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22/06/2026

Portale Dati

Connections -
Microzonal Solutions

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Driving Energy

Dear user,

in this guide you will find assistance on how to read the new **Microzonal Solutions** section created within the Connections page of the Data Portal.

If you have any questions or issues, you can contact our support service at the toll-free number 800 999 333 or by email at crm@terna.it.

METHODOLOGICAL NOTE
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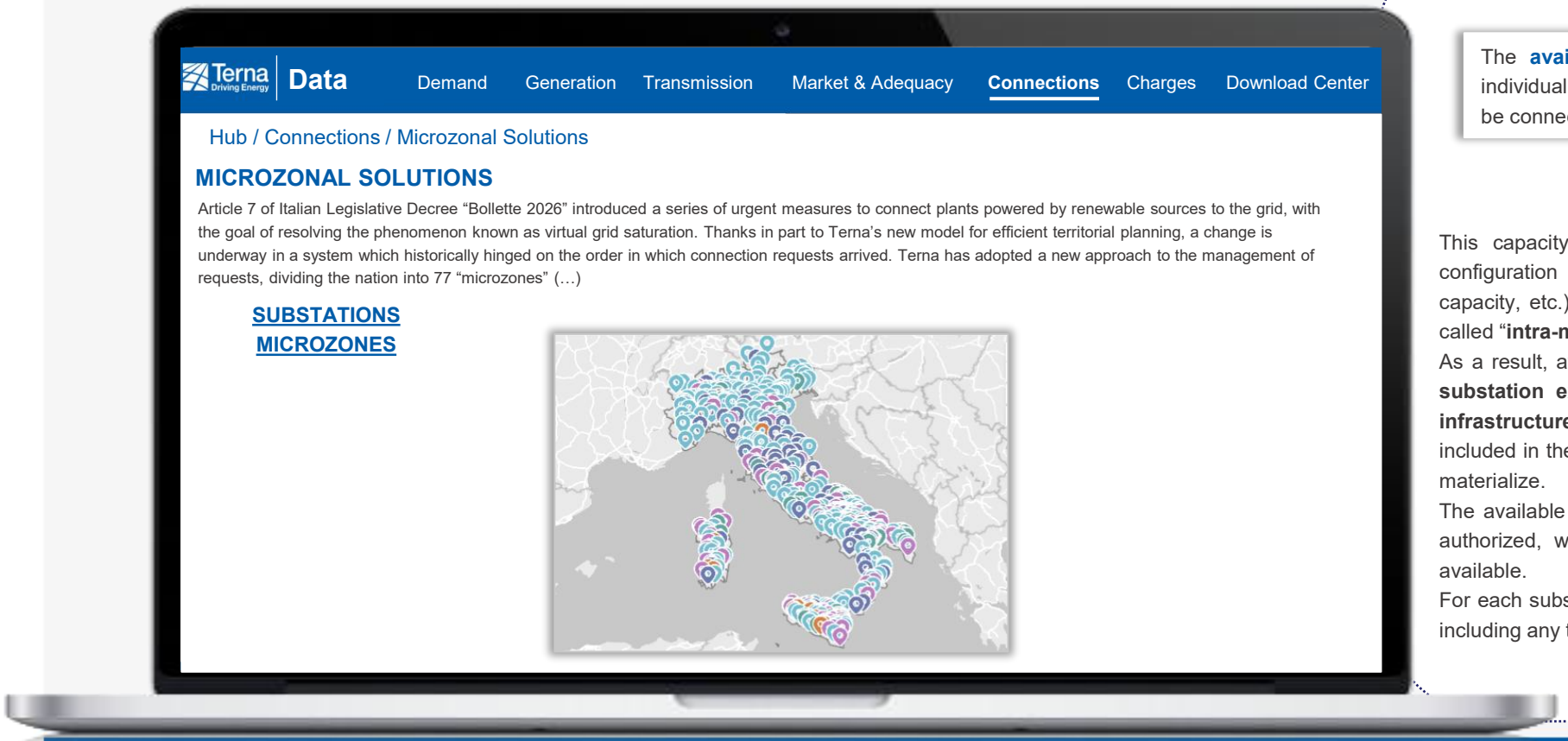
MICROZONAL SOLUTIONS: METHODOLOGICAL NOTE

Connection capacity is studied and published across two dimensions: **substation** and **microzone.**



SUBSTATION

The **available capacity at substations**, also broken down by individual voltage level, is the maximum injection capacity that can be connected to the substation's available connection points.

