

# Second Opinion on KfW's Green Bond Framework

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## Summary

***Overall, KfW's Green Bond Framework has a solid basis of corporate guidelines and practice in sustainable development, and represents a climate-friendly investment program.***

***The KfW Green Bond Framework takes a focused approach to climate change by only including renewable energy. The Framework has robust procedures to avoid engagement in project finance of renewable energy that interfere with sustainability. The Green Bond Framework considers the different institutional and legal basis of countries, and has adapted its screening procedures to take that into account. KfW's procedures include screening of all projects for greenhouse gas emissions and impacts on employment.***

***CICERO evaluated KfW's Green Bond Framework in our Second Opinion from July 2014. KfW asked CICERO to update this Second Opinion using our `shades of green` methodology. Based on an overall assessment of the project types that will be financed by the green bond, and governance and transparency considerations, KfW's Green Bond Framework gets a dark green shading.***

## 1. Introduction and background

As an independent, not-for-profit, research institute, CICERO (Center for International Climate and Environmental Research - Oslo) provides second opinions on institutions' framework and guidance for assessing and selecting eligible projects for green bond investments, and assesses the framework's robustness in meeting the institutions' environmental objectives. The second opinion is based on documentation of rules and frameworks provided by the institutions themselves (the client) and information gathered during meetings, teleconferences and e-mail correspondence with the client.

CICERO has established the global Expert Network on Second Opinions (ENSO), a network of independent non-profit research institutions on climate change and other environmental issues, to broaden the technical expertise and regional experience for second opinions. CICERO works confidentially with other members in the network to enhance the links to climate and environmental science, building upon the CICERO model for second opinions. In addition to CICERO, ENSO members include Basque Center for Climate Change (BC3), International Institute for Sustainable Development (IISD), Stockholm Environment Institute (SEI), and Tsinghua University's Institute of Energy, Environment and Economy. CICERO encourages the client to make this Second Opinion publically available. If any part of the Second Opinion is quoted, the full report must be made available.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO does not validate or certify the climate effects of single projects, and, thus, has no conflict of interest in regard to single projects. CICERO is neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor for the outcome of investments in eligible projects.

This note provides a Second Opinion of KfW's Green Bond Framework and policies for considering the environmental impacts of their projects. The aim is to assess KfW's Green Bond Framework as to its ability to support KfW's stated objective of low-carbon and climate resilient growth.

Climate change will have a significant impact on economic development, both from the perspectives of sustainable future development pathways and from the perspective of adapting to changing circumstances. CICERO takes a long-term view on activities that support a low-carbon climate resilient society. In some cases, activities or technologies that reduce near-term emissions result in net emissions or prolonged use of high-emitting infrastructure in the long-run. CICERO strives to avoid locking-in of emissions through careful infrastructure investments, and moving towards low- or zero-emitting infrastructure in the long run. Proceeds from green bonds may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. CICERO assesses in this second opinion the likeliness that the issuer's categories of projects will meet expectations for a low carbon and climate resilient future.

### Expressing concerns with 'shades of green'

CICERO evaluated KfW's Green Bond Framework in our Second Opinion from July 2014. Since March this year CICERO Second Opinions are now graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds. KfW has asked CICERO to update the Second Opinion using this 'shades of green' methodology. The shading is based on a broad qualitative assessment of each project type, according to what extent it contributes to building a low-carbon and climate resilient society.

This second opinion will allocate a 'shade of green' to the Green Bond Framework of KfW based on earlier received documentation:

- \* Dark green for projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future. Typically this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities.
- \* Medium green for projects and solutions that represent steps towards the long-term vision, but are not quite there yet.
- \* Light green for projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil based processes).
- \* Brown for projects that are irrelevant or in opposition to the long-term vision of a low carbon and climate resilient future.

The project types that will be financed by the green bond primarily define the overall grading. However, governance and transparency considerations also factor in, as they can give an indication whether the institution that issues the green bond will be able to fulfil the climate and environmental ambitions of the investment framework.

