First Look Solutions S.A.

Environmental and Social Impact Assessment Report

460.8 MW Vifor Wind Farm, Buzau County, Romania Report

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Project No.: 066726

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APPENDIX A CLIMATE CHANGE RISK ASSESSMENT SUPPORTING MATERIALS

List of default climate indicators and definitions

Indicator Name	Description
Coastal Flooding Inundation Depth (m)	Baseline: The maximum inundation depth associated with a 1-in-500-year coastal flooding event as a result of historic sea level rise, land subsidence, storm surges and/or high tide events. Projections: The maximum inundation depth associated with a 1-in-500-year coastal flooding event as a result of projected sea level rise, land subsidence, storm surges and/or high tide events. Baseline year: 2010
Cold Spell Duration Index (days)	Baseline & Projections: The annual number of days contributing to unusually cold events where 6 or more consecutive days experience a minimum temperature (TN) of less than the 10th percentile of the historical averages for that time of year. Baseline period: 1985-2014
Forest Fire Danger Index (Number of days with fire-permitting climatic conditions)	Baseline & Projections: The annual number of days with fire-permitting climatic conditions. This index is based on the McArthur Forest Fire Danger Index (FFDI; widely used in Australia for several decades) and combines a record of dryness, based on rainfall and evaporation, with meteorological variables for wind speed, temperature and humidity. Baseline period: 1985-2014
Maximum Burned Area (km2)	Baseline: The maximum area that has been burned by any fire type within a 30km2 area. Baseline period: 1989-2020
Maximum Tropical Cyclone Wind Speed (knots)	Baseline: The maximum sustained wind speed associated with being within 200km of a tropical cyclone event. Projections: The maximum sustained wind speed associated with being within 200km of a tropical cyclone, based on cyclone basin-specific tropical cyclone projections generated using AR6 global mean surface temperature projections. Baseline period: 1980-2020
Pluvial Flooding Inundation Depth (m)	Baseline & Projections: The maximum inundation depth experienced within a 270mx270m area that is associated with a 1-in-500-year pluvial (extreme-rainfall-induced) flooding event.
Rainfall-Induced Landslides Index (Number of days with a potential chance of a landslide event)	Baseline & Projections: The annual number of days with a potential chance of a rainfall-induced landslide event. This index is developed using antecedent rainfall index (weighted summation of daily rainfall amounts) and landslide susceptibility (based on slope, faults, geology, forest loss, and road networks). Baseline period: 1985-2014
River Flooding Inundation Depth (m)	Baseline & Projections: The maximum inundation depth experienced within a 270mx270m area that is associated with a 1-in-500-year river flooding event.

Key considerations and supporting questions when conducting physical CCRA's – as per EP4 guidance[1]

What are the current and anticipated Physical Risks of the project's operations?	
Acute Increased frequency and severity of: - Wildfires - Flooding – Storms/Cyclones - Heatwaves Chronic - Changes in precipitation patterns resulting in **drought or water stress** - Rising mean temperatures **- Sea level rise** (i.e., in coastal zones, designated flood zones, areas vulnerable to storm surge)	**What are potential Physical Risks for the project?** ■ Based on current climate conditions and long-term climate projections (if available), are there any potential Physical Risks that are known or forecast to get worse in the project's location? ■ Is the project highly reliant on a resource that could be impacted by climate change, like water or changes to land use? ■ Is the project in a location more vulnerable to climate change, such as a low lying area, coastal area, or flood zone? ■ Is this project in an industry or geographic location where climate and weather variation are already having impacts? Are such impacts likely to be exacerbated over time? **How could the identified Physical Risks impact on the project?** ■ What would be the impact? Damage to assets, loss of operation, delays for customers, impact on suppliers, increased operating costs, or impact on the surrounding business, environment, and communities? ■ How material would this be to the project's operations? Supply chain? Revenues (if known)? ■ Would climate vulnerabilities and risks inform the design, siting, and analysis of alternatives of the project? Would physical climate impacts result in impacts on community, business, or customers? E.g., greater competition over water resources ■ Would physical climate impacts increase the vulnerability of certain groups? ■ Would these impacts be severe enough to affect the license to operate of the Project Sponsor or the project?

