

BKW

Green Bond Framework



Introduction

The BKW Group (BKW) is a Bern-based international energy and infrastructure company employing more than 7,000 people. Thanks to the company network and extensive expertise, BKW offers to its customers a full range of overall solutions. BKW plans, builds and operates infrastructure to produce and supply energy to businesses, households and the public sector, and offer digital business models for renewable energies. Today, the BKW portfolio comprises everything from engineering consultancy and planning for energy, infrastructure and environmental projects, through integrated offers in the field of building technology, to the construction, servicing and maintenance of energy, telecommunications, transport, and water networks. BKW is a company with a long history and today is driving the transformation into an energy and infrastructure service provider. BKW's strategic business model focuses on three core areas, 1) Aligning the energy business area to the future (Energy), 2) Further developing the grid business area (Power Grid) and 3) Growing the services business area (Building Solutions, Engineering and Infrastructure Services).

BKW owns and operates the largest distribution grid in Switzerland (22,000 km as of 2018) and is actively increasing its holdings of renewable energies. Renewable energy projects under construction and already installed represent a 64% share of energy capacity. BKW is further reducing energy use and increasing efficiency through decentralised energy systems which include the optimisation of communications technology for smart meter deployment and big data technology for grid and geographic information systems (GIS)¹. In addition, the company uses digitalisation to improve energy efficiency and in preparation to meet the requirements for the smart meter roll out in order to meet the EU 2050 energy target². BKW Group is also developing its services network business, which focuses on innovation building solutions, intelligent urban planning and smart infrastructure.

BKW is committed to generate long-term value for the company and society. The company is aware of its social responsibility and is convinced that motivated and committed employees are key for a client-oriented, agile and innovative firm. Sustainable energy and infrastructure solutions are a value added for BKW's business partners, the society and the environment. With innovation in engineering and building technology, BKW contributes to an efficient and renewable future. BKW is dedicated to efficiently use natural resources and reduce the impact on the environment with a special focus on a lasting CO₂ reduction.

To follow its mission of designing "solutions for a future worth living for", BKW approaches inter-connected topics across the economic, social and environmental dimensions. This is why BKW supports the achievement of the

¹ GIS is used to map the potential of renewable energy sources and restrictions on their exploitation

² The EU 2050 energy target is to reduce Green House Gas emissions by 80-95%, when compared to baseline levels in 1990, by the year 2050.

Agenda 2030 and the Sustainable Development Goals (SDG). Although being aware of the integral and holistic approach of all SDGs, BKW has identified ten SDGs that are particularly relevant for BKW.

Solutions for a future worth living for



BKW sees the avoidance of massive climate change in combination with mitigating the effects of an already existing climate change as one of the biggest challenges today. Therefore:

- BKW continues to invest in renewable energy capacities in Europe to support a climate-neutral supply of electricity and heat. In 2018 for instance, BKW increased production from renewable energies by 10%. In the coming years, BKW plans to expand its production capacity exclusively in the renewable energy space. By 2023, BKW expects the share of renewable energy to be at least at 75 % of the BKW's production portfolio.
- BKW provides solutions for energy efficiency in buildings, electro mobility and helps customers reduce their carbon footprint. In 2018 for instance, combined heat and power plants fired with wood chips allowed BKW's customers avoid 60'000 tonnes of CO₂ emissions.
- Furthermore, BKW operates an international network of local engineering specialists that offer engineering services to support the necessary investments in infrastructure in Europe. With this, BKW supports resource efficient infrastructures and increases the resilience of living spaces when it comes to adaptation to and mitigation of climate change.

Rationale of the Green Bond and Green Bond Principles

In its history, BKW has been a pioneer of renewable energy with the construction of hydro power plants by the end of the 19th century and the first Swiss solar power plant Mont-Soleil, which was at that time the largest in

Europe. BKW wants to continue this pathway and, through with their operations provide answers to the need of renewable energy and climate friendly energy solutions.

This Green Bond Framework aims to provide transparency to BKW's investors and give insights into their considerations for the projects financed by the Green Bonds issued. This framework is in alignment with the Green Bond Principles (GBPs) 2018 issued by the International Capital Market Association (ICMA). BKW strives to contribute to high-level environmental objectives, including climate change mitigation and climate change adaptation through four key Green Bond Categories from the GBPs, highlighted below.

