

„Schnorbacher Model“

Energy saving guideline of Schnorbach

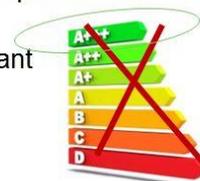
Start in May 2015:
„nationwide unique pilot project“



Photo: Werner Dupuis

Support of:

- Energy consulting
- Change of white goods
- Change of heating circulation pump
- Hydraulic adjustment
- Photovoltaic system
- Battery storage
- Building insulation
- Change of windows and doors
- Change of night storage heaters
- Installation of renewable heating systems
- Installation of ventilation systems
- New construction of a passive house
- 6000 € Maximum grant per household



1. Idea/Planning campaign

Schnorbach is a community with 248 inhabitants, within the municipality of Rheinböllen, in the district of Rhein-Hunsrück, in the state of Rhineland-Palatinate.

Two wind turbines were constructed on municipally owned properties in 2014. Already before the beginning of the construction, the local council agreed on using a part of the rental income for local climate protection measures. Therefore the local council created a “Schnorbacher energy concept”, which gains every citizen an access to independent information offers and free energy consulting.

After the consulting took place, every citizen gets a financial support for the implementation of the determined energy saving measures.

Success of the climate protection campaign “Rhein-Hunsrück is saving energy”: The story of how a consulting offer for individual private households developed into systematic village campaigns thanks to Schnorbach.

The community started the conversations with the climate-protection-manager of the district at the beginning of January 2015. He also provided the contact to the consumer advice center Rhineland-Palatinate.

Already at the beginning of autumn 2014 the climate-protection-management in partnership with numerous networking partners, started the “Rhin-Hunsrück is saving energy” campaign, which advertises the visiting energy consulting of the consumer advice central. The high-quality consulting offer “Basic-check” for tenants and apartment owners as well as “Building-check” for house owners were rarely recognized within the population before the campaign was started. Thereby the consulting costs (except of a little co-payment) for the independent fee-consulters of the consumer advice central were funded by the federal ministry for economics.

A campaign of the district administration of the district of Rhein-Hunsrück and the consumer advice center of Rhineland-Palatinate



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**Saving electricity costs
Year after year**

Rhein-Hunsrück Sport Strahl - und will helfen Ihnen dabei!
Energieeffiziente Leuchtstoffe bewahren Ihren Stromverbrauch und geben
natürliche Tageslicht und das mit nur 10,- bzw. 20,- € (Eigenanteil)

Start in September 2014



Interim conclusion in December 2015



Change of pumps

Who owns the oldest heating pump? **We give you a new one!**



Change of white goods

Who owns the oldest refrigerator? **We give you a new one!**



The two competitions “Who owns the oldest refrigerator? We give you a new one!” as well as “Who owns the oldest heating pump? We give you a new one!” were started for the advertisement of the campaign. The competitions provided supra-regional attention (Reports on the SWR Television and on the radio as well as at the Rhineland-Palatinate page of the Rhine newsletter). A special focus is on the additional social campaign. Thanks to the financial support by the “Sparkassen foundation” by the “KSK Rhein-Hunsrück” with an amount of 10.000 € it was possible to change illuminates in the way of the “Energy-Check” in more than 100 aid receptor households, also other energy-saving-helpers were submitted for free. An anonymized evaluation shows, that for each 50 € of average value of goods in the household, 100 € of energy costs could be saved every year. At the moment the illuminates in the first own apartment of the refugee families are changed, thanks to the aid of the remaining residual budget and the support of the local refugee aids in the district of Rhine-Hunsrück.

Social add-on campaign: „Energy saving helpers“ for free



Interim conclusion in December 2015

- The “Sparkassen“-foundation provides 10.000 € for “Energy saving helper”.
- So far lamps in more than 100 low-income households were changed.
- Every 50 € of used lamps amount to a power costs saving of 100 € per year



With its program “Energy consulting in the quarter” the consumer advice center already had a consulting concept which fitted exactly into Schnorbach’s ideas and only had to be adjusted to village structures.

