

Frequently Asked Questions (FAQs): Technical

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Reference materials

Please review all [RE100's guidance](#) to support your review of these FAQs, including:

- [RE100's joining criteria](#)
- [The RE100 technical criteria](#)
- [RE100's note on market boundaries](#)
- [RE100's materiality threshold provisions](#)
- [RE100's guidance on credible claims to use of renewable electricity](#)
- [RE100's guidance on how its members are held to account by the initiative](#)

Please review previous [RE100 publications](#), including:

- Previous RE100 annual disclosure reports
- RE100's market briefings
- [RE100's paper on business leadership in the transition to renewable electricity](#) (referred to in this document as 'The RE100 Leadership Paper').

Joining RE100

1. Can any company join RE100?

No. There are eligibility criteria. One of them is having an annual electricity consumption of at least 0.1 TWh. Please see all the requirements in the [RE100 joining criteria](#).

2. Can a company join RE100 if it is already consuming 100% renewable electricity?

Yes, companies which already consume 100% renewable electricity can join RE100. They commit to maintaining this achievement and to having their achievement verified against the RE100 technical criteria year-on-year through the annual reporting obligation.

3. What are the next steps once a company becomes a member?

RE100 member companies must progress towards their RE100 in-line with the [RE100 technical criteria](#), and once the target is achieved, maintain achievement year-on-year.

Members have an annual reporting commitment to the initiative which is met through responses to CDP's Climate Change Questionnaire.

Members are also encouraged to participate in campaign activities, share knowledge with peers, inspire others to follow, and publicly advocate for the clean electricity revolution.

Setting a target: Scope and exclusions

4. What is included in a RE100 target?

RE100 targets are consumption targets. The goal is to be consuming 100% renewable electricity by a target year. All electricity consumed, coming from both self-generation and purchases from utility/supplier is included in the target.

The target boundary can be defined in terms of the organization's GHG emission boundary (following the GHG Protocol convention). RE100 targets are for the electricity consumption which underlies, according to the Greenhouse Gas Protocol:

- All Scope 2 emissions associated with purchased electricity; and,
- All Scope 1 emissions associated with the generation of electricity by the company, for the company's consumption.

For instance, a CHP plant used to generate electricity for self-consumption is within the scope of the RE100 target. If the electricity produced is sold to the grid or a third party, it does not fall in the scope of the target.

To consolidate your company's electricity consumption, RE100 recommends using the [Corporate Accounting and Reporting Standard](#) by the GHG Protocol, which will help setting your organizational boundary and operational boundary.

Boundary setting is an important step to consolidate company's electricity consumption data. Organizational boundaries define the operations that company owns, or controls and operational boundaries involve identifying electricity consumption associated with its operations, categorizing them as direct and indirect emission sources.

As per this standard, there are two distinct approaches that can be used to consolidate electricity consumption:

- The equity share approach:** Under the equity share approach, a company accounts for electricity consumption from operations according to its share of equity in the operation.
- The control approach:** Under the control approach, a company accounts for 100% of the electricity consumption from operations over which it has control. Further, there are two

approaches within the control approach – Financial control and Operational control. The company has financial control over the operation if the former has the ability to direct the financial and operating policies of the latter with a view to gaining economic benefits from its activities. A company has operational control over an operation if the former or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.

Please make sure that you are using the same approach for your GHG inventory and setting your RE100 target.

5. Are subsidiaries included in RE100 targets?

Generally, yes, with some exceptions.

Generally, companies must join the campaign at the group level. However, an exception can be made if a subsidiary company 1) has clear separate branding from the parent company, AND 2) has an electricity consumption greater than 1 TWh/year.

[The RE100 joining criteria](#) detail RE100's policies on subsidiaries fully.

6. Can any operations be excluded from RE100 targets?

[RE100's materiality threshold provisions](#) detail what electricity consumption an organization may exempt from its RE100 target.

7. Are leased offices included in the RE100 target coverage? If a landlord has control over the electricity consumption, what is the tenant expected to do?

A RE100 target covers all electricity, purchased or self-generated, by a company as per the consolidation approach company has used (please refer to FAQ 4 to know more about the consolidation approach). The selected consolidation approach (equity share or one of the control approaches) is also applied to account for and categorize direct (Scope 1) and indirect GHG emissions (Scope 2) from leased assets. **If the selected equity or control approach does not apply, then the company may account for electricity consumption from the leased assets under Scope 3.**

Depending on the consolidation approach used, the tenant may need to include electricity consumption in the RE100 target coverage. The electricity consumption by the tenant is usually metered, but in case of unmetered connection, the electricity consumed by the tenant should be estimated based on the portion of area occupied by the tenant in the building. It is recommended to make third party verification for such estimations as a part of their existing GHG audit process or through an independent audit process.

If the landlord purchases renewable electricity for the entire building where the tenant has occupied one or more floors, tenant can claim RE usage provided it has a contractual arrangement with the landlord reflecting the transfer of ownership of RE attributes to the tenant.

8. Is backup generation included in a RE100 target?

No, but it can only be excluded under a specific set of circumstances.

The scope of the RE100 commitment for members that joined after January 2017 includes any electricity produced and consumed by the member.

