

# BEHAVIOURAL SCIENCE INSIGHTS FOR INCREASED ENERGY EFFICIENCY IN SMEs BEHAVE CONFERENCE, APRIL 21<sup>ST</sup> 2021 TORBEN EMMERLING, PAULE ANDEREGG





# THE PROJECT

# **O** TARGET

Research and development of behavioural science insights for the implementation of voluntary demand-side energy policies for increasing energy efficiency and use of renewable energies in the Swiss industrial and service sector.

## OUTCOME

- 82 page comprehensive report
- 90 papers & reports reviewed
- 12 key heuristics & biases discussed
- 6 behavioural levers identified
- 11 interventions presented
- 4 pilots planned for 2021





inal Report 2021

## BEHAVIOURAL INSIGHTS FOR DEMAND-SIDE ENERGY POLICY

Potentials and measures for increasing energy efficiency and the use of renewable energy sources in the Swiss industrial and service sectors informed by behavioural science research.

AFFECTIVE

swissenergy

# THE PROCESS & INSIGHTS

## 1 RESEARCH

## **A. Academic Insights**

Review of 90 studies on behavioural science and demand-side energy policy.

## **B.** Qualitative Insights

15 in-depth interviews with diverse sample of SMEs on behaviours and contexts.

## **C. Global Best Practice**

Review and analysis of global behavioural science policies and best practices. 2 INSIGHTS

### **A. Behavioural Levers**

- 1. Social Norms
- Commitment 2.
- Framing & Labelling
- Defaults 4.
- Feedback & Reminders 5.
- Gamification 6.

## **B. Target Groups**

- Energy Suppliers
- Energy Consultants
- Repairers 3.
- Executives 4.
- Energy Specialists 5.
- 6. Employees





**3** SYNTHESIS

## A. Guidelines

Selecting and summarising the most important ethical and procedural requirements for evidencebased policy-making.

## **B.** Contextualisation

Fitting the academic insights to the identified behaviours and hot spots in the Swiss SME environment and defining the future validation route together with the SFOE.

#### A. Ideation

Development of a long list with 25 behavioural science interventions.

4 CATALOGUE

## **B. Review**

Discussion and selection of proposed interventions with Swiss expert group.

## C. Finalisation

Detailing and finalisation of 11 shortlisted interventions for pilot phase in coming years.



# THE BIINTERVENTION CATALOGUE

#### "ENERGY EFFICIENCY QUICK WINS"

#### "ENERGY BILLS 2.0"

Using social comparisons, past Goal consumption levels and industry best practice on energy bills, in order to enable SMEs to evaluate their energy consumption in useful benchmarks and to adapt behaviours accordingly.

Target Group	Partner	Effort <sup>A)</sup>
Executives	Energy Supplier, BI Advisor	
Intervention Type	Realisation	Expertise <sup>c)</sup>
Adaption	Sponsoring	Expense /
Category	Hotspot	
Feedback Devices	Feedback, Social Norms, Framing	

#### DESCRIPTION

The energy billing of utility companies is revised with regards to the displayed information. The energy consumption of an SME is presented in relation to similar companies, time periods, regions, sectors, etc. in order to allow social and past behaviour comparisons. The depth of the comparison depends on the data available to the respective utility.

The framing of the current consumption in relation to other companies or the own consumption in a previous period is crucial: SMEs should be positively supported if their consumption is below a comparison average. On the contrary, concrete energy saving tips should be offered if it is above average.

A pilot project can take place in cooperation with a selected utility company, offering the benefit of additional insights on customer interaction and satisfaction through external evaluation. The aim is to give the SMEs helpful feedback to form fact-based concrete actions for increased energy efficiency. This approach has proven successful in private households (cf. OPower in the UK) and is ready to be tested in SME contexts as well.

Relevant BI Concepts	Overconfidence Bias Mental Accounting	Availability Bias	Loss Aversion

Critical Success Factors Cooperation with utility company

Development of relevant benchmarks / average parameters Reaching decision makers of the target group (Mgmt & Finance of SME)

#### IMPLEMENTATION

In cooperation with utility companies, energy bills of SMEs shall be visually reworked and improved with relevant comparative variables. Sector-specific energy-saving tips for above-average consumers are worked out together with utility companies (and possibly intermediaries if appropriate) and provided directly with the energy bill. Energy-conscious companies shall be socially rewarded, for example by appearing as testimonials on the website of the Utility Company/SwissEnergy. Additionally, savings potentials based on estimates of the current calculator on the SwissEnergy website can also be made available on the energy bill. In an initial pilot, it shall be tested whether the provision of the new energy bill reduces the actual energy consumption.