## 2. Brief description of KfW's Green Bond Framework and environmental policies

KfW is the promotional bank of the Federal Republic of Germany and 80 % owned by the Government. It is a leading promotional bank internationally, organized in three business areas with common guidelines for environmental and social engagement (doc. 4). KfW's lending activity includes a Renewable Energy Program containing two subprograms: Renewable Energy "Standard" and Renewable Energy "Premium".<sup>1</sup> Within the area of renewable energy there is also a KfW program for Offshore Wind Energy. The investment area addressed in the Green Bond Framework is the Renewable Energy "Standard" program for building, expansion and acquisition of plants for renewable electricity production, including combined heat and power production.

In Germany KfW implements the Energiewende encouraged by economic incentives as prescribed in the renewable energy law Erneuerbare Energien Gesetz-EEG (doc. 8). The lending through KfW's Renewable Energy Program contributed 48 % to capacity growth in German electricity production during 2010-2012 (doc. 2). About 10% of the KfW lending is for projects outside of Germany, and only 0.13% is for projects in non-OECD countries.

KfW's lending profile includes a Green Bond Framework, which is supported by the corporate social responsibility guidelines in addition to German and EU legal systems, and/or relevant and acknowledged international standards in other countries.

Our assessment of climate and environmental soundness of the Green Bond Framework is based on the documents listed in Table 1. They provide an overview of procedures and criteria for ensuring environmental, social and financial soundness within the KfW lending activities and for the Green Bonds.

**Table 1: KfW Documents/reference overview**

Document	Title	Comments
1	KfW Green Bond Framework	The Green Bond Framework
2	Evaluierung der inländischen KfW-Programme zur Förderung Erneuerbarer Energien im Jahr 2012	Summary, energy and climate achievements of the KfW Renewable Energy Program in Germany in 2012 – Evaluation by Zentrum für Sonnenenergie- und Wasserstoff-Forschung.
3	Merkblatt Erneuerbare Energien "Premium"	Defines eligible projects and investors within the Renewable Energy "Premium" program.

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<sup>1</sup> The Standard program is more established and larger than the Premium program. As an example

4	Gemeinsame Richtlinie der KfW-Geschäftsfelder KfW Mittelstands-bank, KfW Privatkundenbank und KfW Kommunalbank.	Guidelines for environmental and social sustainability. The document describes the KfW's operational approach to sustainable banking.
5	Our Responsibility shaping social challenges – Sustainability report 2012	Outlines KfW's approach to sustainable banking
6	Sustainability guidelines of KfW Bankengruppe	Sustainability guidelines of KfW Bankengruppe
7	Haftungsausschlusserklärung	
8	Erneuerbare_Energien_gesetz-EEG	Renewable energy law - the law text
9	Interne Prozesse zur Begebung eines Green Bonds	Outlines the stepwise internal procedure behind the Green Bond process.
10	Green Bonds Safety Guards	
11	KfW als Förderbank des Bundes, Nachhaltigkeitsmanagement: KfW – Bank aus Verantwortung	Sustainable management of the KfW
12	Dokumentation des Ring_ Fencing-Konzepts zu Themenbonds der KfW	Information on the procedures and accounting system of targeted bonds (Themenbonds)
13	KfW-Programm Erneuerbare Energien „Standard“ (270/274) –Methodik zur Berechnung der Treib-hausgasminderung	Outlines the method for calculating the reduction of greenhouse gases of projects under the Renewable energy “Standard” program.
14	Hintergrund zum Kreditprogramm Erneuerbare Energien „Standard“	Background information on Renewable energy “Standard” program.
15	Informationsblatt für Hausbank-prüfungen für nicht schadenfälliger Engagements im Gewerblichen Durchleitungsgeschäft	
16	Buchungssystematik Ring-Fencing bei Themenbonds – Green Bonds, Renewable Energy Program	Book-keeping system for Green Bonds
17	Impact –Berechnung Renewable Energy ”Standard” 270, 274	Reductions in greenhouse gases 2007-2013, greenhouse gas emission factors, renewable energies, lending and average financing share by KfW, Germany
18	Mittelverwendungskontrolle in den bankdurchgeleiteten Förder-programmen der KfW	
19	Merkblatt Erneubare Energien „Standard“ KfW- Finanzierung von Massnahmen zur Nutzung Erneuerbarer Energien	Defines eligible projects and investors within the Renewable Energy “Standard” program.
20	Development of strategies and sustainability standards for the certification of biomass for international trade	The final report summarizing results of a research project on sustainable biomass production and use, sponsored by Umwelt Bundesamt

As a promotional bank KfW is dedicated to make sustainable improvements to social, economic and environmental conditions (doc. 5), and its lending activities are geared towards climate change identified by the KfW as one of three key challenges of today (doc. 5).