The electricity production could come from fossil fuels in the form of backup generation, peak shaving generation, prime-power generation, or the electricity generated by a combined heat and power (CHP or cogeneration) system. Backup electricity generation is common across many industries, however true backup generation is rarely in use, and thus does not make a significant

difference if a company removes it from the target coverage. This also reduces reporting burden on the company.

Thus, scope 1 electricity consumption from emergency backup generation used only in the case of grid outage can be excluded from the RE100 target. However, RE100 require greening prime power and CHP as well as systems used regularly for construction and peak shaving.

9. Is there a deadline to achieve a RE100 target?

Yes. RE100 targets must align with the following minimum ambition:

- 60% by 2030
- 90% by 2040
- 100% by 2050

RE100's current average 100% target year is 2030.

For companies headquartered in South Korea and Japan, the interim targets are recommended but not required.

New members headquartered in those two countries must agree to do active policy engagement. They are asked to publicly call for a numerical target of renewable electricity deployment in the country and for an increase accessibility of renewable electricity for corporate buyers, in order to contribute to the acceleration of the expansion of renewable electricity in those countries.

Achieving a RE100 target

10. How should we develop our roadmap to increase our consumption of renewable electricity?

RE100 members develop their roadmap as they wish. RE100 does not support this development, but only maintains the rules for how members should be sourcing their renewable electricity. Generally, RE100 does not offer consultancy services.

A [CDP Accredited Solutions Provider](#) could support you in developing your strategy.

11. Is there a process for verifying the target achievement before any public claims?

Yes. RE100 verifies whether a claim (either a 100% target achievement or an interim target achievement) is consistent with the RE100 technical criteria before supporting any public messaging by the member.

[RE100's guidance on how its members are held to account](#) explains how this can happen as part of the annual reporting requirement, or on-demand.

12. What if a company cannot meet its RE100 target in time because of operations in markets without renewable electricity sourcing options?

Some companies are and will be unable to meet their RE100 targets on time. This is especially true for companies with operations in many markets.

All markets will develop eventually, but in the meantime, the companies can get “stuck” at a certain percentage of renewables. RE100 considers that the companies sourcing renewables where possible are showing leadership, even if they cannot reach the 100% fully. If no renewable electricity sourcing options are available in a country that is a failure of the market and policy, not of the companies wishing to procure renewable electricity.

RE100 encourages members to report transparently on the barriers they face in their annual reporting. RE100 studies the barriers which members report facing in its annual disclosure reports and uses the information to help develop targeted policy messaging in challenging markets.

13. What is next once a company achieves 100%?

Once a company has achieved its RE100 target, it is expected to maintain it year-on-year. It can also look at increasing its impact by using more impactful procurement options or engaging with its supply chain on renewables. See more information in [the RE100 Leadership Paper](#).

Renewable energy sources

14. Which sources of energy does RE100 consider ‘renewable’?

RE100 considers electricity produced from the following energy sources as renewable:

- Geothermal
- Solar
- Water, including tidal energy and large and small hydropower
- Wind as renewable energy sources
- Biomass (including biogas) provided it meets strict sustainability criteria

Biomass and hydropower can play a role in decarbonization provided they are created and used sustainably. RE100 recommends using standards to secure sustainability claims associated with the use of biomass and hydropower. The following standards/guidance can for instance be used: the ISO 13065:2015 (specifies principles, criteria, and indicators for the bioenergy supply chain to facilitate assessment of environmental, social and economic aspects of sustainability), the Green-e® Renewable Energy Standard for Canada and the United States, and the Low Impact Hydropower Institute (LIHI).

Waste heat recovery (WHR) based electricity generation where the primary source of energy is fossil fuels and Integrated Gasification Combined Cycle (IGCC) technology are not considered as renewable sources of energy.

15. Does RE100 consider fuel cells to be renewable energy?

It depends on the source of the fuel. A fuel cell itself is not inherently renewable or non-renewable. If it is consuming fuel generated from a renewable source, then the electricity output of the fuel cell can be considered as renewable. A fuel cell consuming natural gas cannot be considered as a renewable energy source.

16. Does RE100 consider energy storage to be renewable energy source?

No. Energy storage systems are an essential part of a highly renewable grid, but they cannot be considered as renewable sources of energy.

Energy storage systems are not inherently renewable or non-renewable. A storage system can store electricity produced by renewable sources or non-renewables sources and what makes the electricity renewable is not the fact that it was stored but rather how it was generated. RECs issued for energy storage are not valid for RE100.

Reporting

17. What data is requested by RE100 for annual reporting and why?

To understand what disclosures the initiative is asking for in 2022, please review [RE100's 2022 reporting guidance](#).

RE100 members commit to [being publicly held to account](#) on their progress towards their RE100 targets. To this end, RE100 members have an annual reporting obligation to the initiative. This exercise, the public accountability of the membership, and the insights drawn from reported data are central to RE100's credibility and leadership position.

CDP manages the reporting exercise. In the 2021 and earlier disclosure cycles, members could meet their reporting obligation through their responses to CDP's Climate Change Questionnaire. A separate reporting route, the RE100 Spreadsheet, also existed. The RE100 Spreadsheet was RE100's preferred reporting option because it allowed members to report in more detail on their sourcing of renewable electricity, and also allowed members to report on the barriers to sourcing which they faced. It gave the initiative the important information it uses to develop its policy message. Furthermore, the Spreadsheet captured how members' sourcing aligned with RE100's technical criteria. For members claiming to source 100% of their electricity renewably, reporting through the RE100 Spreadsheet was a requirement rather than a recommendation.

