

DURATION OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS AND COMPARATIVE DEVELOPMENT OF RENEWABLE ENERGY TECHNOLOGY

ENERGY COMMUNITY, 25th Meeting of the Environmental Task Force

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ENVIRONMENTAL IMPACT ASSESSMENT FOR RES

Regulation on Environmental Impact Assessment (Official Gazette No. 61/14, 03/17)

Article 18., Annex 4

- ❑ Project documentation for EIA is a **conceptual solution** - the first phase of and the basis for the conceptual project (basic information on location, dimensions, functional and organizational scheme, design elements)

Annex 1 (mandatory EIA)

4. Wind farms with a power greater than 20 MW

Annex 2 (mandatory screening - Ministry)

2.3. Wind farms

2.4. Solar power plants as stand-alone facilities

PREPARATION OF EIA

- ❑ Act on Nature Protection (Official Gazette No. 80/13, 15/18, 14/19, 127/19)
- ❑ In or near NATURA 2000 area - **Appropriate assessment**
- ❑ Mandatory pre-construction monitoring
 - Birds, Bats, Large Carnivores
 - Habitat survey and/or mapping
- ❑ Number of different Guidelines for wind farm monitoring (Scottish Natural Heritage, EK, National Wind Coordinating Collaborative, U.S. Fish and Wildlife Service...)
 - **12** to 24 months (depending on species)
 - Surveys on monthly basis
 - ✓ Birds: Vantage point, Transect, Indirect counts, Infrared and thermal imagery, Tracking, Radar
 - ✓ Bats: Identification of important sites, Bat detector surveys, thermal/infra-red cameras, Activity surveys at height
 - ✓ Large Carnivores: Identification of important sites, photo traps, identification of core area and migration routes
- ❑ Assessment of impacts on biodiversity, noise levels and flickering with the help of computer models that require a **high level of technical details of wind turbines and solar panels**
- ❑ Additional 2 - 3 months to gather all the data in final report and finish EIA
- ❑ **In total 15 months as a best scenario**

DURATION OF ENVIRONMENTAL PROCEDURES

EIA Directive 2014/52/EU

Article 4 (6)

- ❑ Determination whether the project shall be made subject to an assessment (screening) - within a period of time **not exceeding 90 days** from the date on which the developer has submitted all the information required.
- ❑ The time-frames for consulting the public - not be shorter than **30 days**.

Environmental Act (Official Gazette No. 80/13, 153/13, 78/15, 12/18, 118/18)

Article 88. Duration of decision-granting procedure

- ❑ **EIA procedure** must be carried out **within four months** from the date on which the developer has submitted request.
 - Procedure can be extended by a maximum of two months if it deems necessary to carry out supplementary actions.
- ❑ **Screening procedure**- must be carried out **within two months** from the date on which the developer has submitted request
 - Exceptionally, the procedure may be extended. In this case, the competent authority is obliged to inform the developer in writing of the reasons for the extension, as well as of the new deadline for the implementation of the procedure.

DURATION OF ENVIRONMENTAL PROCEDURES

General Administrative Procedure Act (OG 47/09, 110/21)

Article 21

- ❑ The reason for extension of the screening procedure deadline can't be the delay of other relevant bodies (other Ministries whose decision is relevant e.g. Ministry of agriculture) to decide on the environmental acceptability of the project prior to the adoption of the decision
- ❑ the decision shall be adopted in the prescribed deadline even if the opinions of other relevant bodies haven't been issued on time meaning **within 30 days**
- ❑ **silence of the administration should apply here**

Article 22

- ❑ Foresees the possibility to submit all the requests in one place within the administrative body, in case of several requests – **„one stop shop“ (?)** – refers only to the procedures within the same administrative body

Potential remedies to shorten the environmental procedures

- Hire more people in the administration
- Optimization of the process
- Limit time to retrieve the opinions of other competent bodies
- Digitalization of the process

DURATION OF ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURES IN THE PERIOD 2014 - 2023

