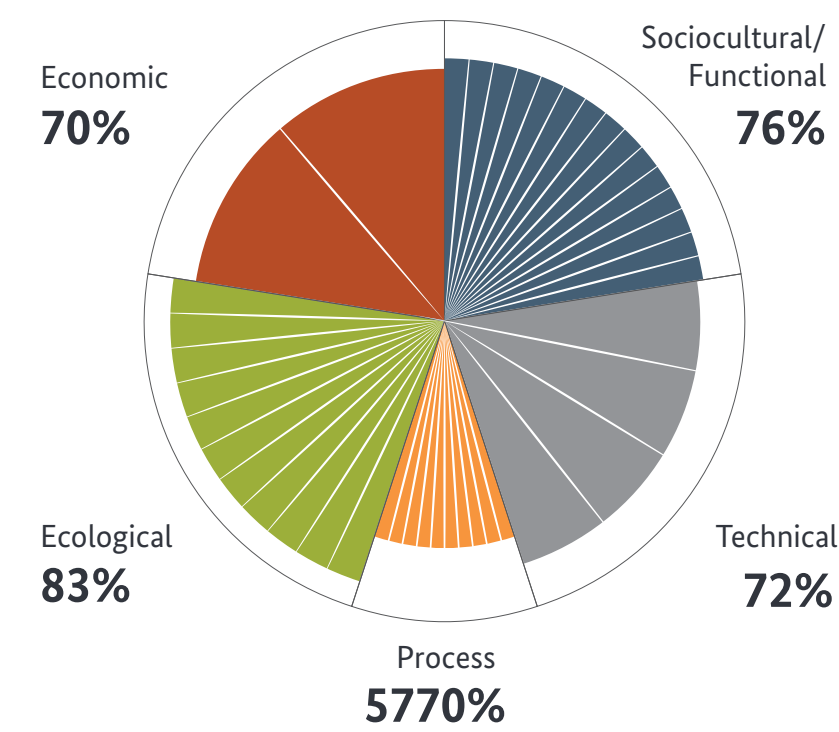


Federal Constitutional Court

Complete Refurbishment | Karlsruhe | Grade 1.7 | SILVER

Weighting of Assessment Quality **73.3 %**



Office Building (Complete Refurbishment)	Silver according to BNB_BK 2013_3
Client	Federal Republik of Germany
Architect / Planner	Assem Architekten, Karlsruhe
Auditor	Dipl.-Ing. Jan Zak, ikl GmbH Karlsruhe
Completion	September 2014
Gross Floor Area (GFA)	16,726 m²
Gross Construction Costs	€ 57 million
Construction Costs (KG 300, 400)	2,297 €/m² _{GFA} (net)
Operation Costs	1,342 €/m² _{GFA} (net)
Life Cycle Costs	3,639 €/m² _{GFA} (net)
Primary Energy Demand (LCA)	total: 166 kWh/(m² _{NFAa} a)
Global Warming Potential (LCA)	34.1 kg CO ₂ eqv./ (m² _{NFAa} a)



The Federal Constitutional Court is located in the city centre of Karlsruhe, close to the public park of Schlossplatz and a Botanical Garden. It was planned and built in the years 1962- 1969 by the architect Prof. Paul G. R. Baumgarten.

The challenge was to preserve the distinctive, transparent architectural language as an expression of a representative and broad understanding of democratic jurisdiction. However, at the same time a contemporary, energy-efficient building that provides a comfortable indoor climate for the next life cycle should be realised.

Monument Protection

Due to the much respected decisions of the court and the interest of the media, the building became one of the most popular public buildings in Germany.

Because of its constructional and urbanistic qualities and its scientific and historical significance, the Federal Constitutional Court fulfils the criteria of a cultural monument of particular importance. The Botanical Garden adjacent to the Federal Constitutional Court is also listed as a cultural monument in the register of monuments of Baden-Württemberg.

Energetic Quality

According to experience, energy saving and monument protection are usually two inconsistent disciplines. The use of renewable energies for cooling with well water as well as the generation of electricity with a photovoltaic system, combined with efficient LED lighting, have been a holistic approach to the energy refurbishment of the Federal Constitutional Court.

Since the complete refurbishment the buildings primary energy demand is 33 % below the requirement value of the EnEV 2009 for new buildings and with the consideration of the 140 % rule for existing buildings even 52 % below.

User-relevant Quality

- Optimal comfort for the user has been achieved by:
- The installation of cooling ceilings or cool wave elements
 - The use of non-toxic and low-odour building materials
 - Carpet flooring and sound absorbing curtain covers
 - Perforated solar shading slats
 - The installation of control panels for solar and glare control, room temperature as well as daylight and artificial light in each office
 - Covered and illuminated bicycle parking bay
 - Art on building
 - Redesign of the outdoor facilities