In 2022, the CDP Climate Change Questionnaire captures the same information the RE100 Spreadsheet used to. All RE100 members are now invited to respond to the CDP Climate Change Questionnaire. RE100 is therefore retiring the RE100 Spreadsheet and making reporting to CDP the only process by which RE100's membership meets its annual reporting obligation. This simplifies the reporting exercise and is expected to improve the quality of the insights the initiative is able to draw.

18. Can a company change the period it reports on?

It is possible that availability of supplier compliance data with an RPS could incentivize a new reporting period being chosen for a member wishing to claim default delivered renewable electricity, supported by EACs.

RE100 does not currently accept changes to the reporting period. While the period chosen for the reporting year is up to the company, it should be the same year to year, and cover 12 consecutive months which have already passed. For more information, please see the [RE100 reporting guidance](#).

19. Can a company request a change to its historic electricity consumption and renewable electricity consumption data reported to RE100?

No. There are limited cases where amendments may be made to CDP responses. Please review CDP's corporate response amendments policy, which details where, within a certain time after the reporting deadline **within the same year**, an amendment can be made, often for a fee. CDP will not amend responses for **previous** years of disclosure.

A member's boundary might change because of a merger or acquisition, suggesting its historic electricity consumption and renewable electricity sourcing will also change. These changes are not reflected in subsequent RE100 annual disclosure reports, which will only reflect disclosures as submitted during previous reporting years. While it is possible to re-state GHG emissions figures for previous reporting years in a **new** CDP response for the purpose of reflecting a change in organizational boundary, re-statements are not possible for electricity consumption or renewable electricity sourcing.

RE100, as an initiative, believes its historic data should reflect the state of the initiative at the time. It is therefore possible that members' own publications may contain historic totals for electricity

consumption and renewable electricity sourcing which differ from RE100's annual disclosure reports because those totals reflect different organizational boundaries.

Guidelines and technical criteria

20. Are there guidelines which companies can use to report their renewable electricity consumption data in a credible manner?

Yes.

- [The RE100 technical criteria](#)
- [RE100's guidance on making credible claims to use of renewable electricity](#) – provides a set of criteria that renewable electricity sources and purchasing mechanisms must meet to support credible renewable electricity usage and delivery claims. These criteria can be applied to a local electricity market regardless of the type of market and the stage of market development. This briefing also provides guidance for verification, reporting, and communication of renewable electricity use.

These guidance documents are globally relevant. Where there is sufficient member demand RE100 will attempt to provide market-specific guidance but with members operating in over 150 markets this is not possible everywhere.

21. Are the technical criteria ever revised? Are the rules subject to change? Why?

Yes, the technical criteria are reviewed regularly and changed, when necessary, to:

- Ensure the campaign remains credible as renewable electricity markets evolve;
- Clarify issues where there has been repeated misinterpretation of existing criteria; or
- Provide new interpretations based on frequent questions from members.

Additive changes to the technical criteria may be introduced at any time, since they require no transition plan. Subtractive changes, and their transition plans, are developed in consultation with members and the public. RE100's next planned update to its technical criteria will be published in March 2023. [RE100 is holding a public consultation around proposed changes.](#)

Credible claims

22. How can renewable electricity be 'double-counted' or 'double-claimed'?

Double-counting and double-claiming can refer to slightly different problems with tracking of renewable electricity.

Double-counting of renewable electricity can refer to the same MWh of renewable electricity being tracked in more than one way. For example, if a generator is in more than one EAC registry, then the renewable electricity is being double-counted.

Double-claiming of renewable electricity refers to two different parties claiming to have used the same MWh of renewable electricity. In the example above, if one party purchases the certificates from system A issued to the generator while another party purchases the certificates from system B issued to the generator, the renewable electricity is being double-claimed. The only way to credibly claim use of renewable electricity in this instance is for one party to purchase the certificates from both system A and system B and to make a single claim.

23. What is a renewable energy contractual instrument?

A renewable energy contractual instrument is a contract between two parties for the sale and purchase of renewable energy attributes.

These attributes may be bundled or unbundled from energy itself.

Markets differ as to what contractual instruments are commonly available or used by companies to purchase energy or claim specific attributes about that energy, but they can include energy attribute certificates (RECs, GOs, etc.) and direct contracts such as Power Purchase Agreements (PPAs).

24. What are the quality criteria for tracking instruments?

To make credible claims about the contractual allocation of attributes, the following criteria must be met:

- Credible generation data
- Attribute aggregation
- Exclusive ownership (no double counting) of attributes
- Exclusive claims (no double claiming) of attributes
- Geographic market limitations of claims; and
- Vintage limitations of claims

For further information on these criteria please refer [RE100's guidance on making credible claims to use of renewable electricity](#).

Renewable electricity sourcing options

25. What sourcing methods are currently accepted by RE100?

The list of sourcing methods recognized by RE100 are listed in the [RE100 technical criteria](#).

The criteria also explain how to make credible unique electricity usage claims for each of the sourcing options.