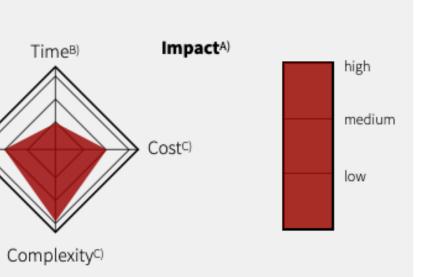
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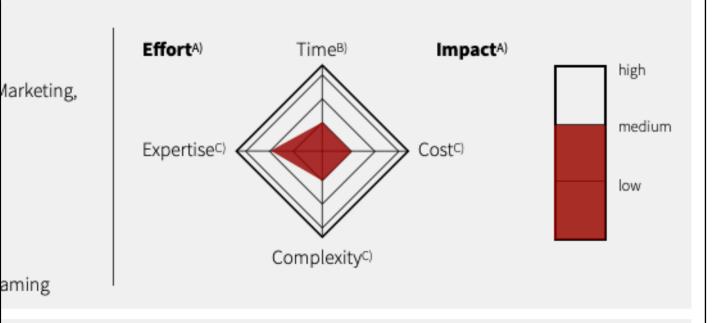
- Establish cooperation partnership with energy supplier and networks.
- design of new energy bill 2.0
- comparison on energy bill)
- IV. RCT pilot phase with distribution of new bill to group A vs. old bill to group B
- VI. Analysis and publication of results.



4







#### LEMENTATION

#### cted Pilot of a Social Media Communication Campaign:

the most important and simplest EE solutions are elaborated together with selected sentatives of energy consulting experts. Differences in individual industries and ors may have to be considered. Second, two series of posts will be drafted for the edIn/Youtube channel of SwissEnergy, one series with conventional communication nd one series with "Quick Wins" (B).

#### ess:

Elaboration of generally relevant "Quick Wins" in cooperation with energy consultants Design of 2 LinkedIn post series, a control series with conventional communication (A) and a test series with "Quick Wins" (B)

Randomized publication of the posts with trackable links via the SwissEnergy channel Fracking links distinguish between reaction to A or B

Test the effectiveness of communication strategies A & B

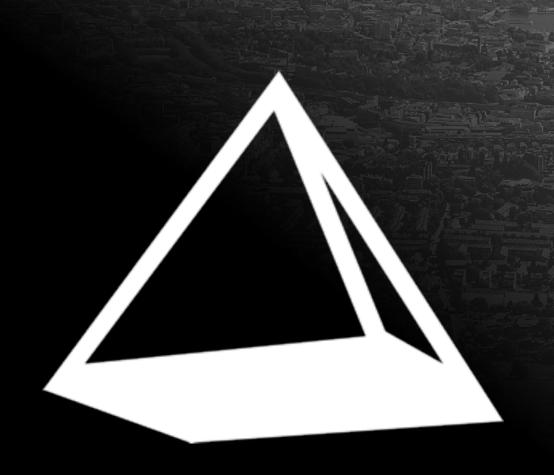
II. Determine relevant parameters for social and past consumption comparisons, development and

III. Calculation of benchmarks / savings potentials by sector (display of relevant social or temporal

V. Evaluation of the measure with regard to changes in effective energy consumption

A) Estimates of the project group <sup>B)</sup> Key from inside to outside: short \_ medium \_ long C) Key from inside to outside: low \_ medium \_ high

A Estimates of the project group B) Key from inside to outside: short \_ medium \_ long Key from inside to outside: low \_ medium \_ high



# Affective Advisory Ltd. | Zürichbergstrasse 38 | 8044 Zurich | Switzerland +41 44 260 86 84 | info@affective-advisory.com | affective-advisory.com

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SwissEnergy Program Management Swiss Federal Office of Energy (SFOE) Pulverstrasse 13 | 3063 Ittigen | Switzerland

