



EXPLORING  
PATHWAYS  
FOR **LOW-IMPACT**  
**ENERGY**  
**SOLUTIONS**  
IN NORTH  
MACEDONIA



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An owl is perched on the edge of a solar panel. The background is a blurred blue sky with some trees. The owl is looking towards the camera.

## ACKNOWLEDGEMENTS

We are grateful to everyone participating in the process, listed in Annex I. Special gratitude goes to Mark Lambrides and Dragana Mileusnic from The Nature Conservancy for reviewing the text and providing valuable contributions.

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# LIST OF ACRONYMS

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**TNC** → The Nature Conservancy

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**NECP** → National Energy and Climate Plan

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**RES** → Renewable Energy Sources

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**GDP** → Gross domestic product

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**EIA** → Environmental Impact Assessment

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**SEA** → Strategic Environmental Assessment

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**MOEPP** → Ministry of Environment and Physical Planning

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# INTRODUCTION

To tackle climate change and meet energy demand, North Macedonia needs a significant increase in renewable energy capacity. However, if their siting and development is not carefully planned, renewable energy solutions could put significant pressure on the land and rivers of North Macedonia. They could adversely impact people and biodiversity, creating conflicts that not only have negative consequences, but may jeopardise investments and the slow expansion of renewables.

Building up renewable energy on converted lands — those that have already been significantly altered for mining, buildings and other physical infrastructure, and other development activities — provides an opportunity to avoid these conflicts and, instead, accelerate the transition to clean energy. Further, proactive strategic planning that includes environmental and social considerations can increase local benefits for communities, reduce wildlife impacts, and avoid the release of CO<sub>2</sub> from converting forests and other natural land and rivers for project development.

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The Nature Conservancy (TNC) believes North Macedonia can benefit from a low impact energy planning approach. With the country's ambitious plans to expand its renewable energy generation, evaluating where to site an additional 1400 MW of solar and 750 MW of wind power will require finding feasible and low impact locations for future projects.

North Macedonia has already taken a significant step by drafting a progressive National Energy and Climate Plan (NECP) and by putting forward ambitious RES targets. The NECP used MARKAL modelling to select the Green Scenario, the most ambitious when it comes to renewables and energy efficiency measures, as the most cost-beneficial for the country.

In 2021, The Nature Conservancy initiated a partnership project to identify the opportunities for accelerating the development of renewable energy projects in North Macedonia. For that purpose, The Nature Conservancy established partnerships with the Macedonian Academy of Sciences and Arts and the Center for environmental research and information "Eko-svest" to implement a joint project.



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To establish a baseline of available data for conducting a low impact energy siting of solar, wind and hydropower plants;



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To identify legal and technical barriers and opportunities to using brownfields for siting renewable energy projects;



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To identify and describe the essential planning and decision-making stakeholders, in order to effectively carry out a low impact planning initiative in North Macedonia;



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To identify the environmental and social values that will serve as a basis of establishing areas for building solar, wind and hydropower plants.

In the frame of these activities, a public survey to collect opinions about the development of renewable energy in the country was conducted, and three focus groups were created. The focus groups consisted of groups of relevant stakeholders from: 1) regional development centres, municipalities, and agriculture experts; 2) state and private energy companies; and 3) civil society organisations active in the area of environmental and biodiversity protection, as well as poverty alleviation.

The results of these consultations helped formulate the main principles outlined in this document. Once defined, the principles were shared with the participants in the focus groups, with the goal of receiving final feedback and approval before publicly presenting them.





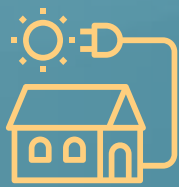
# PRINCIPLES

# 1 Accelerate the development of renewables to meet ambitious energy and biodiversity targets



Meeting the targets set in the new and ambitious Energy Development strategy will require accelerated siting and construction of cost effective wind and solar installations while maintaining the protection of natural resources and protected areas, and at the same time recognising community and stakeholder values and ensuring environmental justice.

