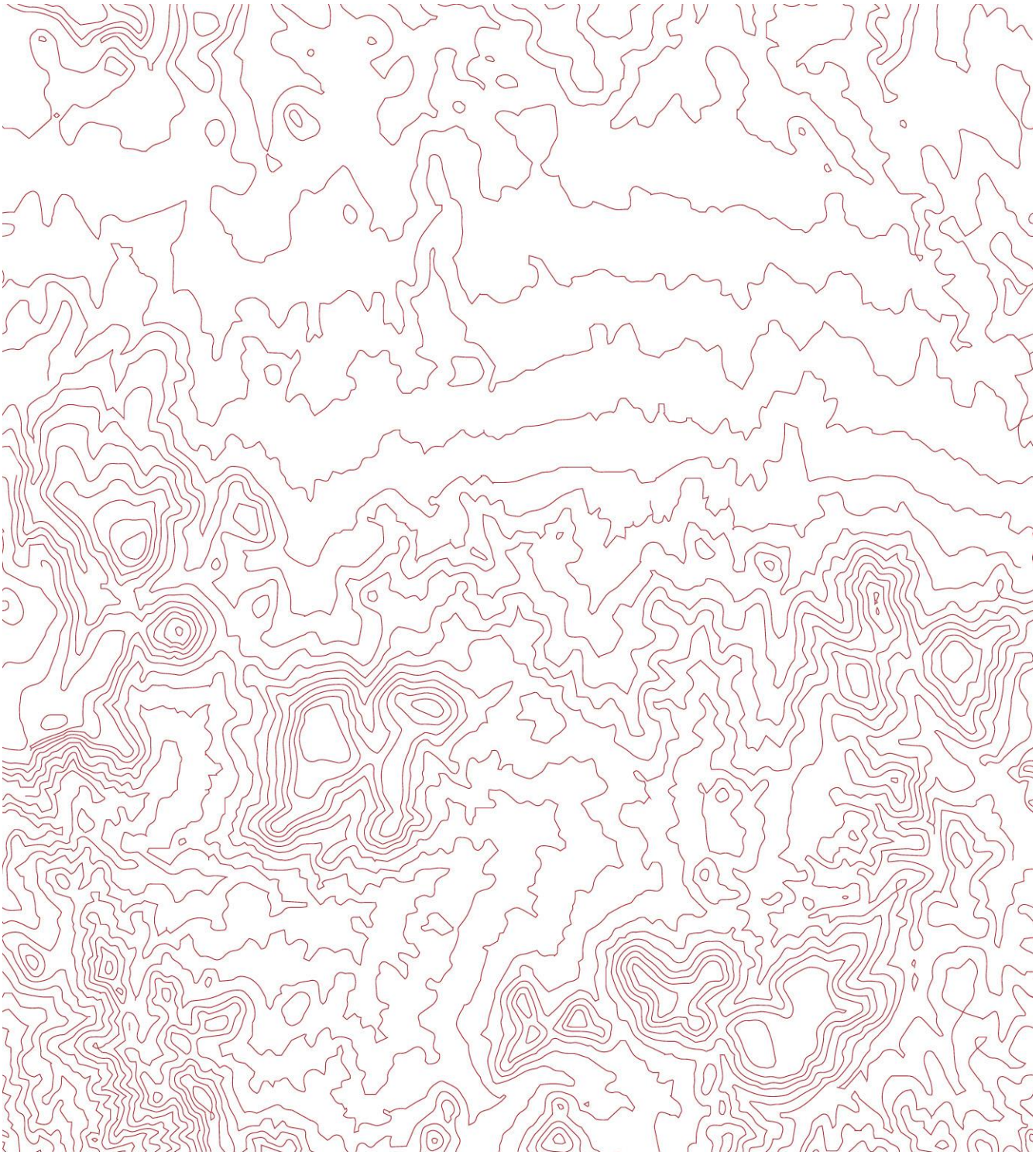
# Green electricity labels in Europe

Summary of the comparative study
April 2026



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# Summary

Motivation and relevance

There is currently a wide variety of green electricity labels on the European market. While this choice is generally positive for end customers, it also makes it difficult to decide. This study compares the most important of these labels in terms of environmental sustainability, thereby providing a well-founded decision-making aid for the procurement of green electricity. The focus is on electricity production with the lowest possible negative impact on the environment.

Selection of the 12 green electricity labels

Only labels that meet transparent and binding environmental criteria, have sufficient market relevance within the European market, undergo independent audits and are managed by an independent body were assessed. In total, 12 labels were identified and assessed on the basis of these criteria.