Green Bond Framework

1. Use of Proceeds:

An amount equal to the net proceeds from the issuance of the Green Bonds will be used to finance and/or refinance, in part or in full, **Eligible Green Projects**, as defined below.

Green Bond Category	Description of Eligible Green Projects	UN SDGs
Renewable Energy	<p>Projects aimed at increasing the production, connection and distribution of renewable energies and related infrastructure.</p> <p>Renewable energies may include:</p> <ul style="list-style-type: none"> ▪ Wind projects; ▪ Small hydro power plants less than 20 MW of generation capacity; ▪ Medium to large hydro power plants subject to the conformity with recognised international standard, including Climate Bonds Initiative, UNFCCC Clean Development Mechanism, IFC Reference Standards for hydro projects or equivalent; ▪ Solar photovoltaic; ▪ Biomass plants. 	 
Energy Efficiency	<ul style="list-style-type: none"> ▪ Investments in smart grid/meters for energy demand management; ▪ Grid infrastructure improvements that allow higher transmission efficiency and reduce energy loss; ▪ Storage systems development. 	 

Green Bond Category	Description of Eligible Green Projects	UN SDGs
Green Buildings	<p>New, existing or refurbished buildings which meet at least one of the following criteria:</p> <p>For new builds:</p> <ul style="list-style-type: none"> ▪ Minergie®-P/-A/-ECO- Standard; or ▪ SNBS/DGNB – Standard Gold/Platinum; or ▪ Compatibility with “SIA-Effizienzpfad Energie” <p>For renovation/refurbishments:</p> <ul style="list-style-type: none"> ▪ Minergie®-P/-A/-ECO- Standard refurbishments; or ▪ SNBS/DGNB – Standard Gold/Platinum; or ▪ Reduction of 25% compared to SIA requirements for refurbishments (QH,li/SIA 308/1); or ▪ Energy or environmental-friendly improvements such as thermal insulation, climate-friendly heat generation (thermic solar systems, heat pumps, regenerative energy sources, heat recovery...), PV installations, LED lighting, water saving technologies, green roof garden, etc...; or ▪ Ecological measures such as resource-saving development through the reuse of existing infrastructure, use of resource-saving construction methods or use of recycled material (concrete, wood, insulation materials). 	 
Terrestrial biodiversity conservation	<p>Land preservation and grid improvement through (i) the replacement of overhead power lines with efficient underground cable or (ii) installation of underground cables instead of overhead power lines.</p>	 

Eligible Green Projects may include capital expenditures, operating expenditures related to improvement and maintenance of Eligible Green Projects, research and development, as well as acquisitions of companies specialized in any of the above Green Bond Categories³.

³ At least 90% of the revenue of the company acquired derives from activities falling in any of the above Green Bond Category

A list of Eligible Green Projects identified for BKW's inaugural Green Bond issuance is detailed in "Appendix 2: List of Projects for BKW's inaugural Green Bond"

Projects for the inaugural Green Bond are selected based on the Environmental, Social and Governance (ESG) criteria provided in Appendix 1: "ESG Criteria applied to Renewable Energy Projects in Appendix 2".

Projects related to any of the following aspects will be excluded:

1. Nuclear power
2. Fossil fuel
3. Production facilities within protected areas, e.g. to Ramsar or International Union for Conservation of Nature I-IV⁴.

2. Process for Project Evaluation and Selection

BKW has further strengthened the integration of sustainability into their business model by setting up a dedicated cross-departmental Green Bond Committee (GBC) to identify and select Eligible Green Projects. The GBC is comprised of members from the following teams:

- Treasury
- Sustainability
- Investor relations
- Business development
- Other functional teams (as needed)

The GBC's role is to:

1. Review, select and validate the pool of Eligible Green Projects, based on the Green Bond Framework;
2. Validate annual reporting for investors;
3. Monitor the on-going evolution related to the Sustainable Capital Markets (i.e. GBPs) in terms of disclosure/reporting in order to be in-line with market best practices; and
4. Review the Framework to reflect any changes with regards to the Company's sustainability strategies and initiatives and to be in-line with market best practices.

3. Management of Proceeds

An amount equal to the net proceeds of the Green Bonds will be credited to the general account owned by a BKW Group company⁵.