# 2 Prioritise and accelerate the spatial planning process that integrates low impact energy siting



The already initiated process of spatial planning needs to be prioritised and accelerated to avoid delays in energy planning decision making. Energy siting that integrates renewable energy resources, energy infrastructure, and social and environmental factors needs to be an integral part of the spatial planning process and relevant institutions need to base their siting decisions on scientific research and data. As many relevant experts and professionals as possible need to be involved in the process and proper public participation must be ensured at all stages of the process.



### 3 Empower communities to engage in renewable energy project development



Accelerated development of wind and solar projects will require decision-making at both central and local levels; local governments and communities need support to effectively participate. To be knowledgeable and effective partners in siting renewable energy responsibly and contributing to a clean energy future, communities and local governments need credible guidance, tools, resources and support on land-use planning and best practices for zoning to pro-actively plan for renewable energy development.

### 4 Preserve natural habitats and protected areas



Renewable energy development must be prioritised, however, not at the cost of biodiversity and ecosystem losses. Protected areas must be preserved and, in the process of energy siting, special attention must be placed on avoiding any negative impact from nearby renewable energy projects. In the planning phase, conservationists and relevant institutions should play a key role in identifying the threats and limiting their occurrence.

## 5 Promote agricultural land protection compatible with renewable development



Landowners, farmers and municipalities should be educated on the benefits and impacts of renewable development on agriculture, and have access to resources to help them integrate the best practices for mitigating the impacts on agricultural lands into planning and zoning. In the process of planning and decision making, priority should be given to the preservation of good quality agricultural land.

## 6 Provide educational programmes and training at all levels



Institutional capacities at central and local levels must improve to meet the ambitious energy, climate and biodiversity goals. Civil servants and experts, as well as local communities, need to be provided with access to various educational and training opportunities on renewable energy development, environmental protection and other relevant socio-economic factors. A scientific resource database and another open source database with relevant research need to be created and widely promoted among these groups.



## 7 Improve public participation opportunities at all levels



Public participation in early stages of decision-making should improve at all levels. Involving citizens and interest groups as well as experts and professionals, and integrating their positions in decision making processes will result in sounder, more sustainable actions. A comprehensive approach that involves diverse stakeholders and includes partnering with local communities, local civil society, scientists and professionals, will reduce environmental injustices and help to ensure the success of renewable energy projects. This is also an important aspect of building trust between citizens and the state institutions. Moreover, such an approach will reduce the local opposition, delays and litigation that often arise in these type of projects.

## 8 Communicate the benefits of renewable energy



Renewable projects can contribute positively to local economies through local employment, income tax generation, local infrastructure improvements and indirect economic activity. At the same time, these projects bring affordable energy while having minimal environmental impacts. These benefits should be widely promoted and clearly communicated, in order to improve understanding and increase the level of trust between citizens and institutions.

## 9 Foster decentralisation of energy production



Energy production needs to be partly decentralised, and municipalities can play a significant role in the development of renewable energy projects that contribute to energy independence, local employment opportunities and access to electricity. At the same time, municipalities need to play an active role in contributing to the decrease of greenhouse gas emissions and in transforming economies.





## RECOMMENDATIONS

In the process of consultations with relevant stakeholders, four priority topics were defined, outlined in the text below. These priorities are Land use and spatial planning, Environmental protection, Agriculture, and Community engagement.



# LAND USE AND SPATIAL PLANNING

PRIVATE  
PROPERTY  
NO TRESPASSING  
VIOLATORS WILL BE  
PROSECUTED





### PROBLEM STATEMENT

While renewable energy will benefit all citizens of North Macedonia, there are local land use impacts to be considered. Many communities currently lack the tools and resources to evaluate and incorporate renewable energy resources into their land use decision-making, which can be a barrier to development. Simultaneously, local and central governments often fail to properly consult local communities in cases of energy developments, which might cause long term delays in the process of energy development.

### BACKGROUND

The legal basis for land use and spatial planning is fairly developed, however, certain legislation is not sufficiently detailed, especially in relation to the spatial plan development and adoption.

