

THE HYDROPOWER CRITERIA

Climate Bonds Standard



What are the Hydropower Criteria?

The Hydropower Criteria define the requirements that hydropower projects must meet to be eligible for [Climate Bonds Certification](#).

This note is an overview of the Criteria. For full details see the Criteria documents available on the CBI website.

What underpins the Criteria?

The guiding principle for all sector Criteria is that certified assets and projects must be in line with limiting global warming in line with the goals of the Paris Agreement and support the climate resilience of the asset.

The Hydropower Criteria specifically then screen projects to 1) test their GHG footprint is in line with decarbonization pathways for the power sector compatible with delivering the Paris Agreement, and 2) demonstrate the project is not having a negative impact on the surrounding environment or social structures.

Why address Hydropower in the Climate Bonds Standard?

Hydropower has a prominent position in many of the world's major power grids. According to the World Energy Council, hydropower supplies about 71% of all renewable energy. In 2019, 15.9% of the world's electricity was generated from hydropower, making it one of the most

significant technologies of the global energy market. Further, upwards of 90% of energy storage globally is via pumped storage.

However, some hydropower facilities have been associated with significant negative environmental risks and impacts. As hydropower investors explore climate bonds to finance projects, it is vital that criteria are in place to ensure projects support climate change mitigation and climate change adaptation and resilience.

The Criteria promotes transparency and credibility for those projects globally that are low carbon and enable climate change adaptation.

Does my project meet the Hydropower Bond Criteria? It's as easy as 1 2 3 4

1. Comply with overarching Climate Bonds Standard

Any bond issuance seeking Climate Bonds Certification must meet the requirements of the Climate Bonds Standard.

The overarching Climate Bonds Standard contains disclosure, management and reporting requirements.

It is accompanied by a suite of sector specific eligibility Criteria, that use of proceeds must comply with. Those for hydropower projects are described in Steps 2, 3 & 4.



2. Comply with Mitigation Criteria

Generation facilities becoming operational pre-2020 must have a GHG footprint of less than 100g CO₂e/ kWh or power density greater than 5W/m². For facilities becoming operational during 2020 or after, these thresholds are 50g CO₂e/ kWh and 10W/m². Additional criteria apply if it is a pumped storage facility.



3. Comply with Adaptation & Resilience Criteria

Each facility must undergo a site-specific assessment, carried out by an accredited assessor using the ESG Gap Analysis Tool. This tool identifies gaps between the facility's practices and industry good practice regarding environmental and social impacts. If more than 10 significant gaps are identified, or more than 2 significant gaps in any section assessed, or the requirements related to Free, Prior and Informed consent are not met, the facility is not deemed eligible use of proceeds for a Certified Climate Bond. Within these limits, for any gaps identified, an Environmental and Social Action Plan (ESAP) must be established and implemented. There are strict limits on the timeframes within which these gaps must be bridged. The Criteria also require a re-assessment at the conclusion of each Action Plan to ensure that facilities have bridged the identified gaps.

ESG Gap Analysis Tool

4. Other requirements

The issuer must publicly disclose the accredited assessor's report on the assessment carried out under the ESG Gap Analysis Tool (and associated ESAP if required). If not explicitly noted in those documents, the issuer should also separately publicly disclose the power density and/

or GHG emissions intensity of the facility, whichever has been used to comply with the mitigation component of these Criteria.





What types of hydropower projects are covered by the Criteria?

The Hydropower Criteria applies to run-of-river facilities, impoundment facilities, pumped storage facilities and related assets and infrastructure including transmission lines. Tidal power and other marine applications are addressed under the Marine Renewables Sector Criteria.

These Criteria apply to all land-based hydropower facilities, regardless of type, size or location.

