realized (INTERVIEW 12). On the other hand, the City of Dobrich links energy transition with the topic of air quality. There is a municipal programme to reduce air pollution which mostly contains measures to increase energy efficiency and renewable energy generation (INTERVIEW 13). Thus, energy transition is also considered a means to deal with local environmental problems (INTERVIEW 13, 15). Moreover, energy transition is partially also seen to be closely interrelated with climate change (INTERVIEW 15). However, the majority of the local actors interviewed stress that dealing with climate change is not a topic on the local level (INTERVIEW 13). Overall, increasing energy efficiency and savings seems to be more focused by local actors, strategies and plans than renewable energy generation (INTERVIEWS 12, 13, 14, 15).

The Bulgarian national legislation also influences the problem structuring on the local level. This delegates the responsibility for energy efficiency to the local level. Municipalities are required to develop energy action plans as basis for implementing energy efficiency measures (INTERVIEW 12). However, the national government does not provide additional funds to realize these measures. Rather, municipalities are supposed to apply for EU and other international funding and co-finance measures from the municipal budget (INTERVIEWS 12, 15). This approach results in a very high importance of the EU programming and funding for local energy transition. Local goals, strategies and plans are directly oriented towards European goals and timeframes (INTERVIEW 12).

Another topic that is stressed by local actors in relation to energy transition is the capacity of municipalities. Increasing the capacity of municipalities and other actors involved is considered to be crucial to be able to act in the field of energy transition (INTERVIEW 12). Consequently, the lack of capacity of Bulgarian municipalities is seen as one of the major problems (INTERVIEWS 12, 15). The City of Dobrich deals with this challenge in two ways: On the one hand, the local agency for energy management was established after a change of the national legislation required Bulgarian municipalities to retrofit all municipal buildings which are bigger than 1,000m². Establishing this agency is seen as means to get in contact with relevant actors on the local level and to increase the capacity of municipalities to act in energy related questions in the long run (INTERVIEW 15). On the other hand, the education and training of municipal experts is considered to be an important measure to promote energy transition (INTERVIEW 12).

Overall, the responsibility for energy transition is strongly seen at the local level with municipal actors being solely responsible for planning and implementing measures (INTERVIEW 12). This may be a direct result of the Bulgarian legislation which delegates the field of energy efficiency and savings to the local administration. Municipal actors consider increasing energy efficiency to be “a bottom-up process” (INTERVIEW 12). However, in this context, this means municipalities carrying the responsibility for promoting energy transition through actively developing and implementing measures. Citizens, businesses and other actors are considered to play a less important role in this bottom-up process (INTERVIEW 12).

Furthermore, actors of the City of Dobrich consider political will and engagement to be crucial for the local energy transition process. They stress the role of the mayor in promoting renewable energy generation, energy efficiency and savings (INTERVIEWS 12, 13, 15). This may also be one effect of the national approach not to provide municipalities with a regular budget to realize measures in this field of action. Therefore, municipalities have to apply for other funds e.g. by EU programmes. Thus, the success of these activities strongly depends on the initiative of local actors and their capability to identify suitable funding sources and meet their requirements. Therefore, the capacity of the local administration and the personal engagement of the mayor become crucial factors for being able to implement measures of energy efficiency and renewable energy generation.

Dobrich is at a very early stage of energy transition. Discourse and all activities are dominated by public actors and institutions and their approaches towards energy transition. Problem perception is focused on the energy efficiency of public buildings and infrastructures and on the local capacity to act in this field of action. There is no culture of broad or selective involvement of stakeholders or citizens. Therefore, the process can only very slowly be opened for the participation of non-public actors.

Recommendations:

Keep up and extend the communication with local stakeholders. *Dobrich has started to establish processes of communication and cooperation with local stakeholders mostly focused on the cooperative development of projects. These processes should be kept up and extended to build trust and gain experiences. Extend the communication from project development to more general discussions on the problem and possible solutions. This may result in new insights, mutual learning, new approaches and projects.*

Envisioning

The City of Dobrich has not defined an overall, long-term vision to guide local energy transition activities. Formulating goals for 2050 or a similar timeframe is considered to be too long-term (INTERVIEW 12). Within the IMAGINE project, the local authority will develop a roadmap defining goals for 2050. However, this will be done in closed process within the municipal administration (INTERVIEW 12). Municipal experts are considered to be responsible for that. Active participation of external actors is not intended.