Together with the partners, the guideline with an application form and an annex was worked out point by point in numerous meetings of the local council.

This is what’s funded:

Free access to the visiting energy consulting on-site for everyone:

The co-payment of the citizens for the visiting energy consulting of 10 € (for the basic-check) or 20 € (for the building-check) are assumed by the community.

Low-cost investment measures:

The procurement of new electronic devices “White goods”, as long as the new device has the optimum energy-label at the point in time of the procurement. Each device group gets an one-time grant of 100 €: Refrigerator, freezer/chest freezer/ combination device, washing machine, heating pump dryer/ washing-drying combination device, dishwasher, oven.

Installation of a high-efficiency pump with a grant of 100 €, hydraulic comparison with a grant of 200 €.

The following high-cost investment measures are funded with a maximum of 2.500 € per measure:

New installation of a photovoltaic system with up to 10 kWp, new installation of a battery storage for the increase of the internal-consumption, professional insulation of the dwelling, professional exchange of windows and doors, thermal solar systems, installation of a wood carburetor, wood chips, and pellet boiler central heating, heat pumps for the heating network, installation of ventilation systems for heat recovery.

The exchange of outdated night storage heaters with efficient new devices is funded with a maximum of 1.200 € per dwelling. The insulation of basement ceiling as well as the top ceiling is granted with a maximum of 500 €.

The total funding per household is a maximum of 6.000 €.

People who built a passive house in Schnorbach sweepingly receive the maximum funding.

Unanimous decision

After intensive consultations the guideline was passed unanimously in the meeting of the local council at the 28th of May 2015 and subsequently was published. Previously the citizens were already extensively informed in official journals as well as on the homepage of the local congregation. To get a better recognition value a logo was developed, which is used in every publication. Additionally the guideline and the application forms as well as documents of the consumer advice center with the topic energy-saving were handed out to every household in an especially manufactured cloth bag, which is printed with the logo.

On the occasion of a press meeting the energy speaker of the consumer advice central Rhineland-Palatinate Hans Weinreuter described the “Schnorbacher Model” as a “nation-wide pilot-project”.

Already at the 11th of May 2015 there was a professional moderated information event with specialist lectures as well as a discussion round and the guideline was presented to the citizens.

2. Description of the campaign

a) Target group

Every citizen of the community, who wants to do something for the climate protection or for their own saving of energy no matter whether tenant or owner.

b) Objective and realization

The objective of the local congregation is a significant lowering of the energy consumption within the community. This shall happen easily but effectively. Because of the reason, that the saving of energy does simultaneously save costs, it is the approach of the guideline to support the citizen with investments into energy saving measures, so these measures have a financial benefit for them.

Present high-quality consulting offers like the visiting energy consulting of the consumer advice center shall be made known within the population and gain a high acceptance hence to an active commitment of the community towards this topic and a credible “stand behind” the campaign.

With the help of the financial support, the “sluggishness point” of the citizens for low-cost and high-cost investment measures shall be overcome.

c) Consideration of local conditions/special features

To reach a preferably high participation, the guideline was designed as easy and as non-bureaucratic as possible. The grants shall be paid out without any previous applications and bureaucratic barriers and proves. Therefore applications with a foundation amount of up to 500 € are directly instructed by the mayor and furthermore are decided in non-public meetings of the local council.

Also the guideline shall give every citizen the appeal to save energy, no matter whether tenant or owner, for low budget or for bigger investments.

d) Actors/Cooperations

1. Mayor and local council (7 members) as initiator

2. Climate-protection-manager of the district of Rhein-Hunsrück

He has got the expertise that's necessary and also got contacts to other institutions. He knows the situation on-side and has got the overview over measures in other communities. With the campaign “Rhein-Hunsrück is saving energy” a suitable basement was present.

3. Energy consulting of the consumer advice center Rhineland-Palatinate

They also have the needed expertise and they have a long-term experience in the consulting of citizens and they provided the concept “energy consulting in the quarter”. Furthermore they convey the energy consultant, who performs the energy-checks in the households.