This capacity is determined by taking into account both the technical configuration of each substation (number of available bays, transformer capacity, etc.) and the power transfer capability of the local grid (here also called "**intra-microzonal**").

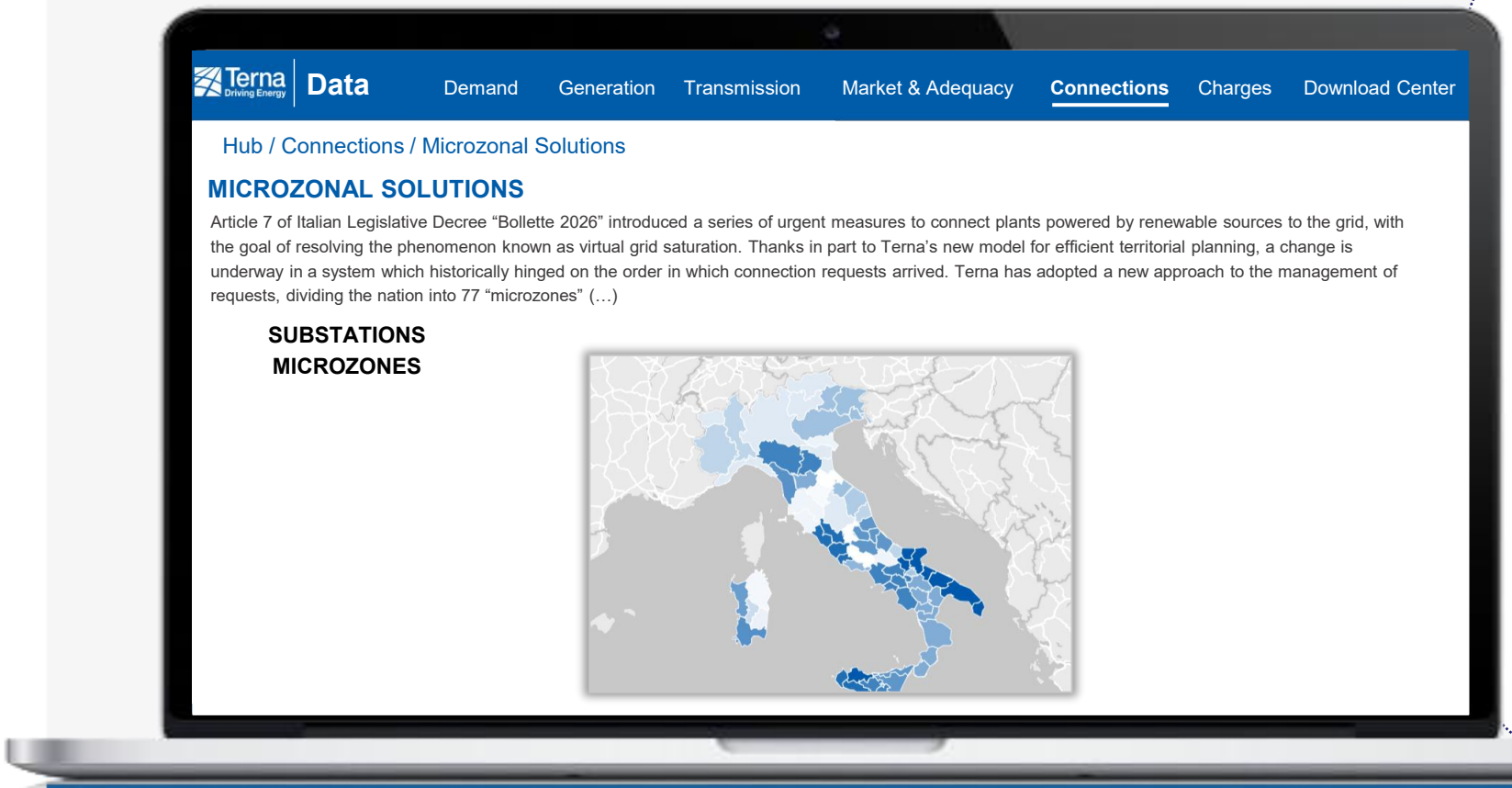
As a result, available capacity at substations can be increased by planning **substation expansions** and/or **reinforcements** to the local grid. These **infrastructure developments** (power lines, other stations) are explicitly included in the connection solutions and will be built as initiatives in the area materialize.