Assessment procedure

A set of criteria comprising 8 environmental sustainability criteria (shown in green in the table below) and 4 overarching criteria (in blue) was developed for the assessment. The overarching criteria evaluate aspects such as transparency, the certification scheme's monitoring and sanction mechanisms, and the traceability of the electricity. The labels were assessed against all criteria on a scale of 1 (lowest) to 5 (highest). Finally, the average of the 12 criterion assessments was calculated for each label. This average forms the overall rating for each label, on the basis of which the labels were grouped. This resulted in four groups, each with clearly distinct overall ratings.

| | ADEME VertVolt très engagé | Bra Miljöval | EKOenergy | Green-e | Green Electricity (DE) | Green Electricity (Austrian eco-label) | Milieukeur | naturemade | naturemade star | ok-power | TÜV SÜD EE01 | TÜV SÜD EE02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Renewable energy | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Hydropower | 2.4 | 3.5 | 2.7 | 4.3 | 1.8 | 3.5 | 1.4 | 2.6 | 4.8 | 1.8 | 1.0 | 1.0 |
| Biomass | 2.3 | 2.7 | 2.6 | 2.9 | 2.1 | 2.7 | 2.3 | 1.9 | 4.6 | 1.9 | 2.6 | 2.6 |
| Wind | 1.2 | 5.0 | 3.4 | 1.0 | 5.0 | 4.0 | 3.4 | 5.0 | 5.0 | 5.0 | 1.0 | 1.0 |
| Photovoltaics | 4.0 | 3.5 | 4.0 | 1.0 | 2.0 | 2.0 | 4.0 | 2.0 | 5.0 | 2.0 | 1.0 | 1.0 |
| Municipal waste | 1.0 | 4.2 | 5.0 | 5.0 | 1.0 | 1.8 | 1.0 | 5.0 | 5.0 | 5.0 | 1.0 | 1.0 |
| Global environmental Impact | 2.3 | 1.0 | 1.0 | 1.6 | 1.0 | 3.2 | 2.6 | 1.0 | 4.1 | 1.0 | 1.5 | 1.5 |
| Funding mechanisms | 2.6 | 3.6 | 3.6 | 2.2 | 3.6 | 1.0 | 1.0 | 4.0 | 4.4 | 3.8 | 4.0 | 2.8 |
| Certification process | 5.0 | 3.9 | 4.7 | 4.2 | 4.4 | 3.4 | 3.4 | 5.0 | 5.0 | 5.0 | 2.2 | 1.3 |
| Quality of electricity supply | 3.6 | 3.6 | 2.1 | 3.9 | 3.0 | 3.3 | 2.4 | 4.3 | 4.3 | 4.2 | 3.9 | 5.0 |
| Quality of electricity product | 4.2 | 4.2 | 4.2 | 4.2 | 4.0 | 5.0 | 4.2 | 4.2 | 4.2 | 4.6 | 4.2 | 4.2 |
| Transparency | 5.0 | 3.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |

Renewable energy and overarching criteria rated highly

The assessment of the labels based on these criteria shows that almost all labels perform well in terms of renewable energy – i.e. the consistent exclusion of non-renewable energy sources – and the overarching criteria (see the first row and the blue rows above). For most local environmental impacts (from hydropower to and including municipal waste), there are significant differences between the labels. The global environmental impacts of electricity production across the entire life cycle, including upstream supply chains, are taken into account by very few labels.

Incentive mechanisms

Many green electricity labels have additional support mechanisms. One option is to contribute to a fund for nature conservation or for the expansion of production capacity via a levy per kWh of electricity. Another approach is to require minimum shares of new installations or other quotas to provide an incentive for the expansion of renewable electricity production.

Different priorities

The analysis has shown that the labels place different priorities in specific areas. Some labels focus on electricity production with the lowest possible environmental impact. Just under half of the labels focus on the expansion of renewable electricity generation and do not have strict additional environmental criteria for every production technology. There are also hybrid forms. Within the scope of this study, the focus is on the low environmental impact of electricity generation, as renewable energies can also cause conflicting objectives, for example with regard to the protection of biodiversity.

*naturemade star* with the highest overall rating

With this focus, *naturemade star* achieves the highest overall rating (see chart below). This result remains robust even when the weightings of the criteria and their sub-criteria are altered. In the second group are *Bra Miljöval, EKOenergy, naturemade* and *ok-power*. The labels are listed alphabetically within their respective groups.