



# Guide to green innovation vouchers

Experiences from testing vouchers  
for renewable energy service innovators



Innovation in Services  
KIS-PIMS



**European Commission**  
Enterprise and Industry

The present booklet presents the outcomes and findings of the project KIS-PIMS “Knowledge Intensive Services in the Planning, Installation, Maintenance and Scrap services (PIMS) for renewable energy production systems” co-funded by the European Commission under the Competitiveness and Innovation Framework Programme CIP.

KIS-PIMS is part of the European Innovation Platform for Knowledge Intensive Services (KIS-IP) that aspires to accelerate the take-up of services innovations.

**Written and edited by Greenovate! Europe with contributions from the consortium partners.**

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Printed on Cyclus 100% post-consumer recycled paper in Belgium.

Design by [www.mardi.be](http://www.mardi.be)



This publication is financed under the Competitiveness and Innovation Framework Programme (CIP) which aims to encourage the competitiveness of European enterprises.

## Foreword

This “Guide to green innovation vouchers” aspires to provide policy makers and innovation experts with an insight into the experiences that were gained through testing vouchers for renewable energy service innovators. This sector-specific voucher test in Austria, Finland and France was implemented through the Europe INNOVA project KIS-PIMS (Knowledge Intensive Services – Planning, Installation, Maintenance and Scrapping) for renewable energy installations.

After three years, the KIS-PIMS project is now coming to an end in April 2011. KIS-PIMS has delivered toolboxes and training sessions for innovation experts, it designed and implemented calls for proposals and, through the vouchers, it provided business expertise to renewable energy service innovators.

KIS-PIMS has been a challenging project. On the one hand, the complex policy concepts of “knowledge-intensive services” and “innovation” were difficult to communicate to small and medium-sized companies and the consortium struggled to find the right marketing channels for the KIS-PIMS voucher. On the other hand, the public agencies had to find innovative ways to adapt their rules, selection criteria and financing instruments to this flexible and “light” voucher tool.

KIS-PIMS has been an inspiring project. It triggered even closer cooperation at European level to find suitable solutions for the challenges of the project. It also inspired green voucher projects in other sectors, regions and countries. Last but not least, it stimulated risk assessments, cash flow simulations, the development of business models and service ideas, the protection of intellectual property and investments.

We hope that you will find this Guide useful and that our experience report inspires more green voucher schemes throughout Europe.

### THE KIS-PIMS CONSORTIUM

|                |  |
|----------------|--|
| <b>Austria</b> | ATB-Becker • LEV • Dr. Michael Heidenreich                     |
| <b>Belgium</b> | EUREC Agency • Greenovate! Europe                              |
| <b>Finland</b> | ADVANSIS • MOTIVA • VTT  |
| <b>France</b>  | ARMINES • CAPENERGIES • DERBI • NEKOE • OSEO • S2E2 • TECHNOFI |



# What are green vouchers?

The first innovation voucher scheme was already introduced in 1990 by LIOF in the region of Limburg. Nevertheless, by 2006 there were only three schemes up and running in Europe (in the Netherlands and France). By 2010, however, the number of innovation voucher schemes had dramatically increased to at least 25, with schemes now being set up and implemented at national and regional levels all across Europe.

## THE BEAUTY OF INNOVATION VOUCHERS

- Simplicity
- Speed
- Little bureaucracy for applicants
- Low administrative costs for implementing agencies
- Outreach to new and very small companies and start-ups
- **Easy & quick access to external expertise**

from the recipient SME. This own contribution can be provided in own personnel contributions (no cash out) or as financial contribution toward the purchase of external expertise (cash out). They are most often handled by national or regional agencies and are either financed through regional, national or European funds, including the ERDF.

The voucher schemes are highly flexible and can be designed according to the handling agency's interests and the needs of SMEs in a certain market or context. They can be shaped to offer non-bureaucratic innovation support at reduced administrative burdens and costs for both the applicant SME and the agencies running the schemes.

## Entry-level innovation support

For policy makers, innovation vouchers represent a handy entry-level innovation support funding scheme. They are essentially very small grants that aim at encouraging innovation activities of SMEs in a multitude of sectors. By financing the costs of experts from outside the SME, innovation vouchers seek to initiate and foster professional relationships with external knowledge providers such as research institutes, universities and consultants. The policy rationale for using vouchers is typically that SMEs have many innovative ideas but often lack the necessary technical and / or business expertise to transform their innovation project into a market success.

Innovation voucher schemes differ substantially in size and scope. The voucher values range between as much as 500 and 66,000€ per project, with the majority offering around 5,000-10,000 €. Most schemes that are currently running in Europe tend to have a relatively non-bureaucratic application procedure of 2-5 pages with short waiting periods for approval. Financing solely external expertise, they are suitable for first contacts with outside knowledge providers and for solving small innovation issues in SMEs. Most vouchers require an own contribution



## Green innovation vouchers

Green innovation vouchers have the same features as normal innovation vouchers except that they focus on particular sectors or areas with positive environmental impact. While generic innovation vouchers are open to applications from all sectors, green vouchers are intended to promote the increased development and market introduction of sustainable technologies and solutions.

Green vouchers thus support national or regional eco-innovation objectives, such as CO<sub>2</sub> emission reduction, introduction of renewable energies, investments in energy efficiency, etc. This sector-specific approach to green innovation support has many benefits:

- the innovation networks and actors differ from sector to sector;
- the political and legal framework conditions are often sector-specific;
- the innovation drivers and barriers are different for environmental technologies and other sectors.