The available capacity at substations is calculated net of initiatives already authorized, whose capacity is already reserved and therefore no longer available.

For each substation, the number of available connection points is published, including any that may be linked to substation expansions.

MICROZONAL SOLUTIONS: METHODOLOGICAL NOTE

Connection capacity is studied and published across two dimensions: **substation** and **microzone.**



MICROZONES

Each Region has been divided into one or more microzones in order to study its local ability to accommodate connection requests from RES (Renewable Energy Sources) and storage systems.

At microzonal level, the **integrable capacity** represents the maximum capacity that can be accommodated by the microzone and evacuated toward other microzones (by the “inter-microzonal” grid), as assessed separately for each microzone.

This capacity depends only on the structure of the grid and in particular on “inter-microzonal” transfer capacity, and can therefore be increased only by strengthening the transfer capacity between microzones. The **“inter-microzonal” grid developments** required to achieve this objective are in general not included in the connection solutions, as they fall within the scope of actions that Terna will plan consistently with the overall expected evolution of the power system.

The integrable capacity of the individual microzone, considering only the limits to energy transport between microzones (“inter-microzonal”), provides information that complements the view of individual stations.

HOW TO READ
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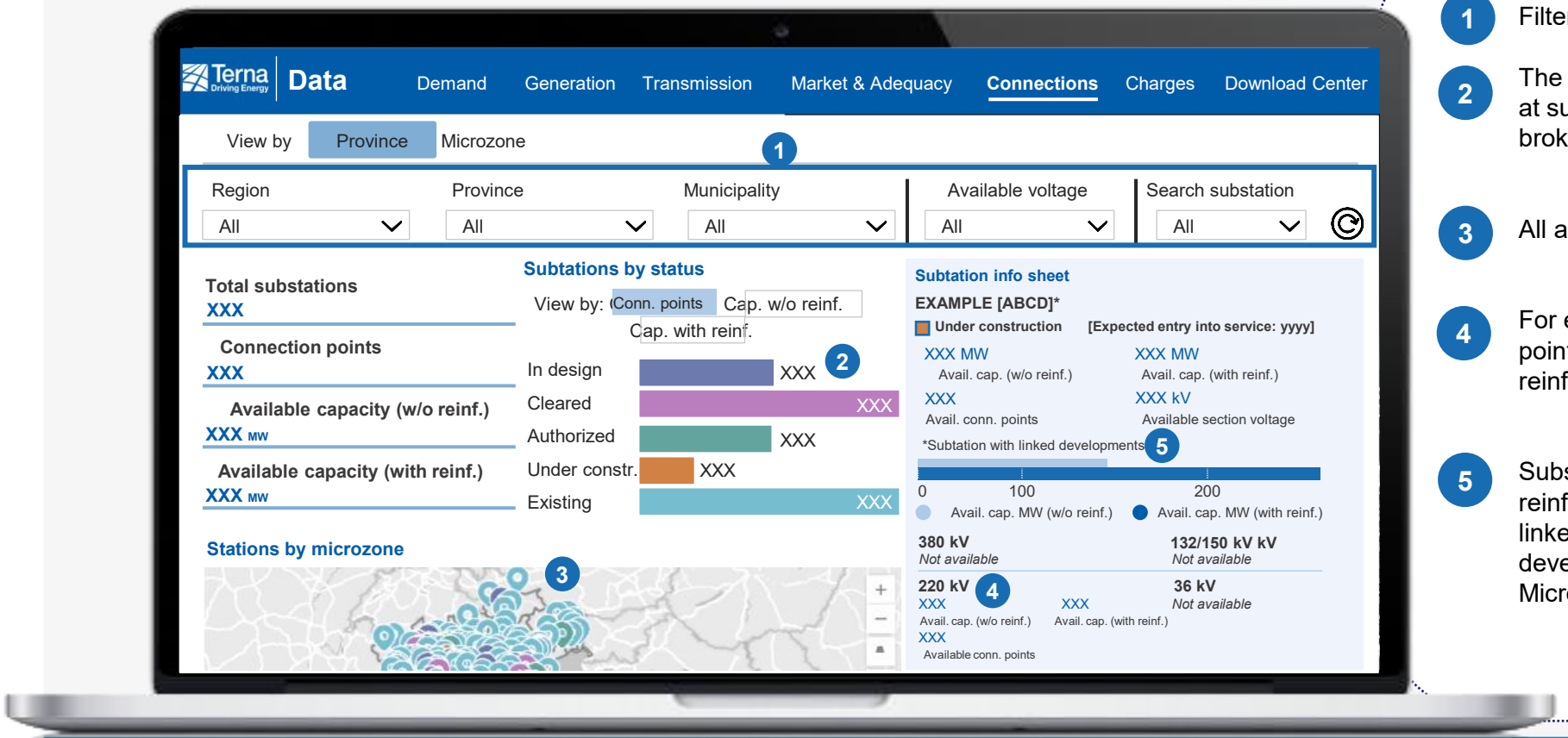
MICROZONAL SOLUTIONS: HOW TO READ - SUBSTATIONS

