AGENDA

- WHO WE ARE

- INDUSTRIAL CONTEXT
  - NET-ZERO STRATEGY
  - REGULATORY ASPECTS
  - ESG
  - TECHNOLOGICAL IMPROVEMENT

- BOTTLENECKS
  - AUTHORIZATION PROCESS
  - GRID ACCESS

- CONCLUSIONS
WHO WE ARE

business model oriented towards sustainable development and decarbonization objectives, consistent with the transition process of the energy system underway worldwide.

80+ years in the energy sector
Listed on the Milan stock exchange
Leading renewable operator in Italy
Main player in European onshore market
ERG TODAY: A SOLID PLATFORM OF ASSETS TO BOOST FUTURE GROWTH

Total installed Capacity

Wind
- 41MW Wind
- 57MW, Solar

Hydro
- 527 MW
- 100%

Solar
- 500 MW
- 100%

CCGT
- 480 MW
- 100%

Pipeline

Wind Pipeline
- 367 MW

Solar Pipeline
- 336 MW

Autorizzazione Unica
- 70 MW

RPW with COD by 2022-2023
- 775 MW

Under construction
- 367 MW

Wind Farm in operation
- 495 MW

Solar Plant in operation
- 336 MW

Hydroelectric Plant
- 527 MW

CCGT
- 480 MW

(1) It includes the recent acquisition of 41MW Wind and 57MW Solar whose closing took place on 28 October 2021
(2) It includes the recent wind acquisition for 55MW, whose closing took place on October 1, 2021
(3) It refers to Poland, Romania and Bulgaria
(4) Pipeline (~3,000MW) is on a gross basis and includes: ~400 MW in construction, repowering & greenfield pipeline in Italy and pipeline for solar & wind greenfield in EU
(5) Repowering is on a gross basis
### ERG TOMORROW: MAIN TARGETS OF 2021-25 BUSINESS PLAN

<table>
<thead>
<tr>
<th>Key 2021-2025 Strategic Guidelines</th>
<th>ERG’s 2021-2025 Targets</th>
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<tbody>
<tr>
<td><strong>Growth in scale</strong></td>
<td>Setting high growth ambition RES portfolio</td>
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<tr>
<td><strong>Energy Sales / Mgmt</strong></td>
<td>Securing energy sales through PPA/CfD</td>
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<tr>
<td><strong>Geographical diversification</strong></td>
<td>Positioning over multiple geographies</td>
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<tr>
<td><strong>Solar as strategic pillar</strong></td>
<td>Wind and solar as growth drivers, with solar gaining share</td>
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<tr>
<td><strong>Seed in Innovation</strong></td>
<td>Capturing opportunities in Storage &amp; other technologies</td>
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<tr>
<td><strong>Conventional is “legacy”</strong></td>
<td>RES-centricity on asset base and development.</td>
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<tr>
<td><strong>Integration of ESG</strong></td>
<td>ESG fully integrated in business strategy</td>
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INDUSTRIAL CONTEXT

NET-ZERO STRATEGY

Decarbonisation of electricity one of the pillar of the EU Carbon Law, with unprecedented targets

RES share on electricity consumption

Source: Eurostat Database
UNIVERSITY CONTEXT

REGULATORY ASPECTS

- **EU - RED II** opens the tendering procedures to all producers of electricity / technology from RES on **non-discriminatory basis**

- **Germany (EEG - Energiewende 2021) and France (PPE - Programmations pluriannuelles de l’énergie):**
  - Repowering projects are allowed to join auctions for RES with **no differences/restrictions** compared to greenfield ones.

- **Italy:**
  - Repowering has only been allowed to participate in RES auctions since the end of 2020, when the "2020 Simplification Decree" came into force
  - No limits on capacity addiction
  - However, **several restrictions remain for RPW:**
    - Access to auction **only in case of spare-capacity** not assigned to greenfield
    - Further **extra-cut of 5% to the allocated tariff**, despite RWP being more expensive in terms of investment (e.g. dismantling of the existing assets).