### THE LAW ON URBAN PLANNING:

- regulates the systemic and hierarchical regulation of urban planning in the system of spatial and urban planning,
- outlines goals and principles of spatial and urban planning,
- defines types and content of urban plans,
- defines conditions for performing activities in the field of urban planning,
- outlines procedures for preparation, adoption and implementation of urban plans,
- regulates supervision of the implementation, as well as other matters in the field of urban planning.

The Law on [Urban Planning](#), however, lacks provisions on important issues such as the period for which the Spatial Plan will be adopted, procedure for its adoption and modification, as well as its basic contents. The transitional provisions in the law also have no mention of the status of the present Spatial Plan of the Republic of North Macedonia. Taking into account that the present Spatial Plan was adopted in 2004 for the period up to 2020, there is an obvious need for a new spatial plan to be adopted, or at least the implementation period of the present one to be extended, thus providing legal certainty in the procedure for adopting spatial and urban plans at a lower hierarchical level.

[Urban planning](#) is part of the system of spatial and urban planning, which consists of the Spatial Plan of the Republic of North Macedonia and spatial plans for its implementation, as well as urban plans and acts for their implementation. The plans within the spatial and urban planning system are hierarchically and horizontally harmonised.

In the focus of urban plans, the public interest is in the arrangement and planning of spaces for the use of humans, the protection and promotion of the environment and nature, as well as the preservation of the natural and cultural values of the space.

[The Agency for Spatial Planning](#) is responsible for developing the Spatial Plan of the Republic of North Macedonia and the spatial plans for its elaboration and implementation, as well as for monitoring the implementation of the Spatial Plan. According to the Constitution, based on the Government's proposal, Parliament adopts the Spatial Plan of the Republic of North Macedonia.

For the purpose of efficient implementation of spatial and urban planning policy and for the needs of preparation, adoption, implementation and monitoring of the implementation of urban plans, the Agency for Spatial Planning establishes an information system for urban and spatial planning, which provides conditions for professional and analytical monitoring of the implementation of the plans, and continuous observation and analysis of the degree and manner of realisation of the plans.

## URBAN PROJECTS

Urban projects are relevant for RES generation facilities and the procedure for their development and adoption must be initiated in case the adopted urban plans do not provide detailed provisions for construction and use of land.

According to the Rulebook for Urban planning, even if the existing urban plan specifies the purpose class on the level of sub-class, that does not mean that changes are not possible, especially if the change is from a more rigid into a more flexible sub-class, such as the change from sub-class D1 - Mining that is considered as heavy and polluting industry into sub-class D3 - energy from renewable sources where non-polluting technologies are applied.

## MINERAL RESOURCES USE

The law on mineral resources allows infrastructure facilities to be built in the concession area and exploitation field if they are of public interest and, without disturbing the exploitation of mineral resources, provide additional possibilities for brown-field investments.

# RECOMMENDATIONS



## 1. ENGAGE RELEVANT STAKEHOLDERS IN ENERGY SPATIAL PLANNING

The process of spatial planning should include relevant stakeholders in order to enhance renewable energy planning. Energy, biodiversity, urban and spatial experts, geomorphologists and geologists, agriculture experts and land use professionals should all take part in the process, ensuring that all aspects are taken on board when the plan is prepared. The regional development centres and municipalities, as well as local communities, need to be consulted and their positions taken on board in the process.



## 2. DEGRADED LAND SHOULD BE CONSIDERED FOR PRIORITISATION IN THE DEVELOPMENT OF NEW RES PROJECTS

When identifying best possible locations for new RES development, degraded land should be analysed and considered as the first possible option. The presence of toxic soils, proximity to local communities and other limiting factors need to be considered before prioritising the locations.



### 3. FURTHER DEVELOP REGULATIONS ON DEGRADED LAND RE-CULTIVATION AND REHABILITATION, AND ADOPT AN ANNUAL PROGRAMME AND STRATEGY

The Government should adopt an annual programme for degraded land re-cultivation and rehabilitation. Further development of regulations to specify the responsibilities of land users in the case of conversion of land for RES use should be initiated. A possible increase of the percentage of fees charged for permits intended for land re-cultivation and rehabilitation should be considered.