26. Can we claim the % renewable electricity in the grid?

In general, no. The goal of RE100 is to have carbon free grids by 2040 and this requires action by corporate consumers. There are only two specific cases when companies can claim this for RE100. The first is when their utility/ supplier is retiring energy attribute certificates on behalf of their customers. The second is when the grid is 95% or more renewable and there is no mechanism for actively sourcing renewable electricity from the grid. For the full criteria to claim via either of these methods please see the [RE100 technical criteria](#). RE100 allows these two limited cases because in the first consumer has a credible claim to the electricity AND this incentivizes the consumer to advocate to policymakers for more ambitious renewables mandates on suppliers and in the second, we don't think that requiring consumers to develop a new procurement method or tracking system in a grid that is already almost 100% renewable is impactful.

Companies cannot claim the grid mix in general because claiming the percentage renewables from the grid mix will be double-counting the renewable energy attributes conveyed by the specific renewable electricity market instruments such as direct contract with the supplier, and energy attribute certificates.

27. What about countries or regions with a high percentage of renewables in the grid?

RE100 recognizes that some countries have a high percentage of grid renewables and no mechanism for voluntary procurement of renewable electricity from the grid. RE100 also recognizes that it is not beneficial to create unnecessary cost or bureaucracy for companies operating in markets where this is the case. Therefore, RE100 members can, in their RE100 reporting, count all their electricity consumption from the grid as renewable (i.e., take a passive approach) in a country **when the default grid mix of renewables is over 95% and when there is no mechanism for actively sourcing renewable electricity from the grid.**

This only applies when the entire **national grid** is at a high percentage (i.e., one state or region being over 95% does not allow for a passive claim) and **does not apply to electricity consumption in that country from sources other than the grid.** This means that in case of state/province/region in the country have over 95% RE in the local grid, companies shall not claim RE usage, for example Quebec has over 95% RE in the local grid, however companies operating in the region still cannot claim RE from the grid as Quebec is one of the thirteen provinces and territories of Canada, and the above criteria is only applicable at the national level.

At present RE100 has found that only Paraguay, Uruguay, and Ethiopia meet these criteria. Other countries with a high percentage of renewables on the grid such as Norway and Iceland are not eligible for passive claims as the renewable attributes from the electricity have been transacted to specific customers. This also does not apply to countries such as Nepal which have a high percentage of domestic renewable electricity but import significant amounts of electricity.

This list of countries is subject to change as the market and the grids evolve and members are welcome to present data from other countries that they think should be included.

Note: If you find evidence that a certain country is meeting those conditions, please send the information to re100@cdp.net for us to evaluate it.

Please refer to the full text in the [RE100 technical criteria](#) on these passive procurement methods.

28. Why do we have to buy renewable electricity in Costa Rica when the grid is already over 99% renewable?

As per the [RE100 technical criteria](#) (see point 6.2), RE100 recognizes that some countries have a high percentage of grid renewables and no mechanism for voluntary procurement of renewable electricity from the grid. RE100 members can, in their RE100 reporting, count all of their electricity consumption from the grid as renewable (i.e., take a passive approach) in a country when the default grid mix of renewables is over 95% **and** when there is no mechanism for actively sourcing renewable electricity from the grid.

In the case of Costa Rica, active renewable electricity sourcing mechanisms are available for corporates, for example I-RECs.

RE100 recommends that companies take an active approach to sourcing renewable electricity. Therefore, companies having operation in Costa Rica should not claim grid renewables and procure renewable electricity actively.

29. What if there is a government mandated renewable electricity target imposed on our company due to our large electricity consumption?

If a renewable electricity target directly applies to your company and you are procuring renewable electricity to meet it, this procurement can be counted for RE100 as long as it meets the rest of the [RE100 technical criteria](#).

30. The Australian Capital Territory (ACT) is 100% renewable; can we count it as renewable?

'Default delivered renewable electricity from the grid, supported by certificates', is a recognized sourcing option for renewable electricity defined in the [RE100 technical criteria](#). An organization could therefore claim the renewable content of the ACT which is also supported by certificates.

This may or may not be 100%, and companies should be prepared to support their claim to RE100. For example, a RE100 member should ensure that it has data from its utilities/suppliers to support these claims, particularly where alternative compliance mechanisms are available to utilities/suppliers and the compliance data may not be available or sufficiently detailed.

31. What about New Zealand? The grid is already 85% renewable, why can't we claim it?

It is possible to procure renewable electricity in New Zealand meaning that the only consumers in New Zealand that have a claim to renewable electricity are those that are specifically buying it. New Zealand also has an energy attribute certificate system which can be used for transacting renewable electricity. For more information on what gives a consumer a unique claim to renewable electricity please see [RE100's guidance on making credible claims to use of renewable electricity](#).

32. In British Columbia, Manitoba, Quebec, grids are 98%, 99.8%, and 99.6% renewable, what are the expectations around 100% of the electricity load in these provinces being sourced through renewable contractual instruments/RECs/PPAs/etc. for RE100?

As per the [RE100 technical criteria](#) (see point 6.2), RE100 recognizes that some countries have a high percentage of grid renewables and no mechanism for voluntary procurement of renewable electricity from the grid. RE100 members can, in their RE100 reporting, count all of their electricity consumption from the grid as renewable (i.e., take a passive approach) in a country when the default grid mix of renewables is over 95% **and** when there is no mechanism for actively sourcing renewable electricity from the grid.