There are no long-term goals or visions to guide short-term activities. Furthermore, municipal actors are skeptical about the use of abstract, long-term goals. Overall, goal formulation is exclusively dominated by municipal actors.

Recommendations:

Develop long-term goals and discuss these with local stakeholders. *Long-term goals should guide the short-term activities of municipal and private actors. This facilitates an integrated approach and avoids contradicting measures in different sectors. Long-term goals should be abstract so they do not contradict EU mid-term goals (for 2030 which are not known yet). Formulating abstract, qualitative goals allow the municipality to align local mid-term targets with EU mid-term targets (until 2020 or 2030) which are highly crucial to reach co-funding of local measures.*

Furthermore, the long-term goals should be communicated to and discussed with local stakeholders. This exchange may generate new ideas, increase mutual understanding and

promote the energy transition process as a successful transition requires actions not only by public actors but also by private businesses.

Communicate long-term goals to citizens and stakeholders. *Once long-term goals have been developed these should be communicated to local citizens, stakeholders and other cities. The already existing forms of communication and participation can be used for that. This may raise awareness among citizens and stakeholders and promote their activities in the field in the long-run. Furthermore, it helps to communicate and further promote Dobrich's leading position in energy transition among the Bulgarian cities. Dobrich will be more strongly perceived as frontrunner in this field of action.*

Exchange of perspectives

Overall, there is a relatively low level of exchange with local actors in strategy, plan and project development processes (INTERVIEWS 12, 13). The municipality organizes workshops and events for different target groups and provides information for citizens (INTERVIEW 13, 14, 15). However, these are mainly targeted at information provision and awareness raising, not at the cooperative development of strategies, plans and projects. Furthermore, there is some exchange of perspectives with a small number of selected actors on project level (INTERVIEW 14). However, these actors are not involved in goal and strategy development processes (INTERVIEWS 12, 14). The LA considers goal and plan development to be an internal process which lays fully in the responsibility of municipal experts (INTERVIEWS 12, 13, 14) (see also 'envisioning').

As processes of communication with private actors and citizens have already been established, these could also be employed for the exchange on the long-term goals. Private actors are open to be involved in plan and strategy development (INTERVIEW 14). However, municipal actors state that the lack of financial resources and the low importance of energy efficiency of citizens hamper the communication and cooperation with citizens (INTERVIEW 15).

Activities to influence the transition process are strongly dominated by public actors. Goal, strategy, plan and project development and implementation are closed processes which only very rarely allow the involvement of private and societal actors and citizens. Furthermore, there is no culture of discussing and cooperating with private or societal institutions or organizations. Therefore, the transition management process can only slowly be opened towards non-public actors.

The recommendations for 'problem structuring' and 'envisioning' will result in a more participative transition management process. Therefore, there are no further recommendations to increase the 'exchange of perspectives'.

Tactical Activities

Thematic visions

The SEAP of the City of Dobrich defines goals for the reduction of local CO₂ emissions, the reduction of energy consumption and the increase of renewably energy sources by 2020 (Dobrich Municipality 2010). These are not connected to an abstract vision. However, they are suitable to guide the mid-term oriented activities of the LA.

Recommendations:

Orient and integrate sectoral goals, strategies and plans towards long-term goals. *All relevant municipal strategies and plans should be consider and contribute to the long-term goals of energy transition. The long-term goals should work as an orientation framework for*

short-term plans and actions. This results in an integrative approach across sector boundaries.

Individualize mid-term EU goals to local specifics. *Mid-term goals and plans are and should be oriented towards the mid-term goals of EU programming. However, to increase local identification and exploit local synergies and opportunities these should be specified for Dobrich's local situation. Furthermore, it may be beneficial to supplement these goals with further local goals to create synergies and opportunities.*