The Government should adopt a strategy for geological surveys, sustainable use and exploitation of mineral resources for a period of 20 years.



### 4. SITING OF RENEWABLE ENERGY PROJECTS BASED ON SCIENCE

It is important to base decisions about the locations for renewable energy projects on scientific research and data. Publicising the data also helps communities better understand the reasons behind these decisions, and builds trust with state institutions that the decisions are made after taking sound data into account.



## ENVIRONMENTAL PROTECTION



### PROBLEM DEFINITION

The transition to a renewable energy economy requires not only joint efforts and decision making by several state institutions, but also high standards to avoid negative impacts of future energy developments on natural resources.

Conservation of biological diversity and management of protected areas remains a challenge for central and local governments. The territory to be covered by protected areas is aimed at 15% and the country is considered to have extremely rich biodiversity and a high rate of species endemism. Having in mind the strategic goals to preserve biodiversity, nature protection must be given equal attention as renewable energy development.

Nature protection is not considered as a priority and economic and energy development are often prioritised over it, thus the high risk of improper siting of energy projects.

### BACKGROUND

Although the majority of the EU acquis is transposed in national legislation on environmental protection, implementation of adopted laws is still not satisfactory. In addition, limited capacities of relevant institutions to tackle environmental protection as a horizontal issue is hampering proper implementation, financing and prioritisation of healthy environment in the country.

Environmental taxes collected centrally are not directed to environmental protection projects. The country is dependent on EU, foreign government financial support for the implementation of essential environmental projects in the area of waste collection, wastewater treatment, air pollution and nature protection.

In the last decade, environmental awareness has increased among the general public and, overall, public consultation processes have improved.

The system of protected areas includes 82 areas, that occupy an area of 357,778.05 ha or about 13.92 % of the territory of the country. National parks occupy about 6.9% of the country's territory, followed by natural monuments with 3.0%, while all other categories of protected areas occupy about 4 % of the country's territory.

Managing natural protected areas is still a challenge as there is no agency for nature protection and no regular monitoring is in place. As with environmental protection, financing for nature protection is dependent on foreign donors. The capacities of protected area managers are also low and protected areas such as major national parks are obtaining the necessary finances from logging activities (which sometimes contribute to up to 80% of the total budget of the protected area).

On one hand, the country shows ambition to protect environment and natural habitats, on the other, limited funding and capacities result in insufficient practical implementation and enforcement of ambitious strategies.

When it comes to the siting of energy projects, in numerous cases local opposition resulted in project dismissal or delays. Local communities are actively opposing projects they believe will have a negative impact on their surroundings or have serious impacts on their land use or security.

It is noted that, in such cases, the quality of public consultations was not sufficient and resulted in a lack of support from locals.



# RECOMMENDATIONS



## 1. ENSURE THE INVOLVEMENT OF THE SCIENTIFIC COMMUNITY IN PROJECT PLANNING

Conservationists, environmental specialists, geologists, land use experts and forest specialists need to take an active part in the planning processes at both central and local levels. This needs to be with regard to the protection of valuable resources important for local communities, and also to those of national importance, such as protected areas.



## 2. RAISE PUBLIC AWARENESS OF THE BENEFITS AND RISKS FROM THE SITING OF RENEWABLE PROJECTS

As more than 80% of the population are not aware of energy planning processes and above 70% of citizens fear that energy projects might have a negative impact on their communities and the environment, it is necessary to design and deploy a wide public awareness raising campaign based on scientific data. Civil society organisations can play a crucial role in distributing the information, organising educational activities and promotional activities directed at citizens.



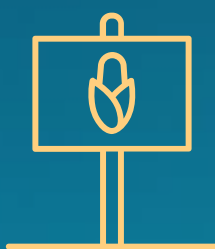
## 3. AVOID SITING IN NATURAL PROTECTED AREAS

Although energy siting needs to be considered as a priority, locating these projects in protected areas must be avoided. Valuable ecosystems need to be preserved and infrastructure projects in protected areas will not serve the primary role of protection.