However, this only applies when the entire national grid is at a high percentage and **does not apply to one state or region e.g., Quebec, etc.**

We recommend companies having operations in these regions to explore either:

- Working with suppliers or utilities to develop green electricity products which contractually allocate the renewable electricity on these grids to individual consumers, so that claims through green electricity products are possible, as recognized in the [RE100 technical criteria](#).
- Working with suppliers, utilities, or regulators to issue energy attribute certificates to generation which is in the default supply, so that claims of 'default delivered renewable electricity from the grid, supported by certificates' are possible, as recognized in the [RE100 technical criteria](#).

33. Does RE100 accept cross border VPPAs (virtual power purchase agreements)?

RE100 only accepts cross border VPPAs from within the same market boundary, for example within the defined [European market boundary](#). The concept of a VPPA between Brazil and Argentina, for example, doesn't make sense as they are not part of the same market for renewable electricity.

34. Can carbon offsets or avoided emission statements be used to meet the RE100 target or for making renewable electricity consumption claims?

No. Offsets and EACs are fundamentally different instruments. The offset represents a quantity of global GHG emissions reduced or avoided by the project compared to a baseline scenario of what emissions would have occurred in the absence of the offset-funded project. Offsets, and their global avoided emissions claim, represent a different instrument and claim from the energy attributes associated with electricity production. Offsets convey tons of avoided CO₂ using project-level accounting, but they do not convey information about direct electricity generation emissions occurring at the point of production, like EAC do.

Thus, an offset does not confer any claims about the use of electricity attributes applicable to scope 2.

Please check section *8.2.4 Relationship to offset credits* in the [GHG Protocol's Scope 2 guidance](#) for more details.

35. How can we report default delivered RE in the US when the utility/supplier does not publish data about REC retirement overlapping the reporting period of the company?

To claim and report default delivered RE in the US, a reporting company needs to have data available corresponding to the reporting period of the company. In the event of data unavailability from the utility/supplier, the reporting company cannot claim, and report default delivered RE. In some circumstances, data is only available for a few months of the 12-month reporting period of the company. In this case, the company can only claim and report RE consumption corresponding to the period for which data is available. It is recommended to work with the utility/supplier to get them to make this data available in a timely manner.

RE100 expected data availability to be an issue when we introduced the default delivered renewables option, and the expectation is that companies will use this as an opportunity to push their suppliers for better data, and refrain from making claims until they have the data to support them.

Energy attribute certificates (EACs)

36. What is an Energy Attribute Certificate (EAC)?

An Energy Attribute Certificate (EAC) is a category of contractual instruments used in the electricity sector to convey information about electricity generation to other entities involved in the sale, distribution, consumption, or regulation of electricity. Typically, 1 EAC = 1 MWh of renewable electricity. EACs are issued to renewable electricity generators operating within the same market boundary as the claimant. EACs exist in markets with reliable tracking systems to ensure that no double counting of the attributes takes place. EAC can be sourced bundled as well as unbundled, where a bundled EAC means that it comes with the physical delivery of electricity (such as through a direct PPA), and unbundled means that it comes without the physical delivery of electricity. It is important to note that EAC's are not offsets. They are contractual instruments that allow companies to accurately account for their renewable electricity purchases.

37. Which Energy Attribute Certificate (EACs) are currently accepted by RE100?

RE100 accepts any tracking instruments that meet the criteria for contractual allocation of attributes outlined in [RE100's guidance on making credible claims to use of renewable electricity](#).

RE100 does not maintain a comprehensive list of certificates that meet these criteria. The following Energy Attribute Certificate systems are currently recognized as either fully or partially credible:

- REC (US and Canada)
- GOs or REGO (Europe)
- T-REC (Taiwan)
- J-Credit, NFC, GEC(Japan)
- I-REC (International)
- TIGR (International)
- GEC (China)
- NZREC (New Zealand)

38. How can I get RE100 to endorse a particular REC/EAC system?

We have limited resources to verify EAC systems and focus them on government systems where we have significant member demand. If you want to procure an EAC that has not been verified by RE100 please check it against the criteria in [RE100's guidance on making credible claims to use of renewable electricity](#).

39. Is there a vintage limitation for certificates?

Yes. To make a credible RE claim, the vintage of the energy attribute certificates must be “reasonably close” to the reporting year of the electricity consumption to which it is applied. There is however no official consensus on what is “reasonable” in this case, and it may vary between markets. RE100 does not have a specific vintage limitation.

Companies can refer to certification standards, claim verification and recognition programs, and/or GHG inventory reporting systems to ensure that the vintage of generation does not occur too far in advance or after consumption.

The Green-e® standard has a 21-month vintage requirement which RE100 recommends as a reasonable practice.

40. Can Energy Attribute Certificates (EACs) be used to green electricity generated consumed from a Combined Heat and Power (CHP) plant?

In almost all cases, no. RE100 asks that you consider whether the emissions from the CHP plant are in Scope 1 or Scope 2 of your organization, whether the CHP plant is located on-site or off-site, and, if off-site, whether the electricity from the CHP is being sourced through a direct line or a grid transfer. These factors determine whether it is credible to use EACs to decarbonize electricity sourced from CHP which is using fossil fuels.