⁴ IUCN: <https://www.iucn.org/theme/protected-areas/about/protected-area-categories>

⁵ BKW AG or BKW Energie AG

If the net proceeds from BKW's Green Bonds are used to finance new projects selected by the GBC, the funds will be transferred to the corporate entities in charge of the project in the form of intercompany loans or equity capital, with the purpose to finance the disbursements in connection with the Eligible Green Projects. The above mentioned process will be monitored until full allocation of the net proceeds. BKW intends to fully allocate the proceeds within 24 months after the Green Bond issuance date.

If the net proceeds from BKW's Green Bonds are used to refinance existing projects, an amount equal to the net proceeds will be allocated to the Eligible Green Projects as selected by the GBC in accordance with BKW's Green Bond Framework. Net proceeds can refinance Eligible Green Projects with a commissioning date up to 36 months before the issuance of a Green Bond. Depending on the life time of Eligible Green Projects, the lookback period could be longer (i.e. hydropower projects). This will be reviewed on a case-by-case basis and deviations from the lookback period of 36 months will be transparently disclosed in the annual Green Bond report.

All relevant information regarding the issuance of Green Bonds and Eligible Green Projects (re)financed will be monitored and kept in BKW's ERP/Treasury system.

BKW will use its best effort to substitute any projects no longer eligible, as soon as practical once an appropriate substitution option has been identified. Under the scenario where there is a change of ownership or a change in the capital structure, such as BKW's ownership falling to a proportion that leads to an under commitment of Eligible Green Projects, BKW will find additional projects to make up for the shortfall.

The payment of principal and interest on any bond issued by BKW under the Framework will be made from its general funds and will not be linked to the performance of any Eligible Green Project.

Unallocated Proceeds

Pending the allocation or reallocation, as the case may be, of the net proceeds, BKW will invest the balance of the net proceeds, at its own discretion, in cash and/or cash equivalents (money market instruments, bank accounts) and/or other liquid marketable instruments, as per the company's investment management policy.

Maximum Allocation Amount

The BKW Group consists of various operating companies that may have their own debt. Therefore, for every Eligible Green Project, the following condition must be fulfilled for the allocation of Green Bond proceeds:

Maximum allocated proceeds for Eligible Green Projects = (Total eligible expenditure⁶ – External debt⁷) * BKW's share of the project.

Hence only the pro-rata share of the total results, (i.e. a percentage of the issuing operating company's share of the total financing of the project), would be (re)financed by the Green Bond as a maximum. Impact metrics in the Green Bond impact report will also be reported pro-rata of BKW's share in the Eligible Green Projects.

4. Reporting

BKW will report on the allocation of net proceeds and associated impact metrics annually until the maturity of the respective Green Bond, and as necessary in the event of material development. This report will be published in March every year as part of BKW Group's annual report, with the first publication expected in March 2020.

Allocation Reporting

- The list of Eligible Green Projects (re)financed with a description;
- The aggregated amount of allocation of the net proceeds to the Eligible Green Projects;
- The proportion of net proceeds used for financing versus refinancing; and,
- The balance of any unallocated proceeds invested in cash and/or cash equivalents.

Example Impact Reporting

Where feasible, BKW will report on a number of impact metrics associated with the Eligible Green Projects funded with the net proceeds of the Green Bond.

Green Bond Category	Impact Measurement Metrics Examples (not exhaustive)
Renewable energy	<ul style="list-style-type: none"> ▪ Installed power capacity (MW) ▪ Generated annual electricity quantity (MWh) ▪ CO₂ avoided (tonnes of CO₂ equivalent per year)
Energy efficiency	<ul style="list-style-type: none"> ▪ Expected energy savings from grid infrastructure improvements, such as energy demand management ▪ CO₂ avoided (tonnes of CO₂ equivalent per year)

⁶ Capital expenditure or operational expenditure

⁷ External debt which is specifically financing the Eligible Green Project

Green Bond Category	Impact Measurement Metrics Examples (not exhaustive)
Green Buildings	<ul style="list-style-type: none"> ▪ Annual reduction of energy consumption in % and in kWh/m² ▪ Annual average energy consumption in kWh/m² ▪ Minergie®/SNBS/DGNB certification level ▪ Annual reduction of CO₂ emissions (kg CO₂ equivalent per m² per year) ▪ Annual CO₂ emissions (kg/m²)
Terrestrial biodiversity conservation	<ul style="list-style-type: none"> ▪ Restitution of area occupied by overhead lines in m² ▪ Construction of underground cables (km)

5. External Review

Second Party Opinion

The Second Party Opinion (SPO) provider, ISS-oekom, has reviewed BKW's Green Bond Framework and verified its alignment with ICMA's Green Bond Principles and market practices. The SPO will be made available on BKW's website.