Agenda

There are several municipal plans which are concerned with aspects relevant for energy transition and define mid-term goals and actions such as the strategic urban development plan, the (legally required) energy plan and the programme for environmental protection (INTERVIEW 13). These plans are oriented towards the timeframes of the European Union and define goals for 2020. The strategic urban development plan which is currently being updated should integrate all other plans on city level (INTERVIEW 13). It will also follow the timeframe of the EU programming and will be valid for 2014 to 2020 (INTERVIEW 13). The SEAP of the City of Dobrich defines the common goal of reducing CO₂ emissions by 2020 by at least 25 % (compared to the baseline of 2000) (Dobrich Municipality 2010). More specifically, Dobrich aims to reduce its carbon emissions and energy consumption by 25% while realizing a share of 20% of renewable energy sources of its total energy consumption (Dobrich Municipality 2010). The SEAP originates from the voluntary engagement and commitment of the City of Dobrich in the Covenant of Mayors. Next to this plan, the LA is required by national legislation to draw up an energy plan. This is currently being developed. At the time of the interviews, it hadn't been defined if the goals of the SEAP would be transferred to the energy plan (INTERVIEW 13).

The prioritization of projects for implementation is based on the different municipal strategic plans (INTERVIEW 12). Overall, the focus of the energy transition activities of the City of Dobrich lays on municipal properties, buildings, and infrastructure. Furthermore, increasing energy efficiency and savings is more strongly addressed than increasing energy generation from renewable sources (Dobrich Municipality 2010). One important reason for the weak focus on renewable energy generation can be identified on the national level as the national legislation does not promote energy generation by renewable sources and the technical infrastructure of the energy grid is not sufficiently developed to absorb the produced electricity in peak times (INTERVIEW 13, 14).

Private actors define their own goals for increasing energy efficiency and savings. Their main motivation is the reduction of production costs. Municipal goals and plans are not relevant for their activities in this field (INTERVIEW 14). Rather, the national legislation requires private companies with high energy consumption to perform energy audit and develop measures to increase their energy efficiency (INTERVIEW 14). Private actors prefer to work with short-term goals which are oriented towards production and investment cycles (INTERVIEW 14).

When the City of Dobrich started to develop measures to promote energy transition they started out with "soft" measures of providing information to public servants, citizens and businesses on energy efficient behaviour and possible measures to raise the energy efficiency of buildings and apartments. However, local actors considered the implementation of "visible" projects crucial to demonstrate and illustrate successful energy efficiency measures (INTERVIEW 12). Having demonstration projects is considered very important by local actors. These are used to further promote further energy transition measures (INTERVIEW 12).

Recommendations:

Avoid parallel structures between SEAP and local energy plan. The local energy plan (legally required by Bulgarian legislation) and the (voluntary) SEAP should not exist in parallel to each other. Integrating the SEAP into the local energy plan is beneficial as it avoids the establishment of parallel structures which may lead to fragmented actions and bureaucracy.

Networks

There could no relevant networks without the involvement of the municipality be identified. There are no energy related networks of citizens, private companies, etc. (INTERVIEW 13). However, the City of Dobrich is very actively involved in several networks of Bulgarian municipalities and municipal actors such as EcoEnergy (Bulgarian Municipal Network for Energy Efficiency) and the Union of Bulgarian Black Sea Local Authorities (INTERVIEW 12). These networks play an important role. For example, the Union of Bulgarian Black Sea Local Authorities initiated the establishment of the local energy agencies in their member municipalities. This was a reaction to a change in national legislation which required Bulgarian municipalities to perform energy efficiency measures on municipally owned buildings. The agencies were established to increase the capacity of the local authorities to plan and perform these measures (INTERVIEW 15).

The importance of these networks supports the crucial role of the personal engagement of the mayor of Dobrich as she represents the city in these networks. The City of Dobrich was one of the founders of the EcoEnergy network (INTERVIEW 12). Furthermore, the municipality was often chosen for the implementation of demonstration projects of national programmes (INTERVIEWS 12, 15). This illustrates Dobrich's leading role (one out of three: Dobrich, Varna and Burgas) among the Bulgarian municipalities.

Furthermore, the LA of Dobrich maintains informal relations of communication and collaboration with private actors. There is a closer collaboration between the city and selected private actors on project level. Demonstration projects are developed and implemented in cooperation (INTERVIEW 14). However, this kind of cooperation is limited to exceptional cases (see also 'experiments'). Furthermore, the City of Dobrich directly communicates and collaborates with a wider group of private actors especially in the building sector. Especially the annual Sustainable Energy Days are organized and realized in close cooperation between the municipality and private companies (INTERVIEW 14).