EACs are Scope 2 instruments conveying the environmental attributes of grid-delivered electricity. They cannot be used to decarbonize Scope 1 emissions or electricity that is not delivered through the shared electricity grid (i.e., through a direct line).

RE100 does not support decarbonizing electricity from on-site fossil fuels through any approach which does not directly or contractually reduce those fossil fuel emissions, regardless of the connection type and which Scope the emissions from the fossil fuels are in for your organization. A company with on-site CHP is choosing to have fossil fuel generation located on-site for its use, which is not a strategy that RE100 can support as a 100% renewable electricity initiative.

To decarbonize the electricity generated by an on-site CHP plant or an off-site one to which you have a direct line, regardless of which Scope the emissions are in, you must do one of the following:

- switch to a renewable energy system,

- switch to a renewable fuel source such as biodiesel or biogas for on-site power generation,
- purchase green gas certificates (e.g., ERGaR) from the same gas network.

If electricity from a CHP plant is off-site, contractually sourced through a grid transfer, and the emissions are in Scope 2 of your organization, RE100 accepts the use of EACs to decarbonize it. This is not a recommended approach, however. Contractual sourcing of CHP conveys fossil fuel attributes to your organization and procuring EACs from renewable generation does not inherently substitute those fossil fuel attributes.

Market boundaries

41. If a company has operations in many countries, is it allowed to source renewable electricity in one country or regionally to cover all of the operations?

No. The [RE100 technical criteria](#) include [market boundaries](#) for sourcing renewable electricity. The renewable electricity used must be generated within the same market where it will be consumed.

This ensures that RE100 companies are creating demand and income for renewable electricity within the market in which they are operating and buying and consuming physical electricity. The “market boundary” refers to:

- an area in which the laws and regulatory framework governing the electricity sector are sufficiently consistent between the areas of production and consumption; and
- the existence of system-wide coordination between countries and the countries’ utilities or electricity suppliers recognize each other’s instruments.

In almost all cases, the market boundary is the country boundary, with the exception of North America (US + Canada) and most of Europe which are considered as “single markets”.

This means for instance:

- the electricity consumption of operations in Vietnam must be covered with renewable electricity generated in Vietnam and cannot be covered by electricity generated in China or Laos for instance
- the electricity consumption of operations in France can be covered with renewable electricity generated in Spain, as Europe counts as a single market.
- a claim in Ohio, USA could be made with renewable electricity from the USA or Canada

For more information, please refer to section 2.5 on Geographic Market Boundaries of [RE100’s guidance on making credible claims to use of renewable electricity](#), and to [RE100’s note on market boundaries](#) which lists which countries RE100 considers as part of the single European market for renewable electricity.

42. Does RE100 have subnational market boundaries? For example, is ERCOT (Electricity Reliability Council of Texas) considered as a separate market by RE100?

No, RE100 does not have sub-national market boundaries. ERCOT counts as part of the USA and Canada market for RE100. RECs from Texas can be used to cover operations in the rest of the US and vice versa. This does not mean that companies should not consider these sub-national market differences in their procurement, only that RE100 does not have restrictions around this. Many companies follow more local procurement strategies to ensure that their renewable electricity that they are procuring influences the electricity mix that they are consuming from their local grid.

43. What is the key difference between RE100 market boundary rule and CDP's market boundary rule (for its climate change information request)? Why?

The key difference between RE100 and CDP's market boundary rule is for Europe. For CDP, the market boundary for European countries only includes countries that are [members of the Association Issuing Bodies \(AIB\)](#). Please check more information about CDP's market boundary rule at section 2.3 of the CDP Scope 2 Technical Note: Accounting of Scope 2 emissions (accessed by signing into CDP's [guidance tool](#)). For RE100, the "European Single Market" is considered as a single market boundary. This includes countries from the European Union (EU-28), and European Economic Area (EEA). Please review [RE100's note on market boundaries](#).

Guarantee of Origin (GO or GoO) is the tracking certificate regulated in the [European Directive 2009/28/EC, article 52](#). The GO is further standardized via the European Energy Certificate System (EECS) provided by the Association of Issuing Bodies (AIB). The EECS makes trade, cancellation and use of GOs standardized across AIB member countries. This is a best practice evolved over time in Europe. Therefore, CDP adopted it as the basis to define market boundary for reporting use of renewable electricity market instruments in Europe.

The AIB aims to provide the infrastructure and information to support electricity source disclosure in all EU Member. Currently 28 European countries are AIB members, with one country currently applying to become an AIB member and one country with observer status (which does not make it an AIB member). We anticipate more members will join AIB and will be able to transact GOs cross-border (within Europe) through the AIB hub. As a result, CDP's market boundary for Europe will expand as AIB membership grows over time.

RE100 members which also report to CDP are currently presented with conflicting guidance around market boundaries because of the different definitions of the European market boundary adopted by RE100 and CDP. In 2023, RE100 is expected to retire its definition of the European market boundary and adopt CDP's view of only AIB member countries forming a single market for electricity in Europe. [RE100 is holding a consultation on this proposed change in 2022](#).

