GUIDELINE: CHOOSING FROM DIFFERENT TYPES OF MONETARY INCENTIVES

Abstract

This is a sub-guideline to the main guideline on incentives that looks into the choice of and combination options for monetary- and non-monetary incentive. This sub-guideline on different types of monetary incentives is also written for RD&D project designers as well as for innovation managers and product developers in utilities. While the main guideline renders theoretical backgrounds, decision making aids and do's and don'ts, this guideline contains an overview of the different types monetary incentives that can trigger motivation in customers.

What is it?

This guideline renders an overview over the non-monetary incentives at your disposal to motivate your customers. This is a sub-guideline to the guideline Choosing and combining monetary and non-monetary incentives. In order to receive more detailed information on the factors influencing the choices regarding incentives, to learn about how to set up a general incentive scheme and to find out about do's and don'ts please have a look at the main guideline.

Which monetary incentives are at disposal?

Monetary incentives can be divided into three categories. They can

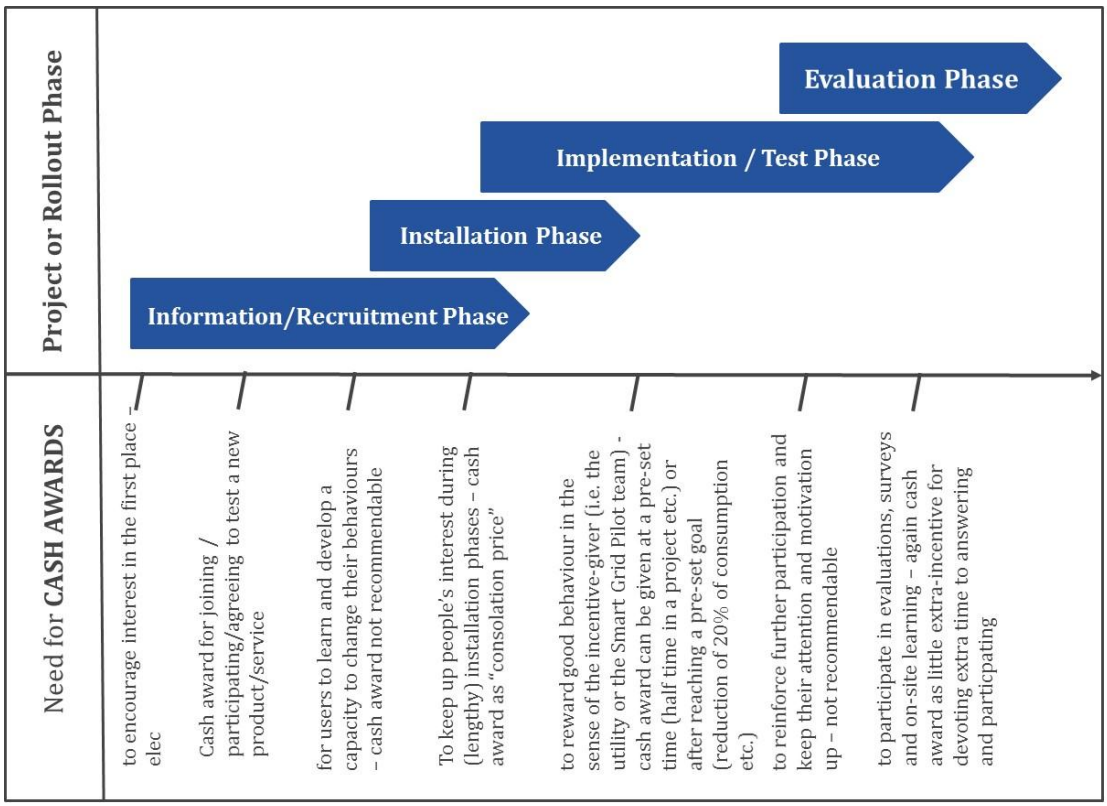
- be constituted by a simple cash award,
- they can be applied to the electricity bill (through bonus, malus or rebates)
- or take the form of gifts (merchandise, energy equipment etc.).

Each of the categories can rank differently regarding their value propositions (to learn more about the value propositions of incentives, have a look at the respective section in the main guideline Choosing and combining monetary and non-monetary incentives. By combining the incentives into a scheme also taking into account non-monetary incentives, more about this in Choosing from different types of non-monetary incentives, many value propositions can be achieved at the same time.