## 4. IMPROVE ENVIRONMENTAL STANDARDS AND CONTROL

It is necessary to increase institutional capacities and funding, and to improve control mechanisms to ensure proper protection of the environment. These measures need to be taken at both central and local levels. Environmental protection needs to be considered as a horizontal issue with higher priority, and inter-institutional cooperation needs to be enhanced to support this process.



AGRICULTURE



### PROBLEM STATEMENT

Agricultural land is a source of significant economic activity in North Macedonia, but is also under economic pressure. Agricultural land is increasingly being promoted for energy developments and more farmers are inclined to sell their lands for RES projects and stop food and crop production. As North Macedonia has limited areas of agricultural land and the local economies rely on them, it is of utmost importance that these lands remain with their primary purpose. It is critical that potential impacts from renewable energy on agricultural lands be addressed. Some of the concerns about the impacts of renewables development on agricultural land include loss of important agricultural soils; loss of agricultural production; fragmentation of fields and farms; impacts from trenching, erosion, herbicide use, and proliferation of invasive species; soil compaction; and fair treatment of farmers and landowners in the siting and land leasing processes.

### BACKGROUND

The ambitious Strategy for Energy Development and the increased needs for accelerating renewable energy development will inevitably have an impact on local communities dependent on their agricultural lands. Moreover, the agricultural sector contributes 11% of the national GDP. Half of the territory of the country is agricultural land, out of which half is pastures and the rest is arable land. 60% of the arable land constitutes small parcels (below 1 ha). Around 20% of employed citizens are engaged in the agricultural sector and this percentage has remained stable in the past several years due to continuous state support.

The use of agricultural land is regulated by the Law for Agricultural Land. This law stipulates that agricultural land can be converted into construction land based on spatial and urban plans.

The Law on Urban Planning stipulates that land in the planning scope of an urban plan receives the status of construction land with the adoption of the plan, if it is so regulated in the plan. As an exception, in the planning scope of the general urban plan, the land may retain the status of agricultural, forest or other land, if that is regulated by a special provision in the plan. In the planning scope of other urban plans, the land can also retain the status of agricultural, forest or other land, if there is an archeological site on it or if the plan envisages construction of an infrastructure line along the route of which a real load on the land is established and its further use as agricultural, forest and other land, or if for other reasons it is regulated in the plan by a special provision. Eventually, the land covered by the project scope of urban projects for construction of individual buildings and infrastructures of state and local importance outside settlements and outside the scope of urban plans on agricultural, forest and other land, coastal belts and other areas retains the status of agricultural, forest or other land that existed before the approval of the urban project.

In any case, the Ministry of Agriculture, Forestry and Water Economy must give an opinion on the quality of agricultural land, existing facilities, established real loads of land, and other relevant facts within their competence immediately after the adoption of the planning programme. Eventually, this Ministry must be informed of the adoption of the urban plan, if with the urban plan the agricultural land has been converted into construction land.

## RECOMMENDATIONS



### 1. AGRICULTURAL LAND SHOULD BE PRESERVED

Incentivise food production in order to stimulate use of agricultural land and prevent its conversion to construction land as much as possible. Prevent conversion of agricultural land to construction land without proper urban plans.



## 2. FARMERS SHOULD HAVE AN ACTIVE ROLE IN ENERGY PLANNING

Local communities and farmers need to be informed about spatial and urban plans and how they affect their communities and land use. Consultative processes for spatial and urban planning need to engage local community representatives in a meaningful way.



## 3. DEVELOP CRITERIA FOR AGRICULTURAL LAND

The Government needs to develop criteria for the conditions for conversion of agricultural land into construction land, including for the purposes of renewable energy development, and develop rulebooks for this purpose. The criteria should be based on the type of soils, level and type of agricultural activity, and other critical attributes to create a framework to distinguish between valuable farmland and less productive land that may be suitable for renewable energy installations. Other criteria might include whether the land is currently productive; its importance to the local economy; if it is protected or designated by the state or a local community; and its suitability for long-term production. The criteria framework needs to be developed in cooperation with relevant organisations and institutions, and with the participation of regional development centres and municipalities.