Wind farms

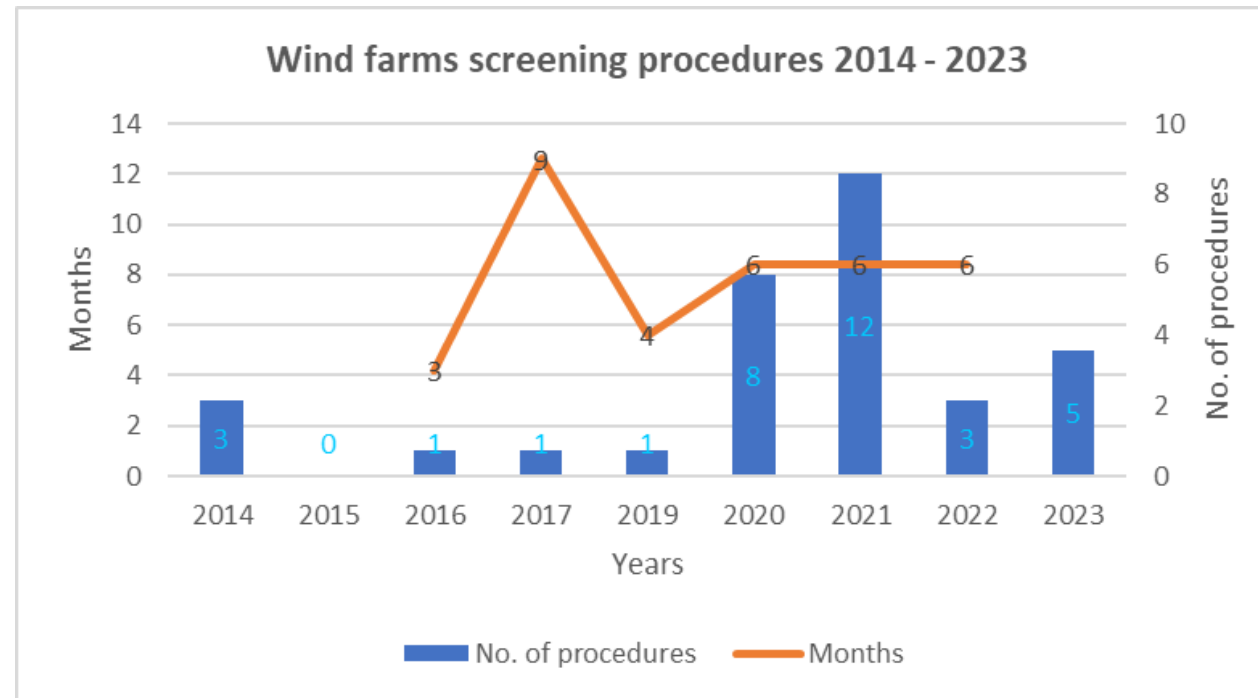
PROCEDURES	YEAR									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
EIA PROCEDURES										
No. of EIA procedures	3	4	1	0	1	0	0	1	1	3
Average duration in months (min – max)	14 (9 - 19)	17 (13 - 22)	7	-	22	-	-	in process	in process	in process
SCREENING PROCEDURES										
No. of screening procedures	3	0	1	1	0	1	8	12	3	5
Average duration in months (min – max)	10 (3 - 29)	-	3	9	-	4	6 (3 - 10)	6 (2 - 13)	6 (5 – 8)	in process

* up to April 20, 2023

- All procedures carried out in 2019 and 2020, as well as 7 of 12 procedures in 2021, concerned the changes (due to the application of new technological solutions) in the projects for which an EIA was previously carried out.

Source: [Ministarstvo gospodarstva i održivog razvoja Republike Hrvatske - Naslovna \(gov.hr\)](https://www.gov.hr/)

DURATION OF ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURES IN THE PERIOD 2014 - 2023



- Out of the 19 screening procedures carried out in 2020 – 2023, for 15 wind farms full EIA Assessment was required while for 13 project Appropriate Assessment was required as well.