4. Energy agency Rhineland-Palatinate

In the way of the holistic approach, which already begins with the creating of the awareness of the children and the youth, the energy agency supported with their project “Electricity detectives”.

Additionally the community plans own measures, such as the construction of a photovoltaic system with a battery storage for the street lightning as well as partial supply of the night storage heating in the village hall and the changeover of the street lightning to LED-technique. Hereby the energy agency is consulting also.



Young detectives are on the hunt for power guzzlers

Campaign. „Electricity detectives“ are on a mission in Schnorbach – joint project of the community and the energy agency

Source: Rhein-Hunsrück newsletter from the 23th of May 2016

e) Feedback

Mainly positive!

The „Schnorbacher Model“ led to a lively discussion within and outside of the local congregation. The often expressed fear that the financial foundation would only lead to a “deadweight effect” could clearly be disproved with the balance. This could also be seen at the experiences of the nearby villages, which in the meantime also decided own corresponding guidelines. Whoever received 100 € of payback in his electricity bill, because he changed his pump or the refrigerator is sensitized for the topic of energy (cost) saving and will keep on with the exchange of the power guzzlers in his own house. The “word-to-mouth recommendation” within the acquaintance is strengthen the effect – also with the achieved successful insulations and the degrees of self-sufficiency reached via photovoltaic and storage systems.

Therefore the “social standard” is shaken in step by step in the whole district, the standard states: “My neighbor is doing something different from me, maybe he’s doing it better than me: I can do it to!” A mayor put it in the nutshell like this: “As a community nowadays you aren’t getting around such a guideline!”

f) Exemplary function/imitability/multiplier effect

Due to the medial echo the “Schnorbacher Model” got a quick local and regional attention and imitators. On Schnorbach’s basis, the local congregations of Laudert, Lingerhahn, Kappel, Reckershausen und Rayerschied in the district of Rhein-Hunsrück already have decided their own comparable funding guidelines. Numerous other communities in the district showed their interest towards the climate-protection-manager. Hereby there is a particular importance placed on that not only financial strong “wind-rent-communities” could decide funding guidelines.

As a special success it shall be mentioned, that the municipality of Simmern decided a low-cost investment funding guideline at the 23th of March 2017. In every of the 32 belonging local congregations the citizens get a free access to the visiting energy consultation as well as a grant of up to 100 € for the exchange of a “White goods” device. Furthermore the municipal administration provides information and support with the BAFA-application for the grant of heat pump exchange and the hydraulic comparison for the citizens in the course of the guideline. This shows that communities which do not have high rental incomes from wind turbines could confess to the topic of energy saving too. At the example of the

municipality of Simmern the solidarity thought within the municipality, which is the base of the guideline, should be pointed out especially.

Area of activity, energy saving: Communities create an energy saving concept for their citizens

District administration of the district of Rhein-Hunsrück
Schnorbach is saving energy



The "Schnorbacher Model" is a role model for numerous communities

Start in Kappel at the first of February 2016



Join in!
Our target: less costs
Better environment

Start in Reckershausen at the 14th of June 2016



Funding guidelines decided in:

- Laudert
- Lingerhahn
- Kappel
- Reckershausen
- Rayerschied, Kludenbach
- Municipality of Simmern (32 citizens – low cost investment basic funding guideline)
- Numerous other communities showed their interest



Reckershausen is saving energy



Even outside of the district the "Schnorbacher Model" gets attention. For instance, the municipality of Sprendlingen-Gensingen in the nearby district Mainz-Bingen decided a funding guideline.

The "Schnorbacher Model" fits exactly into the climate-protection-concept (CPC) which was unanimously decided by the district assembly in 2011:

- Reduction of the total power consumption (heat, traffic, electricity) up to 40 %.
- Halving of the energy need in the building stock.
- Coverage of the remaining energy need with domestic local renewable energies.
- Hereby displacement of an annual amount of fossil energy sources of converted up to 210 million liters of heat oil.