KfW's Green Bond Framework document (doc. 1) contains a list of eligible renewable energy project categories that promote the transition to low-carbon and climate-resilient growth (Table 2). Other renewable energy categories are not excluded. Eligible projects for KfW's Green Bonds Framework are selected by the KfW lending department, and projects with potential for negative environmental impacts are then screened by environmental experts.

Along a future energy scenario renewable energy will replace fossil fuels, which are major contributors to climate change through emissions of greenhouse gases, primarily carbon dioxide. KfW Green Bonds will contribute to reduced global warming and also to reduction in local air pollution and associated improvements of health and welfare.

The impacts of KfW’s projects in terms of greenhouse gases and employment are evaluated on an annual basis by the Zentrum für Sonnenenergie- und Wasserstoff-Forschung (ZSW), which is an independent research institution (doc. 2).

### 3. Assessment of KfW’s Green Bond Framework and environmental policies

The KfW is a significant lender to wind farms, off-shore wind, upgrading of coal-fired power plants in developing countries, energy saving, residential buildings, street lightning, the REDD program, and climate adaptation (doc. 5).

Overall the Green Bond Framework is directly targeting climate mitigation and major local pollution issues by focusing on renewable energies.

**Table 2: Eligible project categories**

Primary objective	Eligible project categories	Likelihood of meeting objective - concerns
Mitigation	Renewable energy for power/combined heat and power	
	1 Photovoltaic	Dark Green – Consider life cycle pollution
	2 Biomass	Medium Green – Observe complex impacts of some biofuels. Consider life cycle emissions, and avoid negative impacts on biodiversity
	3 Wind Energy	Dark Green – Consider negative impacts on wildlife, nature
	4 Hydropower	Dark Green – Consider environmental impacts and possible methane emissions
	5 Geothermal	Dark Green – Potential for heavy metal pollution
	6 Electricity and heat from renewable energy in combined heat and power stations	Dark Green

#### Environmental policies that guide the KfW

In 2006 KfW introduced environmental and social guidelines defining the basis for its sustainability strategy. The sustainability guidelines of 2009: “Gemeinsame Richtlinie der KfW-Geschäftsfelder

KfW Mittelstandsbank, KfW Privatkundenbank und KfW Kommunalbank” describes the KfW’s operational approach to sustainable banking.

KfW support the sustainability goals set by the Federal Republic of Germany, the EU and the international community (doc. 6). A minimum requirement is compliance with national laws, and KfW actively relate to internationally recognized standards like those of the EU, the World Bank Group and the International Convention on Labor (ILO).

Important national laws are the German law on environmental protection and the German Renewable Energy Act (Erneuerbare Energien Gesetz - EEG).

KfW has listed climate change as one of three key challenges of our time (doc. 5). To mitigate climate change KfW offer finance at lowered interest rates under the KfW program Renewable Energy “Standard”.

### **Eligible projects under the Green Bond Framework**

Eligible projects will be selected according to the “KfW Renewable Energies Program – Standard (270/274)” (doc 19). KfW will not finance fossil fuel or nuclear power through its Green Bonds. The Green Bond Framework allows investments in both OECD and Non-OECD countries, although the bond mainly targets projects in Germany (about 90 % of lending) or other OECD countries (about 10 % of lending).

The eligible project categories listed in the Green Bond Framework (Table 2) are generally supportive of KfW’s objective of promoting a transition to low-carbon and climate-resilient growth. Only renewable projects that do not have a negative impact on climate are eligible. All project categories are mitigation activities.

### **Selection of eligible projects under the Green Bond Framework**

Eligible projects are selected by KfW’s lending department in line with KfW’s guidelines for lending through the “KfW-Programm Erneuerbare Energien - Standard” (270/274)”.

All transactions are screened according to KfW’s environmental and social risk management framework as stated in the Gemeinsame Richtlinie der KfW-Geschäftsfelder KfW Mittelstandsbank, KfW Privatkundenbank and KfW Kommunalbank (doc. 4).

