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// Refurbishing residential buildings step by step with an individual refurbishment roadmap (iSFP) Germany

Short description

Since July 2017, the new energy consulting tool - the "Individual Refurbishment Roadmap" (= individueller Sanierungsfahrplan, iSFP) - has been available nationwide in Germany. The iSFP was developed by experts from the German Energy Agency (dena), the Institute for Energy and Environmental Research Heidelberg GmbH (ifeu) and the Passive House Institute Darmstadt and has proved its worth in practice in Germany. The offer is very well received by energy consultants, planners, and homeowners, especially since it enables financially weaker households or hesitant owners to strategically tackle the complete refurbishment of their homes and buildings.

Year // Duration

Available since July 2017, ongoing

Objective

The iSFP for residential buildings is a procedural plan for coordinated steps towards a complete energy retrofit. The building and the need for refurbishment are considered as holistically as possible. The preparation of the iSFP is preceded, on the one hand, by a comprehensive structural and energy inventory and consultation. On the other hand, in-depth

discussions are held with the owners so that the refurbishment roadmap is based on realistic assumptions and conditions. The financial means and desired measures of the residents are taken into account for the development of the plan and compared with the objective requirements with regard to the overall condition of the building. An important side effect of this approach is that the owners are involved in the project from the very beginning and can identify with the procedures. This makes it highly likely that the planning will also be the basis for actual implementation.

Benefits

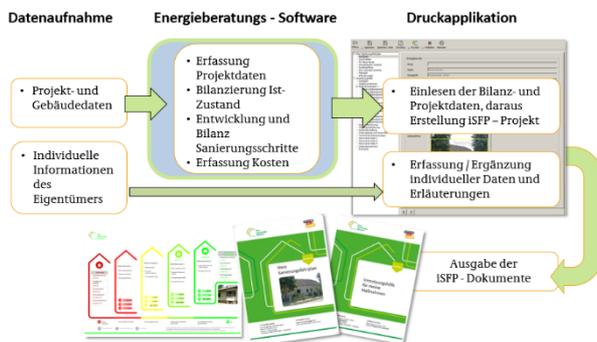
The special advantage of the iSFP is that the measures included in it do not necessarily require a complete refurbishment 'in one go'. Depending on the possibilities of the owners, the refurbishment can start with individual steps and be systematically continued in further refurbishment steps (packages of measures). The most important prerequisite is that there is an overall refurbishment concept for the building behind all steps and measures: they are coordinated with the aim of achieving a high-quality complete refurbishment, i.e. a building comprehensively modernised in terms of energy.

It is part of the truth that the total costs for the step-by-step implementation of the iSFP up to

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the final complete refurbishment are in most cases higher than if the complete refurbishment were to be carried out 'in one go'. Through a step-by-step refurbishment, the packages of measures can be adapted to the service life of the individual components. Coupled with maintenance measures, the economic efficiency can be increased, as the costs for maintenance are incurred anyway.

On the other hand, the iSFP enables a refurbishment to be managed gradually and adapted to the available funds: The financial burden of the project is spread over a longer period of time and on the basis of thoughtful planning. This alone can make complete refurbishments a feasible option for the owners and give a major impulse to clearing the refurbishment backlog.



Process and systematics of setting up an iSFP (German only) . © dena

Implementation: seven steps towards iSFPs

The iSFP is developed in seven successive steps:

1. During an initial consultation with the owners, data on the building and system technology are recorded and user requirements are discussed.
2. The current status is calculated using balancing software.
3. On the basis of the first discussion and the data and calculations, refurbishment proposals are drafted.
4. The proposals are discussed with the owners to agree on the final refurbishment concept.
5. The iSFP and the implementation instructions are elaborated in detail.

6. The iSFP is printed and handed over to the owners.
7. The iSFP and the individual documents are explained, and questions clarified in a final meeting with the owners.

According to the nationwide standardised concept, the owners receive two comprehensible and graphically illustrated documents for implementing and monitoring the project:

- ✓ 'My Refurbishment Roadmap' contains: an overview of the current energy status of the building, a graphic representation of the recommended measures and steps, the financing requirements as well as recommendations for the next steps and an overview of further advantages of refurbishment;
- ✓ The 'Guide for Implementing My Measures' describes the concrete refurbishment measures individually and in detail, details the costs and contains the technical documentation of the energy-related building data and calculation results as well as recommendations for user behaviour after the refurbishment.

With the help of these two documents, also non-experts can maintain an overview and understand the data basis and the technical and mathematical procedure.

Involved parties // Beneficiary parties

Homeowners, energy consultants and experts

Financing // Funding

The Federal Office of Economics and Export Control (BAFA) subsidises the preparation of iSFPs by up to 80 per cent within the framework of its funding programme for residential building energy consultations: for apartment buildings, the subsidy amount is up to 1,700 EUR. An additional 500 EUR is granted if the energy consultant presents the results of his assessment and work at a homeowners' meeting. Those who implement measures from the iSFP receive a higher subsidy for the refurbishment with an additional subsidy of 5 per cent.