Cash awards

Value Propositions for consumers				**Factors for incentive givers**		
Memory Value	Trophy Value	Flexibility Value	Immediate-ness	Costliness	Flexibility	Regulation and contracts
low	*low*	*high*	*high*	*flexible*	*medium*	*high*
Relevant for…						
…Smart Consumer		**…Smart Customer**		**…Smart Citizen**		
✓		✓				

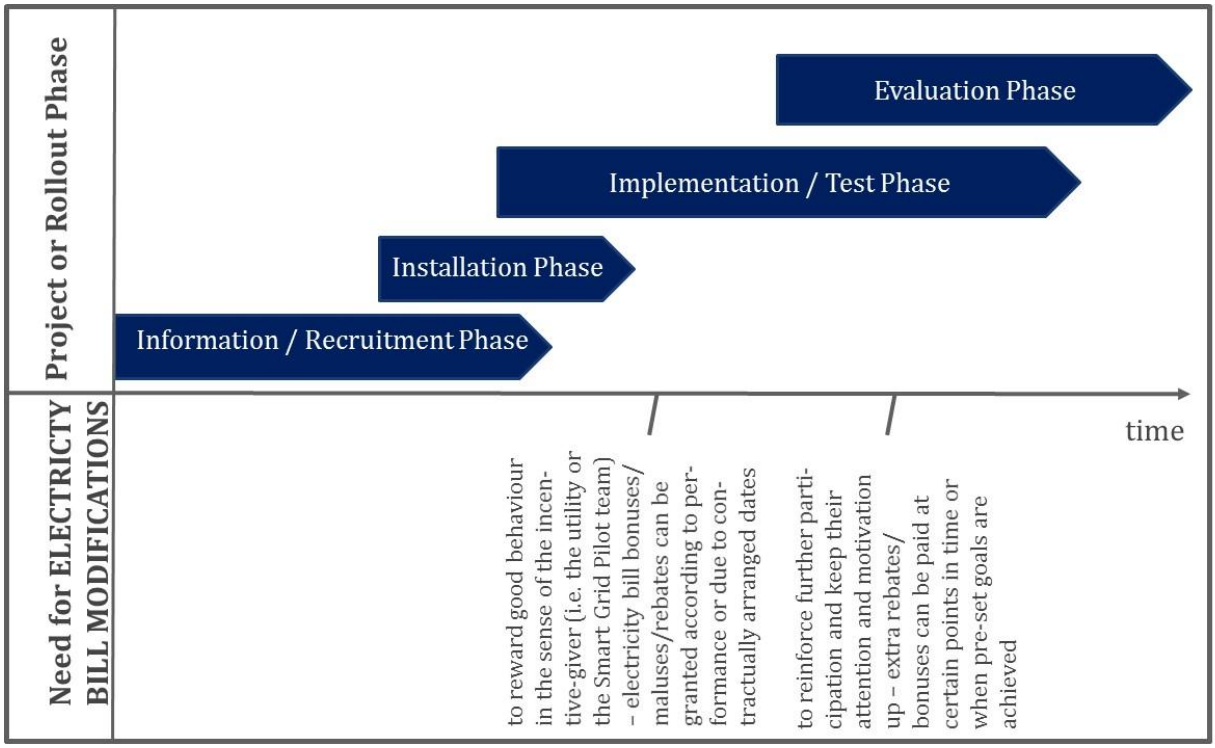
A cash award can be offered in nearly all phases of a rollout, product introduction or demonstration and serve several purposes. While cash is a flexible and immediate for customers to use, the effect of a cash award is neither particularly memorable (especially if the amount is low, which is often the case due to restricted budgets), nor does it have a strong trophy value. Depending on the amounts and occasions on which cash awards are granted, the costliness can range between low and very high. If the amounts and sums of the awards are part of a contract, this instrument displays little flexibility.



Electricity bill

Value Propositions for consumers				Factors for incentive givers		
Memory Value	Trophy Value	Flexibility Value	Immediate-ness	Costliness	Flexibility	Regulation and contracts
low	low	high	high	flexible	low	high

Relevant for…		
…Smart Consumer	**…Smart Customer**	**…Smart Citizen**
✓	✓	



In case of the modification of the end users billing procedures, one needs to keep in mind that setting up a new tariff and according billing system requires a special allowance by the regulator in most European countries. If this is the case, there are ways to simulate a dynamic pricing regime without requiring the permission of the regulator, which are explained in the guideline Designing a dynamic tariff. According to the innovative tariff or contracting regime the end user is billed in, the extent to which they manage to adapt to price and/or efficiency signals is metered. If the end users succeed in implementing them, they receive a bonus on their electricity bill accordingly.

This **bonus can be deducted from the electricity** bill every month, resulting in lower costs. However, other intervals are possible as well. However, if the end users do not succeed in implementing the signals, a **malus can be added to their electricity bill**. This malus can be calculated and added to the bill every month. However, other intervals are possible as well.

The success can be translated into an **accumulated extra-payment** at the end of the project or trial or after the first phase has concluded to keep up the end users' motivation. When designing the intervals for incentives and rewards, project or utility staff should keep the general preference for the immediateness of incentives in mind.