44. Does RE100 count AIB ex-domain cancellations?

Companies can do ex-domain cancellations for the GOs originated in AIB member states for use in non AIB country (or vice versa) within the European market boundary. Please review [RE100's note on market boundaries](#).

Please note that ex-domain cancellations are not supported between AIB member countries, which always transfer GOs via the Hub for cancellation in the destination country, where this is technically possible. RE100 is aware that it is still not possible for consumers to cancel GOs in all AIB member countries and in the case where a consumer unable to cancel in the AIB country of consumption and forced to cancel in another AIB country RE100 still accepts that renewable electricity claim.

RE100 does not accept AIB ex-domain cancellations for consumption outside of the RE100 European market boundary.

45. What about islands which are part of a country but do not share the same electricity grid (ex., Puerto Rico, an unincorporated territory of the USA). Do we have to buy renewable electricity from the specific island where we have consumption?

RE100 does not have subnational market boundaries and thus would allow a claim for a REC from the mainland USA being used for consumption in Puerto Rico, assuming that the rules of the REC system allow this. However, we also recognize that purchasing a REC in the mainland USA will have no impact on the electricity mix in Puerto Rico and thus don't recommend this as best practice.

46. What about nations made up of many islands (ex. Indonesia)? Do we have to buy renewable electricity from the specific island where we have consumption?

RE100 does not have subnational market boundaries and thus a company would not need to buy from the same island where their consumption is located in Indonesia. We recommend, however, that companies take into consideration the impact that their renewables purchases will have on their physical electricity supply.

47. Can I source electricity from China for operations located in Taiwan?

The political and legal statuses of Taiwan are contentious issues. However, when it comes to the electricity market and as far as the RE100 team is aware, there is no grid-interconnection between Taiwan and mainland China. In addition, relevant laws governing the electricity sector are distinct in both regions. Taiwan has its own RE market instrument known as T-REC, which is a valid RE market instrument for RE100 reporting. Additionally, Chinese Green Energy Certificate (GEC) are developed to be used only in mainland China.

Therefore, for RE100 you must use local market instruments such as T-RECs in Taiwan.

48. Will the UK be excluded from the European market boundaries as a result of Brexit? Should UK & EU be treated as two separate markets?

The UK and the EU are currently working on a new model of electricity trading. These arrangements are not in place yet. In the meantime, Great Britain and Northern Ireland will continue to issue REGOs and accept Guarantees of Origin (GoOs) from EU member states. This will allow electricity suppliers in the UK to continue to use REGOs and EU GoOs to comply with their fuel mix disclosure obligations. Ofgem provides the most up-to-date information.

Upon the expiry of the transition period (In Dec 2020), EU laws relating to the promotion of the use of energy from renewable sources and energy efficiency generally will no longer be applicable in the UK. Therefore, it looks like the Guarantees of Origin that have been issued by designated bodies in the United Kingdom in accordance with Article 15(2) of Directive 2009/28/EC will no longer be recognized by the EU Member States after the end of the transition period. The European Commission provides the most up-to-date information.

RE100's intention to adopt CDP's view of market boundaries in Europe in 2023 (see FAQ 43) will mean it will no longer recognize the UK as part of a single market for electricity in Europe. [RE100 is holding a consultation on this proposed change in 2022.](#)

49. What should a company do when renewable electricity sourcing options are not available in a country of operation?

RE100 recognizes that procuring renewable electricity in some markets is challenging, and sometimes impossible.

However, as a leadership initiative, RE100 members are encouraged to engage with local suppliers/utilities or policymakers and aggregate demand with their peers to open up markets to voluntary procurement of renewable electricity. Members can also explore generating their own renewable electricity.

RE100 is happy to discuss opportunities to connect members in regions where RE is particularly challenging.

The electricity sector is tending towards liberalization in most markets (though some markets display the opposite), meaning that barriers to voluntary procurement are expected to be lowered over time.

50. When will Singapore and Malaysia will be considered as the same market for the transaction of renewable electricity?

Singapore and Malaysia currently do not form a single market for the transaction of renewable electricity. Ideally, a single market describes an area in which there is physical grid interconnection with system wide coordination between the countries, consistency of laws and regulatory frameworks governing the electricity sector, and mutual recognition of each other's energy sourcing instrument.

While the members of ASEAN (Association of Southeast Asian Nations) have signaled that they intend to form a single market to facilitate trade of renewable energy market instruments, the ambition to form a joint market is not sufficient to consider it joined. Similarly, there are discussions of importing more renewable energy to Singapore via physical grid transfer, but this is not yet in place.

Leadership and impact

51. Are the RE100 technical criteria by themselves leadership criteria?

No, the RE100 technical criteria are only part of a leadership criteria. They ensure the exclusive and credible usage and delivery claims for renewable electricity consumption, which is articulated in the [RE100 technical criteria](#) and [RE100's guidance on making credible claims to use of renewable electricity](#). The principles outlined in the RE100 technical criteria should be considered the **minimum** accepted criteria for corporate sourcing of renewable electricity.

The leadership aspect of RE100 is firstly in setting a commitment to credibly source 100% renewable electricity, which is challenging, and secondly in working to source that electricity as impactfully as possible in each given market.