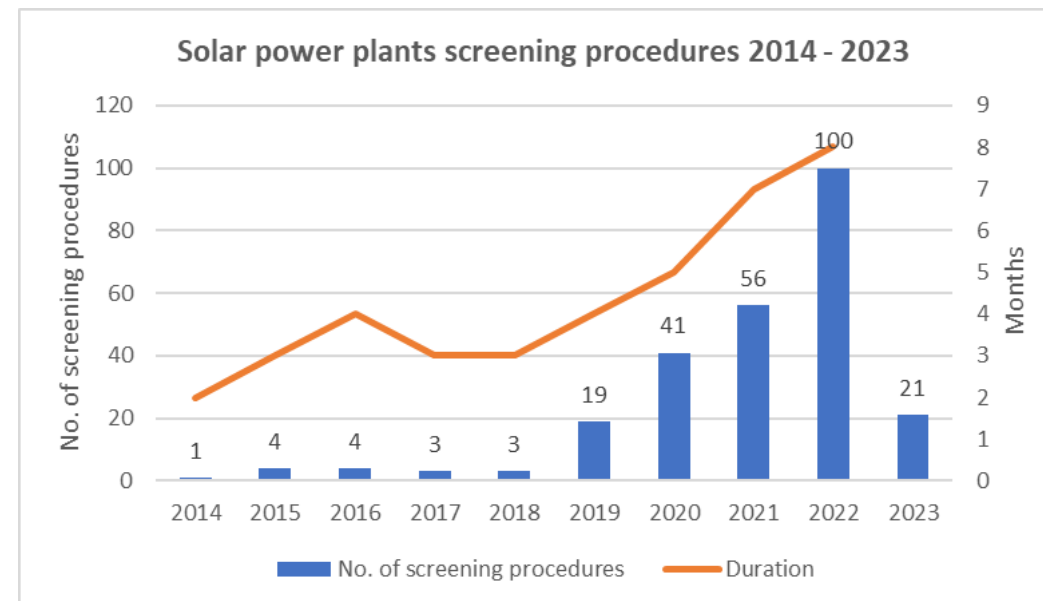
DURATION OF ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURES IN THE PERIOD 2014 - 2023

Solar power plants

- One EIA procedure has been carried out so far in 2020 with a duration of 10 months.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
No. of screening procedures	1	4	4	3	3	19	41	56	100 (28 still in process)	21 in process
Average duration (months)	2	3	4	3	3	4	5	7	8	-

* up to April 20, 2023



(Source: [Ministarstvo gospodarstva i održivog razvoja Republike Hrvatske - Naslovna \(gov.hr\)](http://Ministarstvo_gospodarstva_i_odrzivog_razvoja_Republike_Hrvatske_-_Naslovna.gov.hr))

ENVIRONMENTAL PROCEDURES FOR WIND FARMS AND SOLAR POWER PLANTS

Wind farms

- ❑ EIA procedure is very long.
- ❑ Screening procedures in average last around 6 months.
- ❑ In recent years screening procedures have often resulted with decisions on implementation of EIA and Appropriate Assessment.

SCREENING PROCEDURES	YEAR									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
No. of screening procedures	3	-	1	1	-	1	8	12	3	5
EIA needed	1	-	1	0	-	0	3	9	3	1
Appropriate Assessment needed	-	-	-	-	-	-	3	7	3	1

