



Econcalc

KEYWORDS:

- ☐ Building culture
- ☐ Construction
- ☐ Closed loops
- ☐ Governance
- ☒ Planning Tools
- ☐ Ecology
- ☒ Energy efficiency
- ☐ Indicators
- ☐ Mobility
- ☐ Technology transfer

TARGET GROUP:

- ☒ Architects
- ☒ Builders
- ☐ Citizens
- ☐ Craftsmen
- ☐ Home Owners
- ☐ Planners
- ☒ Politicians
- ☒ Policy Makers

Heating demand before and after renovation



Faktor 10 Sanierung, Vogelwosi, Schleipweg, Al-tach

Results and outcomes (use cases):

Econcalc is a tool for the economic optimization of energy efficiency measures in buildings. It is an Excel-based tool for different user profiles.

It calculates in different economic parameters:

- Price of the saved kilowatt-hour (for

investors who pay the cost of energy itself, for example municipalities)

- Annuity income (for investors who pay the cost of energy itself, for example municipalities)
- NPV method
- Annuity

Example:

	NEH	PH
Annuitäten	Finanzierungskosten	-€ 96.553
	Ersatzinvestition	-€ 2.184
	Restwerte	€ 13.477
	Instandsetzungskosten	€ 0
	Betriebsgebundenen Zahlungen	-€ 653
	Verbrauchsgebundenen Zahlungen	-€ 4.165
	Verkaufserlösschmälerungen	€ 0
	CO ₂ -Folgekosten	€ 0
Gesamtannuität ohne Berücksichtigung Restwert		-€ 103.556
Gesamtannuität mit Restwert		-€ 90.079



Description:

The Excel tool "EconCalc" was developed and programmed in 2011 by Daniel Frick, as a diploma thesis in cooperation with the Energy Institute.

The result is an open source tool for the calculation of cost of various construction projects, taking into account the energy savings and higher investment costs.

Annuities, NPV method or price of the saved kilowatt-hour can be calculated and visualised. The calculation methods comply with the requirements of the EU for the calculation of efficiency in construction. It is a free Excel tool that is available for download on the EIV website.

Relevance for inter-municipal planning (AlpBC):

Economic considerations can be viewed at different scales. You can check details, components, building concepts or settlement approaches in terms of their economic variants.

The method allows a decision of builders in the private, public or national projects, in terms of investing in greater energy efficiency.

By entering the costs, real interest rates, energy prices and increases, an estimation of the future development is possible. In this

way public developers can implement higher investments in mutual agreement.

Energy efficient measures are usually more expensive in their investment and can often only be enforced if it is proved at the same time, that they are calculated on the effective lifetime of the component.

SMEs benefit from higher investment costs by achieving higher order volume.

The cost calculator is quite well known in Germany, but has not yet been translated into other languages.

Relevance for policy goals (Alpine Space, Europe and the region):

The open source instrument has been programmed to have available an easy to use tool for the calculation of annuities and thus encourage investments in energy efficiency and sustainability. The

cost calculator supports the consideration of a measure for its entire life time and thus a sustainable, energy-efficient architecture.