In general, there is no tradition of involving citizens and societal institutions (such as NGOs) in cooperative processes in Bulgaria (INTERVIEW 13). Also, there are no local networks or initiatives of citizens on the local level of the City of Dobrich which could be involved (INTERVIEW 13).

Dobrich is very actively involved in (national) networks of (Bulgarian) municipalities. These are highly important for the energy transition of the city. Therefore, this engagement should be kept up. However, there are no local networks of stakeholders or citizens as there is no culture of this kind of self-organization. This may only slowly evolve if ever. As it does not fit to Dobrich's framework conditions there are no recommendations to promote actor network formation.

Operational Activities

Experiments

The City of Dobrich was often chosen for the implementation of demonstration projects of national programmes (INTERVIEWS 12, 15) which illustrates Dobrich's leading role among the Bulgarian municipalities. However, these projects were not initiated by the City of Do-

brich. Rather, they can be considered experiments developed by the national government that were implemented in Dobrich.

Furthermore, there could two projects be identified which can be considered experiments to promote energy transition initiated by the City of Dobrich. To plan and realize the energetic refurbishment of two municipal buildings the LA closely collaborated with local private companies of the building sector. The LA selected the building and used its data on the energy consumption of the municipal building stock as basis for cooperatively planning the measures to realize. The company provided the building material and could use the monitoring data of the city to showcase the effect of their materials on the building's energy consumption. This new form of cooperation was used to realize high energy efficiency standards by using newly developed building materials. Since completion, the refurbished building has been used as demonstration project to illustrate the improved indoor climate conditions and the realized technical solutions to citizens and experts of public and private institutions from the local level and beyond (INTERVIEW 14). Thus, the successful experiment is used to further promote energy transition on the local level. Building on the experiences made while planning and realizing this successful experiment, there was also the realization of a refurbishment close to passive house standard planned by the same actors. However, up to today the project could not be realized (INTERVIEW 14).

Overall, at the current point of the energy transition process of the City of Dobrich, the realization of successful demonstration projects is considered highly important. The LA uses these to promote further measures and to illustrate the leading role of Dobrich among the Bulgarian municipalities. "Soft" measures of information and awareness raising are only considered initial steps to "hard" measures which visibly illustrate the success of the municipality in increasing energy efficiency (INTERVIEW 12).

The municipality has also established successful forms of cooperation with private actors to realize measures of awareness raising. The LA organizes annual "Sustainable Energy Days" and the "European Mobility Week" (INTERVIEW 12). The measures are targeted at citizens and particularly children and students. Furthermore, companies of the building sector use the "Sustainable Energy Days" to promote their services and materials (INTERVIEW 14).

Experimental projects are highly crucial for the energy transition process of Dobrich. They fulfil multiple purposes such as exploring technical feasibility, developing and trying new forms of cooperative project development, implementation and financing and demonstrating and communicating successful energy transition projects to citizens, stakeholders and other municipalities. The developed experiments well fit the energy transition process of the city of Dobrich.

Recommendations:

Increase the cooperation with stakeholders. *A more intense exchange and cooperation with private actors may enable the municipality to create win-win-situations and synergies with these actors. This may result in new forms of cooperation which can facilitate future projects. Developing and trying new forms of public-private cooperation may enable the municipality to develop more experimental and regular projects in the future. The existing, already experienced cooperation with local stakeholders can be used to develop and try innovative forms of cooperative project development, implementation and financing.*

Implementation

The implementation of measures is guided by the SEAP and other municipal plans such as the strategic urban development plan (INTERVIEW 13). However, if measures can actually

be realized strongly depends on the availability of external i.e. non-municipal funding sources (see also ‘problem structuring’). Consequently, the lack of financial resources is considered one of the main barriers for implementation (INTERVIEWS 12, 13, 15). Moreover, this results in plan implementation strongly depending on EU programming and funding and the capacity of the LA to identify eligible funding sources and develop projects which meet the specific programme requirements (INTERVIEWS 12, 15). Thus, increasing the capacity of municipalities and individuals is considered to be crucial (INTERVIEWS 12, 15). One measure taken to increase the capacity of the municipality was to implement the local energy agency (see also ‘networks’). Furthermore, information and demonstration projects targeted at public servants play an important role in that regard. The City of Dobrich was one of the first Bulgarian municipalities to install a local energy agency and has been very active in promoting information on energy efficiency targeted at different groups using different formats of communication (media, municipal website, workshops, events, etc.) (INTERVIEWS 12, 13, 15). These are considered the main reasons for Dobrich’s leading role among the Bulgarian municipalities (INTERVIEW 15).