Calculating price elasticity (Model City Mannheim, DE)

How much influence can monetary rewards in new tariff designs actually exercise on customer behaviour? How much do you have to offer for your customer to react? These were two main research questions the Model City Mannheim project set for themselves. Instead of focusing on typical result parameters like load shifts or energy conservation, they opted to analyse their participants' price elasticity in terms of electricity. Little is known about the actual impact of price changes on consumer behaviour. Studies about customer churning in utilities suggest that the price of electricity is not necessarily a main driver towards changing energy suppliers.
In fact, this model region opted to focus on learning about how much you actually have to offer for consumers to respond.

The RTP tariff implemented in their final phase was fully flexible and allowed for a calculation of the price elasticity of the consumption of the field test customers. The price spread between the overall 31 price levels was set at 7,75ct/kWh and the distribution of the hourly time blocks and prices was changed on a daily basis and announced a day ahead. The project calculated a significant price elasticity of -0,106 on average – i.e. if the price of electricity was raised by 100%, the participants reacted with a decrease of consumption by 10,6% on average. However, it needs to be stressed that the price incentives did not reflect the currently available price spreads within given energy markets and regulatory frameworks. In fact, monetary saving potential and change in energy behaviour via reduced electricity bills under actual, non-test circumstances would be limited.

To learn more about this project's results visit http://www.modellstadt-mannheim.de/moma/web/en/home/index.html

Furthermore, a rebate that can be understood as a more general reward incentivizing the end users to take part in the first place can be offered as a monetary incentive. **Rebates are not dependent on the performance of the end users** within the field-trial, but taken off the bill every month/quarter/year in order for them to appreciate their participation.

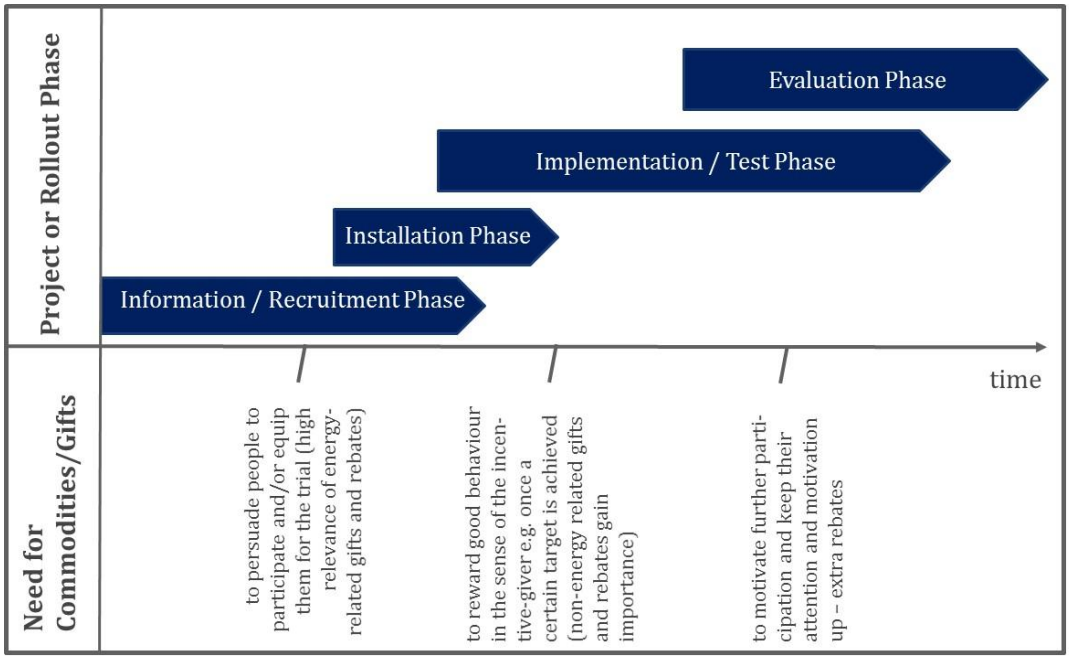
Commodities / Gifts

Value Propositions for consumers				Factors for incentive givers		
Memory Value	Trophy Value	Flexibility Value	Immediate-ness	Costliness	Flexibility	Regulation and contracts
high	high	medium to low	high to medium	flexible	low	low to medium

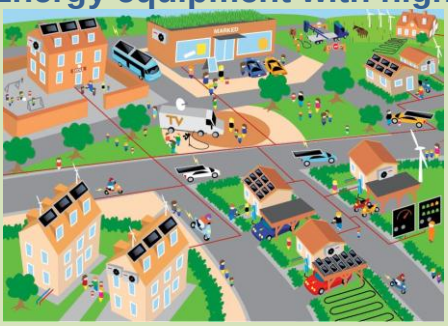
Relevant for…		
…Smart Consumer	**…Smart Customer**	**…Smart Citizen**
✓	✓	✓

Not every monetary incentive needs to be transferred in cash. This section sheds light on how customers can financially gain from taking part and performing well in a smart grid trial without being granted rebates or other cash incentives.