## 4. WHERE POSSIBLE, PRIORITISE CO-LOCATION OF SOLAR AND AGRICULTURAL LAND

The Government should conduct an analysis and develop a framework containing information on the benefits of co-location of both solar installations and farming activities such as grazing animals, planting pollinator-friendly plants, or co-location of crops on less productive farmland, which can aid in securing community acceptance of proposed projects. Proper selection of the types of plants under the solar panels can result in additional benefits such as pollination, increased soil quality, and storm water management. Where it is not practical, vegetative cover should still be maintained to prevent soil erosion.



# COMMUNITY ENGAGEMENT



### PROBLEM STATEMENT

Community opposition to the development of renewable energy projects is a significant barrier to meeting the ambitious goals within the national Energy Development Strategy. As renewable energy projects such as solar and wind are fairly new to the population in North Macedonia, there is an inconsistent level of knowledge and understanding of the benefits, costs, and impacts of renewable development projects at the local level. This is a challenge for developers, municipalities, state agencies, and community members. From the developer's perspective, siting projects successfully takes too long, and engaging each community is typically a time-intensive and labour-intensive process with no guarantee of project completion. Community members, on the other hand, may feel that they are not getting unbiased information from the developer about the costs, benefits, and impacts of the project, and that their interests are not fairly represented throughout the development and permitting process.

### BACKGROUND

The Law on Environment fully transposes the Aarhus Convention that ensures citizens will have the right to be informed about their environment, the right to participate in environmental decision-making, and the right to complain if their rights are compromised. The procedure for carrying out an Environmental Impact Assessment (EIA) ensures public participation in an early stage of the project development. However, in case of energy projects such as photovoltaic installations and wind turbines, the Ministry of Environment and Physical Planning can decide, based on the project's circumstances that an EIA will not be carried out, and instead, demand what is known as an "environmental study" document - a much shorter and simpler assessment referred to as the "elaborate" in the national legislation. The procedure for the preparation of the environmental study is very limited in the existing law and does not include an obligatory public consultation, as in the case of an EIA procedure.

The urban planning legislation envisions a different procedure for public participation, through public surveys. Compared to the Aarhus Convention, the deadlines are shorter. Draft urban plans are discussed at a public meeting. Urban plans are not accompanied by Strategic Environmental Assessment, unless the plan introduces large industrial development or other large scale infrastructure projects.

The level of information related to environmental protection has increased over the past decade. Local communities often find themselves not being asked about the developments in their communities which results in protests and legal cases against investors. However, when adopting national level strategies and legislation, there has been a general improvement of how the public is included in terms of the process and the appropriate time given for consultations.

Local communities are organised in informal communities which used to have legal status in the past but lost it through the decentralisation law. Legal representation of citizens is held by the municipalities that unite a large number of these smaller communities.

This brings with it multiple challenges in the implementation of infrastructure projects and energy siting. On one hand, the state and investors have an interest in conducting the public consultations efficiently, rarely taking into consideration that the process is time and labour intensive; on the other hand, local communities expect that their opinions and demands are taken on board, so that their consent is provided. Very often, local communities will not provide consent, even if public consultation processes have been carried out properly. This is especially the case when the state and investors fail to present information and data prior to the consultation process or fail to engage in a dialogue with local communities, resulting in absence of trust from community members and eventually, unwillingness to give consent.



# RECOMMENDATIONS



## 1. SUPPORT COLLABORATIVE STAKEHOLDER ENGAGEMENT

To support and encourage collaborative stakeholder engagement with respect to renewables planning, the Ministry of Environment and Physical Planning should involve the regional development centres and municipalities in the process of spatial planning. Municipalities should integrate the principles of the Aarhus Convention in the process of public consultations in general and in the development of urban plans.

The Ministry of Environment and Physical Planning needs to improve legislation and enable public participation in cases of smaller sized projects that are required to submit an environmental study as basis for the permit.