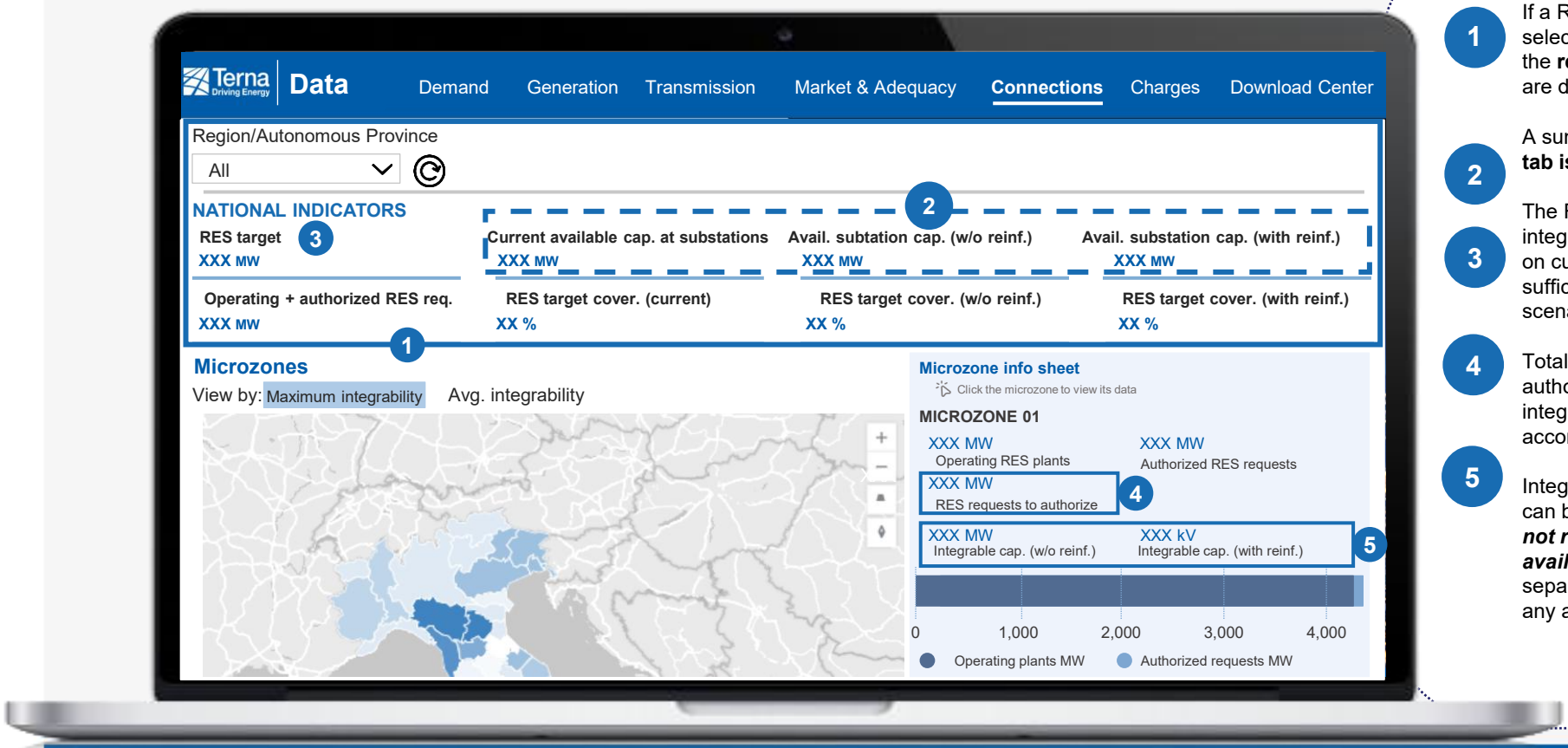
Available capacity with and without reinforcements, available connection points, and available voltage levels are published.
The available capacity at stations is calculated net of initiatives already authorized, whose capacity is already reserved and therefore no longer available.