Free energy technology equipment or rebates on energy equipment can be offered to households or SMEs that are willing to participate in a trial or a rollout.
This is a particularly useful incentive for trials that require they users to purchase or lease new equipment for the trials. Of course, the rebates are not limited to smart energy appliances such as start-stop washing machines or dishwashers, other categories ranging from smartphones, PV panels to heat pumps are feasible as well.



Energy equipment with high trophy value (Insero Live Labs, DK)



S3C's active partner project Insero Live Labs has collected great experiences with offering new energy equipment including PV panels, CHP units, heat pumps, electric vehicles etc. to potential trial consumers at a discount rate. The participating households had to invest half of the market price. Thus, the value of their houses increased and they started developed a "sense of ownership" of the project and the success they made of it.

Their own involvement – financially and clearly visible through their "smart energy trophies" in form of their new household and generation appliances – made them more eager to make the most of the new experience and active consumers and citizens.

For more information on the project, have a look at www.inserolivelabs.dk

The trophy value of a complete smart energy renovation of a home is of course considerably higher than a pure cash incentive. Of course, the equipment required to take part in a trial project can also be made available to the end users as a gift. The Insero experience however suggests that a higher stake for participating customers – also in a test circumstance – can have a positive impact on results. A utility can assemble a "starter-kit" that can be given to the end users as a first reward for joining the project or assemble a "success kit" for end users who reach a pre-defined target in changing their habits. Smartphones and tablets as gifts have been appreciated by end users in several smart grid trials. These gifts also serve the projects, since they can be used to read feedback information for the end users as well.
But **gifts and merchandise going beyond the energy sector** have been used, too. Season tickets for the local public swimming pool to theater tickets are feasible.

Regional gifts (AlpEnergy, DE)

To entice the customers of the regional utility Allgäuer Überlandwerke in Germany's southern part to participate in the trial of the AlpEnergy project, the project teams designed incentives beyond usual cash awards for price signal conformous behaviour. As the project name implies, Kempten is an Alpine region and a stronghold for alpine sports such as skiing and snowboarding. As a recruitment gift, the utility opted to offer ski passes for the season instead of a small lump sum. The gift was well received by the regional audience and helped to underscore the character of the project that tested new tariff arrangement oriented towards making maximal use of abundantly available generation from photovoltaics.
For more information on the project, have a look at www.alpenergy.net

A special form of gift-giving that also combines it with a gamification aspect is a lottery. In case the end user reaches pre-defined targets or another defined

threshold, they become eligible for a lottery in which they can win either field-test related or other items. Another option is to transfer achieved results not into direct monetary gains, but into a **fictional currency like a payback system (Testing tariff schemes in a pilot context and Bonus & Malus - Changing behaviour with rewards and penalties)**. If the end users collect the points, they can use them to buy items in online-shops etc.

This guideline was developed in the S3C project, and is freely available from www.smartgrid-engagement-toolkit.eu.

S3C paves the way for successful long-term end user engagement, by acknowledging that the "one" smart consumer does not exist and uniform solutions are not applicable when human nature is involved. Beyond acting as a passive consumer of energy, end users can take on different positions with respective responsibilities and opportunities. In order to promote cooperation between end users and the energy utility of the future, S3C addresses the end user on three roles. The *smart consumer* is mostly interested in lowering his/her energy bill, having stable or predictable energy bills over time and keeping comfort levels of energy services on an equal level. The *smart customer* takes up a more active role in future smart grid functioning, e.g. by becoming a producer of energy or a provider of energy services. The *smart citizen* values the development of smart grids as an opportunity to realise "we-centred" needs or motivations, e.g. affiliation, self-acceptance or community.

S3C (2012-2015) performed an extensive literature review and in-depth case study research on end user engagement in smart grids, resulting in the identification of best practices, success factors and pitfalls The analysis of collected data and experiences led to the development of a new, optimised set of tools and guidelines to be used for the successful engagement of either Smart Consumers, Smart Customers or Smart Citizens. The S3C guidelines and tools aim to provide support to utilities in the design of an engagement strategy for both household consumers and SMEs. The collection of guidelines and tools describe the various aspects that should be taken into account when engaging with consumers, customers and citizens. More information about S3C, as well as all project deliverables, can be found at www.s3c-project.eu.