Currently 300 % of renewable electricity is produced in the district of Rhein-Hunsrück. The ambitious target of the CPC to be a zero-emission district in all sectors from electricity to heat, mobility and waste till 2020 will already be reached in 2018. In the opinion of many experts this might be unique for a German inland district.

Besides the dynamic expansion of the citizens local heat networks in the district (the 15th network is in construction in the nearby village of Ellern), mainly energy saving guidelines like the "Schnorbacher Model" have become the trademark of the climate protection "made in Rhein-Hunsrück".

g) Public relations work

Positive reporting in the press, local „Rhein-Hunsrück newsletter“, nationwide „Energy & Management“.

Banners at the village entrances, linen bags with the logo and information for every household, homepage of the community.

Mentioned in the progress report about the implementation of the climate-protection-concept (Meeting of the district assembly at the 16th of December 2016).

Best-Practice-example at conventions (e.g. 9th local climate conference “recognizing interfaces – using synergies” in Berlin at the 29th of November 2016) and for international visitor groups in the district of Rhein-Hunsrück (e.g. from Japan, Canada, Great Britain, etc.)

Television report of the program “Hierzuland” of the SWR about the topic “saving energy on-side” expected airdate at the 12th of May 2017.

Reporting of the internet channel “Living with the energy revolution-TV” about the “Schnorbacher Model”, episode 195 from the 31st of March 2016, title: “Wind money is creating perspectives”.

For the further sensitization of the citizens a LED-exchange day took place at the 27th of January 2017. Every household had the opportunity to replace up to 15 traditional light bulbs with LED-illuminates for free. The feedback was overwhelming.

Around 60 out of 95 households participated at the campaign in the village hall. All together 950 illuminates had been replaced within 3 hours at this day, thereof 50 in the village hall. The public attention and the conversation topics outside of the village were correspondingly high.

The local congregation of Rehborn from the nearby district of Bad Kreuznach copied the idea of the LED-exchange campaign for their citizens in April 2017.

Area of activity, energy saving: Communities create an energy saving concept for their citizens

District administration of the district of Rhein-Hunsrück



Energy saving guideline of Schnorbach

Start in May 2015:
“nationwide unique pilot project“

Schnorbach is saving energy



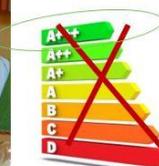
Count me in!



Photo: Werner Dupuis

LED-exchange day 27th of January 2017:

- Households could change up to a maximum of 15 illuminats for free
- 60 out of 95 households participated
- Within two and a half hours 975 illuminats got changed
- Cost for the community: 3.000 – 4.000 Euro
- Significant public interest within and outside of the community



3. Balance/successes

40 energy consultations took place in the meantime. With around 90 dwellings (with 95 households) this corresponds to a quote of 43 %.

This is what's funded so far:

- 7 Photovoltaic systems approx. 67 kWp
- 5 Battery -storage-systems
- 2 Pellet heating systems
- 43 Windows/Doors
- 26 „White Goods“
- 11 Heating pumps/hydraulic comparison
each 1 WP-Heating system, insulation, ventilation system

Paid out funding: 50.184 €

Investment of the citizens: 245.573 €

This corresponds with a funding quote of around 20 %

Furthermore a LED-exchange day took place at the 27th of January 2017. At this day traditional light bulbs had been replaced with LED-illuminates.

All together 950 illuminates had been replaced at this day.

Rough determination of the CO₂-saving:

The saving potential was roughly estimated on the base of the electricity sector.

The average power saving per illuminate is 50 Watt. With 950 replaced LED-illuminates and 1.000 lighting hours per year this corresponds with a power saving of around 47.500 kWh.

The average power saving from the change of "White goods" is 300 kWh per year. With 26 "White goods" this corresponds with a power saving of around 7.800 kWh.

The average power saving from the change of heating pumps is also 300 kWh per year. With 11 pumps this corresponds with a power saving of around 3.300 kWh.

All together this corresponds to a power saving of 58.600 kWh per year.

The average power production per kWp installed capacity is 900 kWh per year. With 67 kWp new installed capacity this corresponds with a production of renewable electricity of 60.300 kWh per year.