([1]) Equator Principles Guidance Note on Climate Assessment Link

Vifor Wind Farm: Risk Score by Hazard

SSP1-2.6

Asset	Hazard	Baseline	2030s	2050s
Vifor Wind Farm	Extreme Heat	1.08	1.52	1.72
	Extreme Cold	2.96	2.36	2.36
	River Flooding	0.06	0.06	0.06
	Extreme Rainfall Flooding	0.00	0.00	0.00
	Coastal & Offshore	0.00	0.00	0.00
	Extreme Winds & Storms	0.00	0.00	0.00
	Rainfall-Induced Landslides	0.00	0.00	0.00
	Water Stress & Drought	0.10	0.80	1.40
	Wildfires	1.08	2.10	2.04

SSP5-8.5

Asset	Hazard	Baseline	2030s	2050s
Vifor Wind Farm	Extreme Heat	1.08	1.72	2.40
	Extreme Cold	2.96	2.28	1.88
	River Flooding	0.06	0.00	0.06
	Extreme Rainfall Flooding	0.00	0.00	0.00
	Coastal & Offshore	0.00	0.00	0.00
	Extreme Winds & Storms	0.00	0.00	0.00
	Rainfall-Induced Landslides	0.00	0.00	0.00
	Water Stress & Drought	0.10	0.94	1.52
	Wildfires	1.08	1.92	3.60

Vifor Wind Farm: Climate Variables

This Annex provides the raw climate values for baseline and future dates. These values are used and converted into normalized values and combined with asset exposure ratings to generate the risk scores.

SSP1-2.6: Detailed information about climate variables

Asset	Hazard	Climate Indicator	Baseline	2030s	2050s
Vifor Wind Farm	Extreme Heat	Warm Spell Duration Index (days)	36.03	63.80	78.10
	Extreme Cold	Cold Spell Duration Index (days)	9.60	6.00	6.10
	River Flooding	River Flooding Inundation Depth (m)	0.10	0.10	0.10
	Extreme Rainfall Flooding	Pluvial Flooding Inundation Depth (m)	0.05	0.05	0.05
	Coastal & Offshore	Coastal Flooding Inundation Depth (m)	0.00	0.00	0.00
	Extreme Winds & Storms	Maximum Tropical Cyclone Wind Speed (knots)	0.00	0.00	0.00
	Rainfall-Induced Landslides	Rainfall-Induced Landslides Index (Number of days with a potential chance of a landslide event)	0.00	0.00	0.00
	Water Stress & Drought	Water Stress (categorical)	Low (<10%)	High (40-80%)	High (40-80%)
	Wildfires	Maximum Burned Area (km2)	0.00		
	Wildfires	Forest Fire Danger Index (Number of days with fire-permitting climatic conditions)	7.17	27.00	26.00

SSP5-8.5: Detailed information about climate variables

Asset	Hazard	Climate Indicator	Baseline	2030s	2050s
Vifor Wind Farm	Extreme Heat	Warm Spell Duration Index (days)	36.03	79.20	140.70
	Extreme Cold	Cold Spell Duration Index (days)	9.60	5.60	3.90
	River Flooding	River Flooding Inundation Depth (m)	0.10	0.10	0.11
	Extreme Rainfall Flooding	Pluvial Flooding Inundation Depth (m)	0.05	0.05	0.05
	Coastal & Offshore	Coastal Flooding Inundation Depth (m)	0.00	0.00	0.00
	Extreme Winds & Storms	Maximum Tropical Cyclone Wind Speed (knots)	0.00	0.00	0.00
	Rainfall-Induced Landslides	Rainfall-Induced Landslides Index (Number of days with a potential chance of a landslide event)	0.00	0.00	0.00
	Water Stress & Drought	Water Stress (categorical)	Low (<10%)	High (40-80%)	High (40-80%)
	Wildfires	Forest Fire Danger Index (Number of days with fire-permitting climatic conditions)	7.17	23.00	82.50
	Wildfires	Maximum Burned Area (km2)	0.00	No data	No data