Public consultation processes need to be designed in a way that ensures wide and inclusive involvement of all stakeholders.

Efforts must be made to include marginalised, energy-poor, and poor community members on the consultation processes around energy planning at all levels.



## 2. HOST EARLY OPPORTUNITIES TO PROMOTE LEARNING AND DIALOGUE

Local municipalities and communities can greatly benefit from being provided learning opportunities and engaging in dialogues on important community issues, as well as learning from each other. Both in-person and online forums can provide an opportunity for municipal officials to share peer-to-peer experiences related to projects sited in their communities. This type of forum could also allow opportunities to learn from various perspectives (such as those of a developer, municipal government, community organisation, or community member), to discuss concerns and questions and to exchange expert knowledge before formal public positions are solidified, allowing greater opportunity for negotiation and compromise as necessary.

Field visits can also serve the purpose of assisting learning and these should be provided by local organisations, regional development centres and environmental groups, for example by enabling interested citizens and municipal officials to visit nearby wind and solar projects, and by networking and interacting with local people and project owners to enable them to learn about projects firsthand.



### 3. DEVELOP RENEWABLES DATABASE

The Government should establish a renewable energy database that includes detailed data on existing and planned renewable energy projects in an interactive online format. The database should provide information on location, installed capacity and production, conditions and concessions issued, investor details and other relevant information.

In addition, the database should also contain studies, reports, best practices, and guidelines from across the region to help stakeholders, including local officials, learn more about the potential benefits and effects of renewable energy projects. Topics could include, but should not be limited to, fiscal impacts for municipalities; benefits and drawbacks to natural resources, farmland, and wildlife; potential noise impacts; and changes to property values. Information should be from credible sources trusted by most stakeholders.

Energy project siting should be based on scientific research; these research programmes should be supported by educational institutions and governmental bodies.



### 4. ENSURE TRAINING, EDUCATION AND PRE-QUALIFICATION OPPORTUNITIES

An important aspect for local communities in fossil-fuel dependent regions, especially when transition of economies is in favour of renewable energy developments, is training and education. Pre-qualification training should be provided to all employees, and a wide range of educational and skill development training courses should be made available in order to ensure future employment possibilities for locally engaged staff, regardless of their previous position or qualifications.

No	Name of organisation/company	Type
1	Ministry of Environment and Physical Planning	State institution
2	Ministry of Economy	State institution
3	Ministry of Agriculture, Forestry and Water	State institution
4	Ministry of transport and communications	State institution
5	Energy Agency of NMK	State institution
6	Spatial Planning Agency	State institution
7	Cabinet of the Deputy Prime Minister for Economic Affairs	State institution
8	Cabinet of the Deputy Prime Minister for Sustainable Development	State institution
9	Agency for the Financial Support of Agriculture and Rural Development	State institution
10	Regional development centres from 4 regions	State institution
11	ESM (Power Plant company of North Macedonia, state owned)	State owned energy company
12	EVN	Energy company
13	Eterna Solar	Energy company
14	Ekarta	Energy company
15	FireLand	Energy company
16	Proekt Structural Engineering	Energy company
17	HBT Negotino	Energy company
18	Solar Market	Energy company
19	Mobil-L D00EL	Energy company
20	Rural Coalition	CSO
21	Center for Climate Change	CSO
22	Macedonian Anti-Poverty Network	CSO
23	Celor Radovish	CSO
24	Polymath Bogdanci	CSO
25	Horti Eko Strumica	CSO
26	Apple Tree, Skopje	CSO
27	Kruna, Radovish	CSO
28	MACEF	CSO
29	Institute for Economic and Energy Policies and Research IEEPR	CSO
30	Zdrava Kotlina society	CSO
31	Eko Vita	CSO
32	Grashnica Struga	CSO
33	Aronija Edukativen Eko Centar	CSO
34	Macedonian Ecological Society	CSO
35	Slow Food Macedonia	CSO



# SMART ENERGY PLANNING

For energy transition and accelerating renewable energy use without negative impacts on the environment and communities.