1. Filter panel.
2. The bar chart can display the sum of available capacity at substations, or the sum of available connection points, broken down by substation status.
3. All available substations are shown on the map.
4. For each section with at least one available connection point, the available capacity without and with reinforcements is shown.
5. Substations whose capacity increases due to local grid reinforcements have one or more grid development linked to them, marked with an "*". The list of linked developments can be consulted in Download Center–Microzonal Solutions–Developments.

MICROZONAL SOLUTIONS: HOW TO READ – MICROZONES (1/2)

Microzones are **territorial subdivisions**, between the regional and municipal levels: each microzone lies entirely within one region and includes, in full, one or more municipalities. The definition of individual microzones derives from criteria for representing the underlying electricity grid structure, useful for effectively modeling the main constraints on electricity transmission.



1. If a Region/Autonomous Province or an individual microzone is selected on the map, the **indicators** shown in this section refer to the **regional** level. If nothing is selected, national-level indicators are displayed.

2. A summary of available substation capacity from the ***Substations*** **tab is shown.**

3. The RES target represents an operational objective for RES integration specifically on the National Transmission Grid, based on current connection infrastructure planning. This target is sufficiently above the regulatory burden-sharing objectives and scenarios. **(*)**

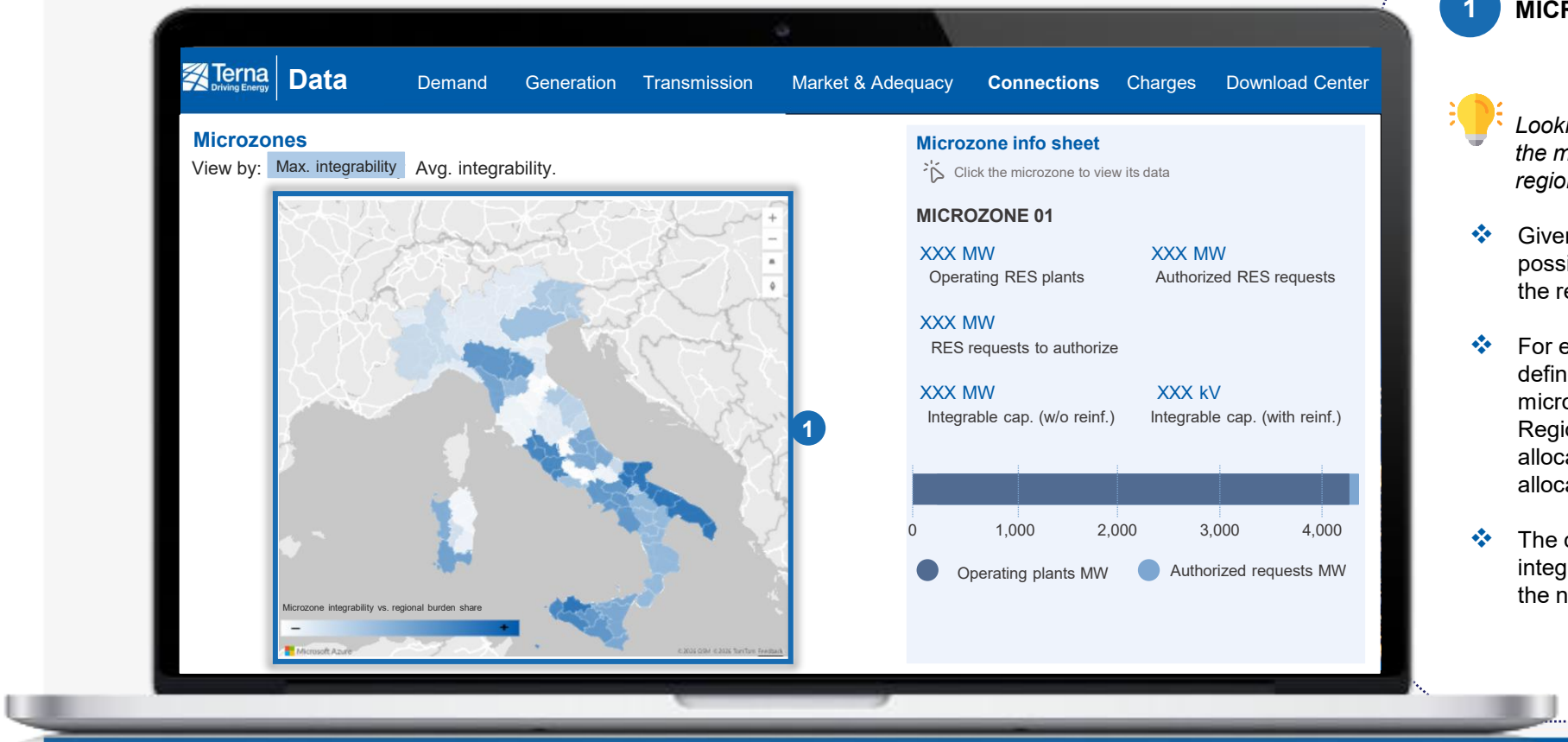
4. Total RES connection requests, excluding those already authorized. These requests can be compared with microzone integrable capacity and available station capacity to assess accommodation margins.