At large with the achieved power saving as well as the renewable power production CO₂-emissions for 118.900 kWh per year are avoided.

Referring to GEMIS (Version 4.9) the CO₂-value of the German electricity mix is 453 g/kWh.

In the electricity sector 53.86 tons of Co₂ are avoided annually.

With the installation of the two pellet-central heating systems and the heat pump central heating system 6.000 liters of heat oil are replaced. With the exchange of the 43 windows and doors and the full insulation of a house another 4.000 liters of heat oil are saved: sum: 10.000 liters of heat oil.

The heating value is 11.8 kWh/liter heat oil, thus this sums up to 118.000 kWh per year. Thereof 75 % of the savings are made by the use of new techniques. Thus this sums up to a saving of 88.500 kWh per year.

The CO₂-value of heat oil is 372 g/kWh.

In the heating sector 32.92 tons of CO₂ are avoided annually.

(Plus incalculable other savings with the installation of a ventilation system, energy consulting, etc.)

With the „Schnorbacher Guideline“ in total 86.78 tons of CO₂ are avoided annually.

(With the multiplication on other villages the savings in total are significantly higher)

Highest consultation rate in the country

Thanks to the campaign “Rhein-Hunsrück is saving energy” and the hereof occurred village campaigns like the “Schnorbacher Model” the consultation rates of the consumer advice center in the visiting energy consultation are – contrary to the federal trend – significantly increased. Therefore 141 out of nationwide 935 energy-checks are performed in the district of Rhein-Hunsrück in 2016. This corresponds with 15 % of all checks in Rhineland-Palatinate. The district of Rhein-Hunsrück is hereby only one out of 36 regional authorities in the state.

4. Financing

The financing was only performed by the use of the household of the local congregation. There was no governmental support needed.

The creation of an upstreamed, scientific energy concept was avoided willfully. This would have been connected to an approx. one year long first running which would not go in hand with the target of the community to preferably immediately support the citizens in the course of climate-protection with the achieved earnings from the rental incomes from the wind power

Every information about Schonbach’s energy-saving-guideline, the application form as well as the annex with a list of the fundable devices could be found at www.schnorbach.de



Mayor Bernd Kunz and climate-protection-manager Frank-Michael Uhle are presenting the most extraordinary light bulbs, which had been changed with efficient LED-illuminates.

Photo: Werner Dupuis

Press review:

Comment

Volker Boch

To the project of the community of Schnorbach

A village exemplifies, how the turnaround works

It is altercated a lot and vehemently about the energy revolution. Even our newspaper described the pros and cons in hundreds of articles in the recent years. A project like the one in Schnorbach illustrates how useful the money that is earned with the wind parks can be bypassed. Here a project had been initiated by the citizens, which on the one hand leads to more acceptance for wind turbines & Co. and on the other hand reaches the target, which sometimes could hardly be made out among the major issues of the energy revolution: The saving of energy. While on state level for example, a targeted, sustainable and extensive funding program is missing, a small community exemplifies very concretely how it could work.

In Schnorbach there is an energy-saving-guideline, which finally helps everyone; the citizens, who for instance can plan with an important start-up financing for the energetic restoration of their houses; the community, which is setting up for the future ahead and especially could benefit in the sick village centers in many cases - and finally most of all the environment.

Schnorbach exemplifies the most important aspect of the energy revolution: the saving. For this purpose the community can be congratulated. The project deserves it, to possibly get copied in many cases, in and out of the region, by referring to the creator. Both large and small, with or without local earnings from the wind power, similar ideas could finally be realized in much villages. The energy revolution can work positively and rather simple. It just needs the courage and will to take important steps – like in the community of Schnorbach.

„This had been the dream of a climate-protection-manager.“

Frank-Michael Uhle, the climate-protection-manager of the district, is remembering very well the first and already far-reaching project paper, which the local congregation presented to him at the beginning of 2015



Source: Rhein-Hunsrück newsletter from the 15th of February 2017

Translated by Patrick Seibert