<table>
<thead>
<tr>
<th>Country</th>
<th>CfD 2 ways</th>
<th>CfD 1 way</th>
<th>Duration (y)</th>
<th>Inflation adj.</th>
<th>Tech. neutrality</th>
<th>Restrictions for RPW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>X</td>
<td>20</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes!</td>
</tr>
<tr>
<td>France</td>
<td>X</td>
<td>20</td>
<td>yes (partially)</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Germany</td>
<td>X</td>
<td>20</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

RES auctions – main topics
ERG started the RPW in 2017 in Italy, in 2019 in France and in 2020 in Germany.
In Italy we currently have exceeded 55% of the authorized projects included in the 21-25 plan
Economics of projects always evaluated in differential terms on the basis of the ERG investment strategy
Repowering projects have 10 items with a "positive" impact on ESG.
INDUSTRIAL CONTEXT

TECHNOLOGICAL IMPROVEMENT

ERG industrial ratios for repowering
✓ Land use: less than As-Is
✓ WTGs reduction -0.5x
✓ Power increase +2.5x
✓ Energy increase +3.5x

Case study: Layout example

The old wind farms are built with obsolete technologies, thus do not exploit the full wind potential. Repowering allows to improve the energy gain from the windiest sites.
**BOTTLENECKS**

**AUTHORIZATION PROCESS**

- **Too long path** (around 4-5 years in Italy in the near past)
- Apart from **some brand new (and positive) simplifications in Italy** (slide up), repowering globally follows the same path as greenfield projects, when RED II is calling for
  - 2 years for green field projects
  - 1 year for repowering!
- **27 Public Entities** – on average - involved in the authorization process in Italy, Spain, France
- Possible **disputes, judicial appeals, ideological oppositions and claims promoted** by Public Entities (Ministries, Regional Authorities, Local Authorities) basically about **landscape protection**, despite repowering projects take place on areas already installed
PERMITTING FOR REPOWERING - SIMPLIFICATION TOOLS

Transposition Decree of RED II into Law

- Choosen by Regions through specific Laws
  - priority for existing RES-sites (same renewable source)
  - meanwhile, sites of existing wind farms subject to «non-substantial» modifications (e.g. Repowering under certain dimensional limits) are considered as Suitable

- Permitting duration reduced by 1/3
- Non binding opinion of Ministry of Culture

RES-suitable Areas

Overview

Simplifications

Simplification Decree - 2021

- Start activity communication
- Environmental permitting / procedures required
- Some expropriation issues to be addressed

Non-substantial mods

<table>
<thead>
<tr>
<th>Original diameter</th>
<th>Max number of WTGs post operam</th>
<th>Maximum height post operam</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 70 m</td>
<td>min (n1 x 2/3; n1^d1/(d2-d1))</td>
<td>≤ h1 x 2,5</td>
</tr>
<tr>
<td>&gt; 70 m</td>
<td>≤ n1^d1/d2</td>
<td>≤ h1 x 2</td>
</tr>
</tbody>
</table>
BOTTLENECKS

GRID ACCESS

• High saturation degree of the main electrical nodes of the national grid

• TSO’s electrical stations are not provided with enough available HV terminal connectors

• 2026 is the year when some European TSOs will complete their Development Grid Plan (e.g. Terna in Italy, REE in Spain). These plans cannot realistically allow to absorb the energy production needed to hit the target defined by the NECP

  › many regions still lack effective connection solutions
CONCLUSIONS

What do we need to unlock the potential of repowering?

- **Authorization processes** coherent with
  - its real impact (complexity and constraints) → **RPW is not Greenfield**
  - the unprecedented wave of RES capacity addition required by EU climate ambition

- **Access to RES auctions** on a fair level playing field with green field projects, **without penalisations**

- **Priority for RPW**, combining the fight against soil consumption and increasing RES capacity/production, while **halving the number of turbines**

- **Investments in transmission and distribution grids** attowing TSOs to underpin renewables expansion