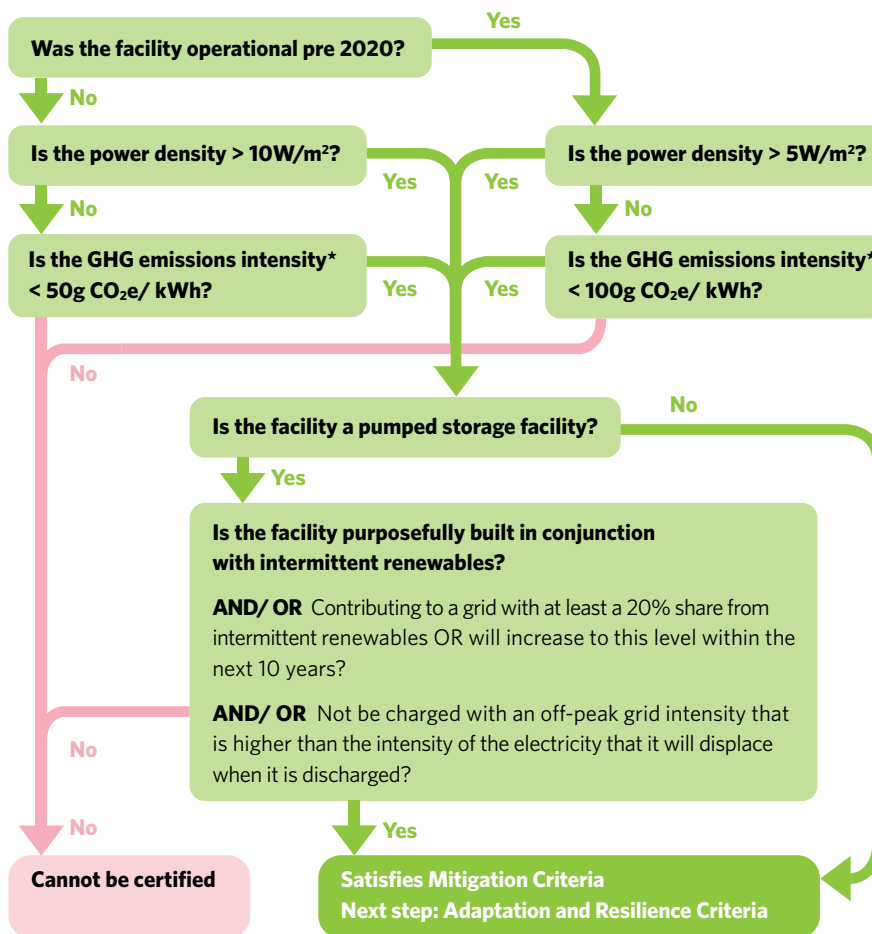
Projects must meet all the components of the Criteria described in Steps 1, 2, 3 and 4 above.

Developed by leaders in the hydropower sector

The Hydropower Criteria were developed with the input of multiple expert stakeholders. The Climate Bonds Initiative convened two groups, a Technical Working Group (TWG) and an Industry Working Group (IWG). The TWG developed the Criteria based on their expertise. The IWG provided feedback on the Criteria proposed. Full membership details can be found [here](#).

Meeting Requirements: Climate Mitigation

Decision tree showing steps that determine whether a facility passes or fails the Mitigation Component of the Hydropower Criteria.



Meeting Requirements: Adaptation and Resilience

The facility seeking inclusion in a Certified Climate Bond must have undergone an assessment under the ESG Gap Analysis Tool. This analysis must have been carried out by an accredited assessor. This assessment will identify any significant gaps that the facility demonstrates against international good practice. If any significant gaps are identified, an Environmental and Social Action Plan (ESAP) must be established to address those gaps including details on how and when these gaps will be closed. **AND**

The approved Climate Bonds Standard verifier must verify that this assessment demonstrates:

- No more than 10 significant gaps have been found in total across the assessment. **AND**

- No more than 2 significant gaps have been found in any section assessed. **AND**
- None of those gaps would mean that the Mitigation Criteria are not met or relate to the Free Prior and Informed Consent elements of the Assessment **AND**

Where an ESAP has been necessary to address any significant gaps, the approved Climate Bonds Standard verifier must verify that the ESAP demonstrates:

- The majority (i.e. > 50%) of significant gaps identified will be closed within 12 months; **AND**
- The remaining significant gaps will be closed within 24 months **AND**

The issuer commits to re-engage the accredited assessor to confirm that these gaps have indeed been closed within the timeframe(s) specified in the ESAP.

*GHG emissions intensity calculated 1) using the G-res tool or 2) by site-specific assessment following the guidelines laid out in the IEA Hydro Framework as described in the 'Guidelines for the Quantitative Analysis of Net GHG Emissions from Reservoirs'. Only reservoir emissions allocated to the hydropower facility should be counted.

FOR MORE INFORMATION

Check out these documents for more information:

[Hydropower Criteria](#)

[Hydropower Background Paper](#)

[Hydropower FAQs](#)

[Climate Bonds Standard](#)

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