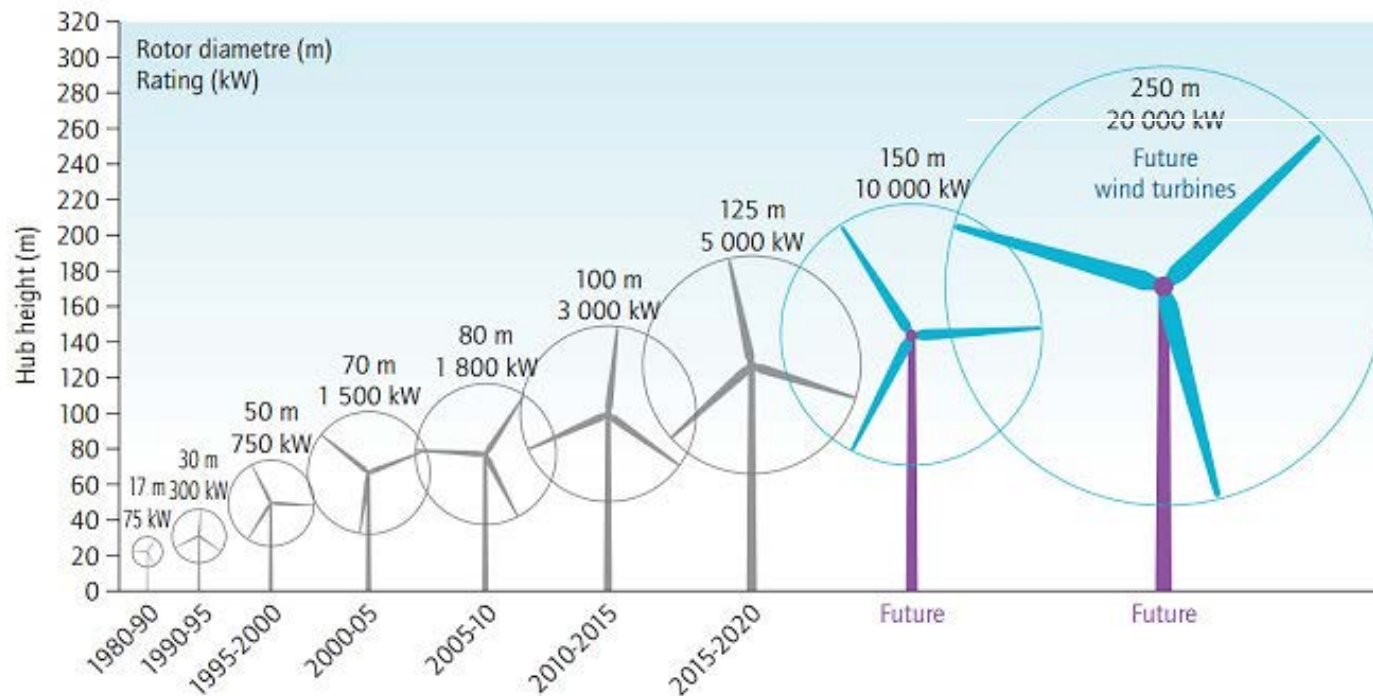
- ❑ Given the length of the EIA procedure and the field studies required to conduct Appropriate Assessment, the overall process will be extended an additional 2 to 3 years.

Solar power plants

- ❑ Annual number of requests is growing significantly and is followed by longer procedures.
- ❑ Wide range of project sizes (a few hundred kilowatts to a hundred megawatts of installed capacity).
- ❑ The procedures for solar projects in the southern part of Croatia are more demanding and take longer.

IN THE MEANTIME - DEVELOPMENT OF WIND FARMS

- ❑ **Wind turbines power incrisement** ⇒ higher production of electricity while reducing their numbers
- ❑ **Improvement of construction** ⇒ suitability of wind turbines for different locations
- ❑ **Increase in wind turbine dimensions** ⇒ better use of available space
- ❑ **Flexible power rating** ⇒ use of the same wind turbines in different locations and conditions, network load...
- ❑ **Increasing the diameter of the rotor** ⇒ increasing the wind utilization factor (up to 35 % for new turbines)



Source: adapted from EWEA, 2009.

⇒ **The Future is here!**

IN THE MEANTIME - DEVELOPMENT OF WIND FARMS

❑ **Rapid technological development**

- Manufacturers have stopped specifying the exact characteristics of wind turbines.
- Development of unique platform that enables the modularity of components.
- Adjustment of the platform for individual wind characteristics at a specific location.
- More cost-efficient equipment maintenance.