The municipality is responsible for implementing technical measures on municipal buildings and local technical infrastructures (as defined by national legislation) while the local energy agency focuses on measures of awareness raising and information provision (INTERVIEW 15). Although the Dobrich municipality has been active in realizing measures of awareness raising for years (such as establishing an info center for local actors and developing a programme to encourage energy efficient behaviour) their effects are still considered to be small. Change of awareness can only be observed very slowly and citizens are still not very interested in the energy efficiency of their own properties. Realizing private energy efficiency measures is still not a matter of high importance for most citizens (INTERVIEWS 13, 15). However, providing financial incentives by the LA to further promote these kinds of measures by individuals is considered not to be possible due to the lack of financial resources (INTERVIEW 13).

The lack of financial resources of the municipality also results in the high importance of public-private-partnerships to finance project implementation. ESCO schemes are applied to realize the measures in close cooperation between the LA and private companies (INTERVIEW 12). As mentioned above, plan and project implementation strongly depends on the availability of external financial resources either by European funding or by co-financing of private companies.

Reflexive Activities

Monitoring/Evaluation

The City of Dobrich has established a baseline emission inventory which captures the energy consumption of all municipal buildings (INTERVIEW 12). The City of Dobrich was one of the first Bulgarian municipalities to establish this system. The establishment was realized in close collaboration with the local energy agency and the Union of Bulgarian Black Sea Authorities (INTERVIEW 15). The data is used to simulate the effects of proposed energy efficiency measures. The results are used to select measures for implementation and calculate their financing (often by ESCO schemes) (INTERVIEWS 12, 13).

The SEAP is being updated in 2-year-intervalls while most other municipal plans are updated in 7-year rhythms following the timeframes of the EU programming (INTERVIEW 13).

Overall, the monitoring and evaluation approach of the City of Dobrich focuses on technical measures on building level. This is valid as it reflects the focus of Dobrich’s energy transition

activities and supports their actions. However, mid- and long-term changes and changes of wider circumstances cannot be caught by this approach.

Adaptation/Adjustment

As the monitoring and evaluation approach of the City of Dobrich focuses on the project level (operational activities) adaptation and adjustment of projects is likely. More mid- and long-term oriented activities and process are difficult to adjust on this basis. This is also a result of the lack of long-term goals and sectoral visions which could be used as basis for evaluation and adaptation.

Role of LA in Dobrich

The energy transition process of the City of Dobrich more strongly focuses on increasing the energy efficiency of (municipal) buildings and technical infrastructures than on promoting renewable energy generation. Thus, the topic of local energy transition is closely related to local infrastructure renewal and the improvement of indoor climate conditions of buildings. Reasons for that can be found in the framework conditions set by the Bulgarian government. Bulgarian municipalities are not provided with financial means to finance local measures of renewable energy generation. Furthermore, the national government does not provide any incentives for the generation of renewable energy neither to public nor to private actors. On top of that, the development of the energy grid is currently not sufficient to absorb the energy peaks connected with wind and solar energy. All these factors hinder the promotion of renewable energy generation on the local level and thus also energy transition. Overall, the municipal activities to promote energy transition are strongly limited by the lack of financial resources of the local authority. The Bulgarian government transfers the responsibility for developing plans and measures to improve the energy efficiency of buildings and infrastructures to the local level without providing financial funds for these tasks. Therefore, the City of Dobrich strongly depends of funding from other sources such as the European Union.