For investments in countries with an established legal framework for environmental sustainability and social rights, a sustainability assessment is not required (EU and most other OECD-countries). In other countries an assessment will be carried out and the project should as a minimum comply with international acknowledged environmental and social standards, like for instance the Environmental, Health and Safety Guidelines of the World Bank (EHS Guidelines), the International Labor Organization (ILO) core conventions on labor standards, and the Equator Principles (an international environmental and social risk management framework).

Projects where the lending department is concerned about environmental and /or social aspects the environmental and social impact will be more closely assessed by the KfW Capacity Center on environmental and social issues.

### Strengths

Renewable energy is directly targeting the climate problem, and can also generate beneficial spin-offs by reducing entry barriers to renewable energy technologies among investors by reducing the information and other transaction costs.

When considering the sustainability of energy investments possible rebound effects and lock-in are essential.

Concerning rebound effects, adding capacity for electricity production and increasing supply generally lowers the price on electricity and makes it more affordable, including electricity from fossil fuels. Within OECD countries, where electricity markets are relatively mature and basic need largely covered, the rebound effect is likely to be limited. KfW's Green Bond targets projects in Germany, although for the few projects outside OECD the rebound effect might be more pronounced. On the other hand clear welfare benefits are likely associated with increasing energy consumption in non-OECD countries.

The KfW Green Bond program has the potential to enhance diversification and decentralization of the energy sector, thus reducing dominance by fossil fuels in the energy markets by introducing alternative supply chains and infrastructure.

Pluralism in the renewable energy sector might keep the door open to a variety of technological developments, absorbing the rapid technological progress characteristic of an emerging industry.

It is a strength that the KfW guidelines and approach are conscious and clear concerning both environmental and social aspects. The procedures include screening of carbon dioxide and the other greenhouse gases included in the Kyoto Protocol.

An annual evaluation of impacts on greenhouse gases and employment by the Zentrum für Sonnenenergie- und Wasserstoff-Forschung (ZSW), which is an independent research institution, is also a strength.

### Weaknesses

There are few weak aspects in the Green Bond Framework. However, all types of renewable energy technologies are accompanied by some negative environmental effects. For instance harvesting of biomass and biodiversity can be exposed to unsustainable practices. We recommend that environmental and social screening at the early stage is supported by appropriate competence and routines. KfW's procedures do not include screening of other environmental impacts than greenhouse gases, and do not include life cycle assessment perspectives.

## Pitfalls

The investments in renewable energy are supported by lowered interest rates and incentives through the German Renewable Energy Law. This might make the renewable energy projects vulnerable to a change in economic conditions and economic policies. However, fossil energy is directly and indirectly subsidized in many countries, making an assessment of the overall situation difficult.

Since all renewable energy projects to some extent affect the broader environment, consideration of local environmental and social impacts of renewable energy investments makes sense, and preferably in a life cycle assessment perspective. One example is large hydro projects, which can have significant environmental impacts. However, KfW's green bond mainly targets investments in Germany, where there are essentially no possibilities for new large hydro projects.

Land and biomass for renewable energy will make certain areas and resources more economically attractive where there was earlier no or low return.

Since the KfW Capacity Center on environmental and social issues only assesses the environmental and social impact of projects where the lending department is concerned about environmental and/or social aspects, there is some risk that projects with problematic environmental and social impacts slip through without sufficient environmental assessment.

## Transparency and reporting

To update investors on the development and provide insight to prioritized areas KfW will provide quarterly information to investors including

- General information on KfW Green Bonds
  - 1) Renewable energies program connected with the Notes
  - 2) A selection of project examples and impact measurement<sup>2</sup> (e.g. GHG savings)
  - 3) Comprehensive description of the Green Bond process at KfW
  - 4) Information about sustainability ratings of KfW
- Specific information for individual Green Bonds
  - 5) Regular summary of Green Bond development (e.g. the outflow of proceeds)

The Green Bond Framework states that all information and relevant documents in respect to the KfW Green Bond and the “KfW-Programm Erneuerbare Energien - Standard” (270/274)” will be available on KfW's website.

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<sup>2</sup> The evaluation of the loan programs is done on a two year basis.

## **Additional references**

IPCC (2013), Climate Change 2013: The Physical Science Basis, Fifth Assessment Report, Intergovernmental Panel on Climate Change.