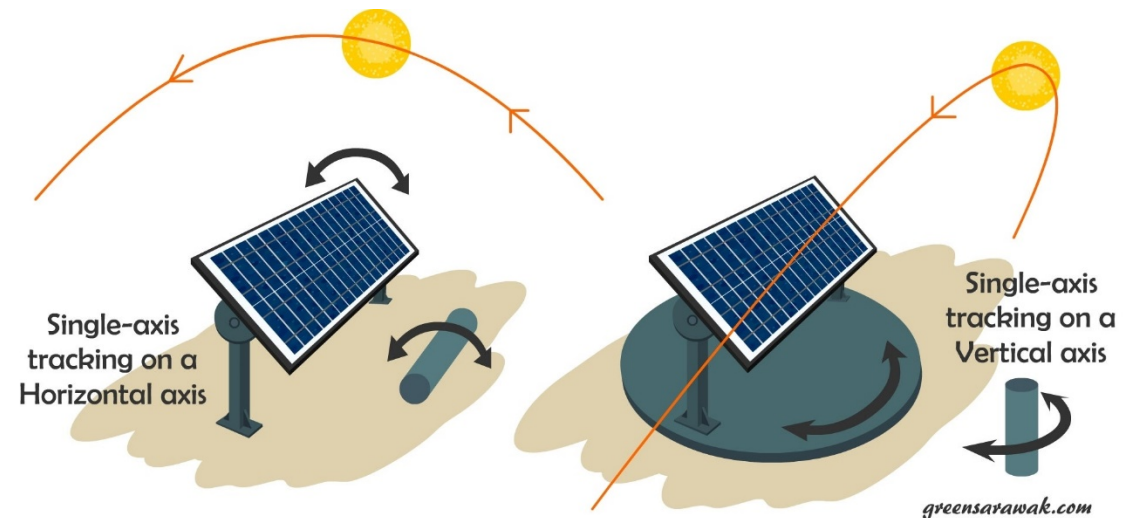
- ❑ Final characteristics of the wind turbine (nominal power, rotor size...) depend on the available performance of the individual platform at the time of contracting.

❑ **Non-uniformity of data for:**

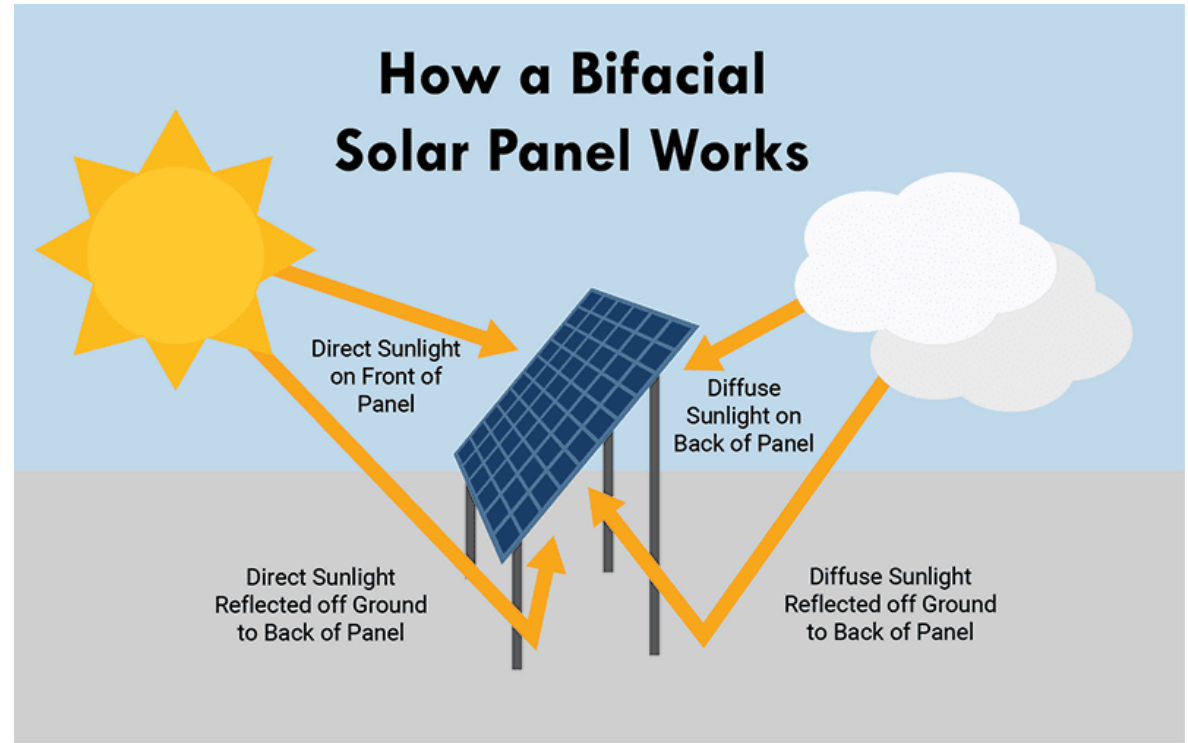
- Impact assessment on birds and bats population (data requirements for Collision risk models).
- Available technological data at the time.