5. Integrable capacity depends only on “inter-microzonal” links and can be increased by reinforcing the “inter-microzonal” grid. ***It does not reflect the presence (or absence) of connection points or available substation capacity.*** This capacity is defined separately for each microzone and does not factor in the effect of any additional capacity located in neighboring microzones.

*(*) The target is shown net of **operating RES plants** and **RES requests already authorized**, so only new resources contribute to meeting the target.*

MICROZONAL SOLUTIONS: HOW TO READ – MICROZONES (2/2)

Microzones are **territorial subdivisions**, between the regional and municipal levels: each microzone lies entirely within one region and includes, in full, one or more municipalities. The definition of individual microzones derives from criteria for representing the underlying electricity grid structure, useful for effectively modeling the main constraints on electricity transmission.



1 MICROZONE MAP OVERVIEW

*Looking at each region separately, it is possible to identify the microzones ready to accommodate a **larger share** of the regional burden share.*

- Given the regional 2030 burden sharing, a certain number of possible **efficient allocations of new RES capacity** among the region's microzones are identified.
- For each microzone, **maximum integrability** is then defined, i.e. the maximum capacity allocated to that microzone across all possible efficient allocations in the Region, and **average integrability**, i.e. the capacity allocated on average to that microzone in the same efficient allocations.
- The coloring of the microzones on the map reflects this integrability, normalized against regional burden sharing and the number of microzones in the region.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