The leadership dimensions presented in the [RE100 Leadership Paper](#) are provided as options for companies that have begun actively sourcing renewables and now seek to maximize their leadership in driving forward the clean energy transition.

52. How can I increase the impact of my renewable electricity purchase?

RE100 identifies different leadership dimensions in corporate procurement of renewable electricity, including an exploration of impactful procurement, in the [RE100 Leadership Paper](#). There are diverse ways to consider impactful procurement, with no consensus on how to evaluate it through various lenses (for example, through an environmental justice lens). RE100 chooses to emphasize procurement which contributes to changing the grid as central to impactful procurement. More specifically, RE100 emphasizes additionality. Additionality is closely aligned with the initiative's aim to accelerate the transition to low-carbon grids. Additionality is also an interpretation of impactful procurement which currently has relevance in all markets. Additionality in the context of impactful procurement of renewable electricity is procurement which adds new renewable electricity capacity to grids which would not have been added to the grid without that procurement.

Other forms of impactful procurement which aim to change the grid exist, however. They are innovative and emerged after RE100 published its Leadership Paper. They are not relevant in all markets because they are only accessible in the most developed and liberalized electricity markets. RE100 is considering ways to recognize their use, but cannot recognize them in the RE100 technical criteria, which must stay globally relevant. Two of these approaches are described below.

Renewable electricity must be procured from the same market it is being used to decarbonize consumption in for a claim of use of renewable electricity to be credible: this is RE100's market boundary criterion. However, location-matching of consumption and generation can be more precise. Similarly, time-matching can also be more precise than RE100's vintage limitation (which only states that the vintage of renewable electricity generation should be 'reasonably close' to the consumption it is being applied to – without defining 'reasonably close'). EACs with a timestamp are

becoming more available, along with hourly, or half-hourly metering, to facilitate precise time-matching of consumption of electricity and procurement of renewable electricity. When location-matching and time-matching are done precisely, they may help develop a more robust renewable grid. This approach to procuring renewable electricity has a high impact on the grid.

Another approach to procuring renewable electricity with a high impact on the grid is to precisely time-match procurement of renewable electricity with peak emissions from fossil fuel electricity generation (i.e., procure renewable electricity at the time of the highest locational marginal emissions on the grid¹). This approach to procurement is intended to optimize emissions reductions by displacing fossil fuel generation. To maximize global emissions reductions, the approach is best used on the dirtiest grid. Organizations which use this approach therefore may deploy it outside of the markets in which they operate. While this might result in higher emissions reductions for the expenditure on procurement than procuring in-market, the organization loses its claim to having itself used renewable electricity. An organization purchasing renewable electricity using this approach outside of the markets in which it operates should therefore view the purchases as the organization's investment in global emissions reductions, and not as part of the organization's procurement of energy for its operations.

Uncertainty around other impact measures does not diminish their importance in any way and companies should consider those metrics in addition to effects on the grid mix.

53. Does RE100 have requirements on the age / commissioning date of the power plant from which the electricity is purchased? Is RE100 looking into the topic of additionality? Does sourcing renewable energy from older facilities have the same impact?

Answer: For disclosure in 2022, RE100 does not have a requirement around the commissioning dates of facilities from which renewable electricity is purchased. However, RE100 strongly encourages members and all purchasers to source renewable energy from new generation facilities – generally defined as those built or repowered within the last 15 years. This is purchasing of renewable electricity with higher impact. RE100 encourages impactful procurement which changes the grid mix: accelerating the transition towards renewable electricity is RE100's mission. Though purchasers may be able to make credible renewable electricity usage claims by purchasing from old facilities, those purchases do not contribute to changing the grid mix.

RE100 first collected disclosures on commissioning dates in the 2021 disclosure cycle and published insights from reported commissioning dates in its 2021 annual disclosure report. Commissioning dates are expected to be reported on by RE100 members more frequently in the future, and the age of the facilities which members procure from will continue to be a topic of interest for RE100. RE100 expects disclosure of commissioning dates from its members, including disclosure that the member could not determine the commissioning date of the facility it bought from.

For broader discussions of impactful procurement, please see the [RE100 Leadership Paper](#) and the FAQ below: 'How can I increase the impact of my renewable electricity purchase?'

RE100's next planned update to its technical criteria, scheduled for 2023, may introduce a fifteen-year commissioning date limit for purchased renewable electricity. [RE100 is holding a consultation on this proposed change in 2022.](#)

¹ Locational Marginal Emissions (LME) is a metric that measures the tons of carbon emissions displaced by 1 MWh of clean energy injected to the grid at a specific location and a specific point in time.

54. Is there additional recognition for companies that purchase from newer facilities?

In the 2022 annual disclosure report (published in January 2023), the member progress table will share how much of members' sourcing of renewable electricity came from facilities commissioned in the last 5, 10, and 15 years, **only where those members submit public disclosures to RE100**. RE100 is also exploring how it can recognize members' procurement from new facilities through RE100's Leadership Awards. Other standards and recognition programs, particularly in the U.S., only recognize voluntary purchasing from facilities built or repowered in the last 15 years, including the Green-e® Standard and the U.S. EPA's Green Power Partnership.

Please review [RE100's guidance on how its members are held to account by the initiative](#) for more details on what is made public about members in RE100 annual disclosure reports.

CONTACT

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