IN THE MEANTIME - DEVELOPMENT OF SOLAR POWER PLANTS

- ❑ Significant increase in the efficiency of photovoltaic (PV) modules in the last decade (10 – 20 %).
 - cost reduction of large photovoltaic systems by 82 % since 2010.
- ❑ **Increasing size of photovoltaic modules (power 600+ W)** while simultaneously reducing material consumption for silicon cells.
- ❑ **Anti-reflective finishing layer** on the modules that also prevent the appearance of the water surface effect and reduce the possibility of birds colliding with the panels.
- ❑ The development of **"tracker" technology** - the panels are placed on a movable construction which follows the "azimuth" of the sun, thus improving the absorption of solar energy and thereby increasing efficiency.
- ❑ Development and application of **bifacial modules** that generate energy from the front and back, thus enabling higher annual production in the range of 5 to 30 %.
- ❑ Development and application of **floating Solar Power Plants**.



IN THE MEANTIME - DEVELOPMENT OF SOLAR POWER PLANTS



RENEWABLE ENERGY AND CLEAN ENERGY TRANSITION

- ❑ RES are at the hearth of clean energy transition to achieve climate neutrality and decrease the Union's dependence on fossil fuels.
- ❑ Renewable energy targets are constantly increasing.
- ❑ The current pace of deployment of renewable energy projects is insufficient.
- ❑ A massive speed-up and scale-up in renewable energy is needed.

TIMELINE OF RENEWABLE ENERGY TARGETS



- ❑ Slow and complex permitting procedures determined as a key obstacle.
- ❑ Permit-granting procedure – up to 9 years for wind projects, and up to 4.5 years for ground-mounted solar projects.
- ❑ A Commission Recommendation to tackle slow and complex permitting for major renewable projects (C(2022) 3219 final).
- ❑ Proposal for revision of RED II Directive (COM(2022) 222 final) from May 2022.

SPEEDING-UP ENVIRONMENTAL PROCEDURES

- ❑ Environmental procedure is important part of overall permit-granting procedure, together with spatial planning often a key part.
- ❑ Key obstacles according to National assessment (MINGOR, June 2022):
 - Great number of screenings is a large burden on competent authorities
 - Delay in opinions of certain competent authorities
 - The quality of the created documents/backgrounds
 - Lack of administrative capacity of public bodies
 - Screening/EIA procedure for technology change
 - Lack of expert basis for planning the RES locations
 - Lack of conservation objectives for Natura 2000 SCI areas
 - Frequent changes in EU and national energy legislation.
 - Insufficient coordination and cooperation between different sectors.
- ❑ 9 measures suggested to ensure the faster and efficient acceleration of the RES projects in Croatia
- ❑ In the short term, no measures related to the environment and nature are recognized as priorities.

CHALLENGES FOR THE FUTURE

- Harmonization of national legislation in the field of renewable energy.
- Proposal for a RED II amendment.
- Renewable go-to areas - Who? How? Methodology? SEA?
- Interpretation of existing established EU legislation – Habitats and Birds Directives and EIA Directive – legal uncertainty and challenge = delay.
- Amendment of other EU Directives.
- ‘Overriding public interest’ – already set in the context of Nature Directives.

THANK YOU

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