In general, improving the capacity of local authorities to act in the field of energy transition is crucial for all Bulgarian municipalities and also for Dobrich. Therefore, the information and education of administrative staff and the creation of new administrative structures and processes plays an important role. Dobrich is one of the forerunners in promoting energy transition among the Bulgarian municipalities. For example, the local authority was one of the first to establish a baseline inventory of local CO₂ emissions and to install a local energy agency. These measures of capacity building can be considered to have long-term beneficial effects on Dobrich's ability to promote the local energy transition process. This is also reflected in the ability of the local authority to develop and implement technical demonstration projects which can be considered transition experiments. These are used to demonstrate the feasibility of the implemented technical measures to citizens and other Bulgarian municipalities. Furthermore, these projects are embedded in innovative forms of cooperation among public and private actors. Therefore, these projects can be considered experiments that promote the local energy transition as these effectively combine technical measures with information provision and awareness raising and new forms of cooperation even though the technical measures are already well established in Western countries. Overall, local actors consider the implementation of visible demonstration projects as being crucial for the local energy transition as these demonstrate their feasibility, positive effects and the municipality's capacity.

Regional and national networks of Bulgarian municipalities also play an important role in building the capacity of the local authority to act in the field of energy transition. Within these



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networks the Bulgarian municipalities exchange information and cooperate for their mutual benefit. For example, one of these networks played an important role in establishing Dobrich's the energy agency. Up to today, this network and the energy agency are institutionally connected with each other. This demonstrates the important role of these networks in promoting local energy transition processes in Bulgaria. These processes and structures of self-organisation of the Bulgarian municipalities may be interpreted as reactions to the lack of structures and resources provided by the national government.

Taken as a whole, problem structuring, goal and plan formulation and the development and implementation of projects are quite closed processes which are undertaken within the local municipality and dominated by municipal actors. Direct exchange and cooperation in these processes is only rarely realized, mostly only in relation with the development and implementation of experiments.

3) Recommendations for further transition process

- **Keep up and extend the communication with local stakeholders.** Dobrich has started to establish processes of communication and cooperation with local stakeholders mostly focused on the cooperative development of projects. These processes should be kept up and extended to build trust and gain experiences. Extend the communication from project development to more general discussions on the problem and possible solutions. This may result in new insights, mutual learning, new approaches and projects.

- **Develop long-term goals and discuss these with local stakeholders.** Long-term goals should guide the short-term activities of municipal and private actors. This facilitates an integrated approach and avoids contradicting measures in different sectors. Long-term goals should be abstract so they do not contradict EU mid-term goals (for 2030 which are not known yet). Formulating abstract, qualitative goals allow the municipality to align local mid-term targets with EU mid-term targets (until 2020 or 2030) which are highly crucial to reach co-funding of local measures.

Furthermore, the long-term goals should be communicated to and discussed with local stakeholders. This exchange may generate new ideas, increase mutual understanding and promote the energy transition process as a successful transition requires actions not only by public actors but also by private businesses.

- **Communicate long-term goals to citizens and stakeholders.** Once long-term goals have been developed these should be communicated to local citizens, stakeholders and other cities. The already existing forms of communication and participation can be used for that. This may raise awareness among citizens and stakeholders and promote their activities in the field in the long-run. Furthermore, it helps to communicate and further promote Dobrich's leading position in energy transition among the Bulgarian cities. Dobrich will be more strongly perceived as frontrunner in this field of action.

- **Orient and integrate sectoral goals, strategies and plans towards long-term goals.** All relevant municipal strategies and plans should be considered and contribute to the long-term goals of energy transition. The long-term goals should work as an orientation framework for short-term plans and actions. This results in an integrative approach across sector boundaries.

- **Individualize mid-term EU goals to local specifics.** Mid-term goals and plans are and should be oriented towards the mid-term goals of EU programming. However, to increase local identification and exploit local synergies and opportunities these should be specified for Dobrich's local situation. Furthermore, it may be beneficial to supplement these goals with further local goals to create synergies and opportunities.

- **Avoid parallel structures between SEAP and local energy plan.** The local energy plan (legally required by Bulgarian legislation) and the (voluntary) SEAP should not exist in parallel to each other. Integrating the SEAP into the local energy plan is beneficial as it avoids the establishment of parallel structures which may lead to fragmented actions and bureaucracy.

- **Increase the cooperation with stakeholders.** A more intense exchange and cooperation with private actors may enable the municipality to create win-win-situations and synergies with these actors. This may result in new forms of cooperation which can facilitate future projects. Developing and trying new forms of public-private cooperation may enable the municipality to develop more experimental and regular projects in the future. The existing, already experienced cooperation with local stakeholders can be used to develop and try innovative forms of cooperative project development, implementation and financing.



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