Annual Audit/Limited Assurance

The allocation of Green Bond proceeds and impact measurement metrics will be reviewed by an auditor. A confirmation letter (called "Limited Assurance") will be made available on BKW's website.

Disclaimer

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Appendix 1: ESG Criteria applied to Renewable Energy Projects in Appendix 2

Environmental Criteria	Description
Environmental Impact study	Necessary environmental impact study(s) is(are) available
Site evaluation for power plant projects for ecologically valuable areas	Site evaluation is conducted and led to the exclusion of power plant projects in protected areas (e.g. nature reserve, landscape protected areas, IUCN categories I – IV, etc.). (Remark: IUCN categories V and VI allow a certain amount of (sustainable) use. Possible projects in these areas would be evaluated in each specific case to make sure a sustainable use is feasible)
Implementation of additional ecological measures to limit negative influences	Proactive and innovative measures to protect fauna, flora or biodiversity (e.g. the installation of tools to protect bats or fish)
Prevention plans to avoid, for example, accidental pollution	Plans for pollution prevention are available for every project for all life cycle phases (construction - operation - dismantling)
Contribution against climate change or adaptation to climate change	Renewable energy contribution; energy efficiency increase and absolute energy savings; reduction of resource consumption e.g. on circular economy or recycled building materials
Positive ad on: Studies to improve understanding of ecological footprint	Implementation of a life cycle analysis (LCA) for projects and/or scientific support for the project (support for research)

Social Criteria	Description
Involvement of stakeholders such as the local population	Structured stakeholder analysis; identification of stakeholders and inclusion in project. Application of the action to all life cycle phases (construction - operation - retrofitting) (if relevant to company)
Measures to strengthen sustainable local/regional value creation	Supply of participation models for municipalities; procurement of materials/services from local/regional suppliers
Working conditions comply with at least international standards (or higher national requirements)	High requirements with regard to labour standards, at least International Labour Organisation (ILO) or national /regional legislation standards. High occupational safety/health standards in the construction and operation of the facilities (for example, a commitment to ILO, OHSAS (Occupational Health- and Safety Assessment Series) or similar) and assurance through audits

Governance Criteria	Description
Environmental and social specifications appropriately addressed in contracts with suppliers and service providers	Fulfilment of environmental and social criteria is stipulated in BKW's supply contracts or service contracts (and checked where relevant on a case by case basis)
Long-term investment/value creation strategy	Preventive maintenance concept for power plants; TCO (total cost of ownership) considerations in decisions; enabling additional value added outside the project (which would not have been realized without a project)
Application of business ethics	Risk analysis considers PESTEL perspectives (political, environmental, social, technological, economic, legal); avoidance/prevention of corruption or fraud; exclusion of discrimination of any kind and fair dealings with business partners

Appendix 2: List of projects for BKW's inaugural Green Bond

Type	Project	Capacity (MW)	Status	Commissioning Date (Year)	Country
Small Hydro	Ragn d'Err	5.8	Operation	2016	Switzerland
Small Hydro	Schattenhalb 1+	2.3	Operation	2017	Switzerland
Small Hydro	Spiggebach	1.5	Operation	2017	Switzerland
Small Hydro	Sousbach	5.5	Planning	2023	Switzerland
Wind	Saint Germier	10.0	Operation	2017	France
Wind	St. Joulieu du Terroux	10.3	Operation	2017	France
Wind	RAZ Energie 3	18.4	Operation	2017	France
Wind	Roan	28.6	Operation	2018	Norway
Wind	Marker	54.0	Operation	2019	Norway
Wind	Hitra II	10.5	Construction	2019	Norway
Wind	Harbaksfjellet	14.1	Construction	2020	Norway
Wind	Geitfjellet	20.2	Construction	2020	Norway
Wind	Kvenndalsfjellet	12.7	Construction	2020	Norway
Total		193.9			