The emergence of **green innovation vouchers** is a rather recent phenomenon, and until now the authors of this guide have only identified the following initiatives in Europe:

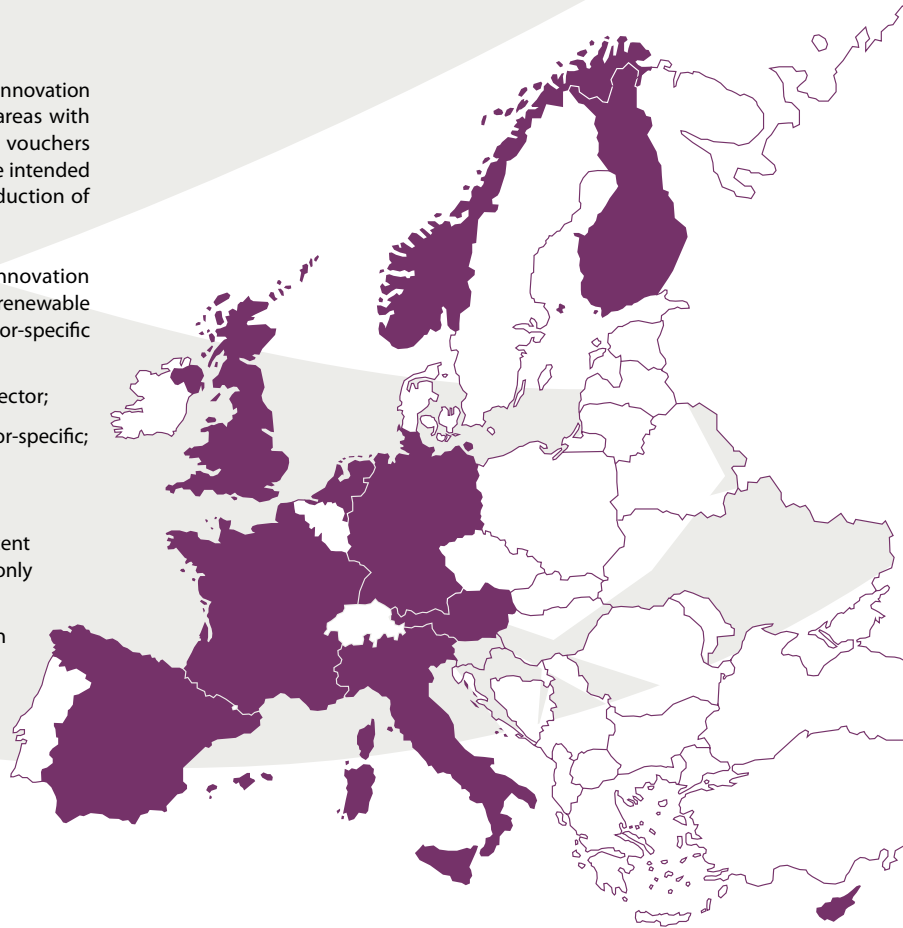
- vouchers supporting renewable energy service innovation (the KIS-PIMS vouchers);
- vouchers supporting sustainable construction service innovation (FR, NO, DE);
- vouchers supporting industrial material efficiency (DE);
- vouchers supporting resource efficiency, recycling and waste management in industrial processes (DE, FR, UK, ES – Navarra and Valencia, IT – Lombardy);
- vouchers supporting sustainable water and waste water management in industry and agriculture (NL, CY, UK-East England and North West, ES – Navarra).

## The KIS-PIMS vouchers

KIS-PIMS stands for **K**nowledge-**I**ntensive **S**ervices of the **P**lanning, **I**nstallation, **M**aintenance and **S**crapping of renewable energy systems and is a European public-private-innovation-partnership aiming at the creation of better innovation support framework conditions for service innovation in the renewable energy sector.

The KIS-PIMS project introduced green vouchers in 2008 as the first programme of its kind. Additionally, KIS-PIMS was the first voucher scheme to focus solely on service innovation.

The vouchers support the development and market introduction of innovative renewable energy services. These are mainly related to the planning, installation, maintenance and scrapping of renewable energy systems, such as biomass, hydro, solar or wind energy services.





# Vouchers in the innovation support system

**Public agencies have a range of innovation support instruments at their disposal, which they can use for various purposes and for different target groups.**

Supply-side instruments focus on supporting the development of new technology and service solutions, while demand-side instruments aim to build a market for products and services. Innovation support instruments typically include the following categories:

- Grants & subsidies
- Equity
- Loans & guarantees
- Fiscal instruments
- Market stimulation

Innovation vouchers are one of many possible innovation support instruments. Since they are deployed as grants; i.e. an amount of money given to a recipient that does not need to be paid back, they belong to the category: “Grants & subsidies”.

## All vouchers are grants... but not all grants are vouchers

Vouchers have a few distinctive features that set them aside from normal grants. Firstly, vouchers buy access to external expertise. This means they cannot be used to fund innovation efforts such as personnel costs, private R&D costs or investment in hardware and software directly for the recipient SME. Secondly, vouchers may be obtained with greater speed and ease compared to grants, and their funding volume is much smaller too. The authors have come across a so-called “voucher scheme” with application procedures and a funding size just like those of an ordinary grant (80 page application for up to 100,000 € funding) – such schemes should not be labelled as voucher schemes, but rather as small grant. According to the RIGA declaration (see p. 19), it is good practice for a voucher to be available to applicant SMEs within four weeks of submitting an application that requires no more than five pages.

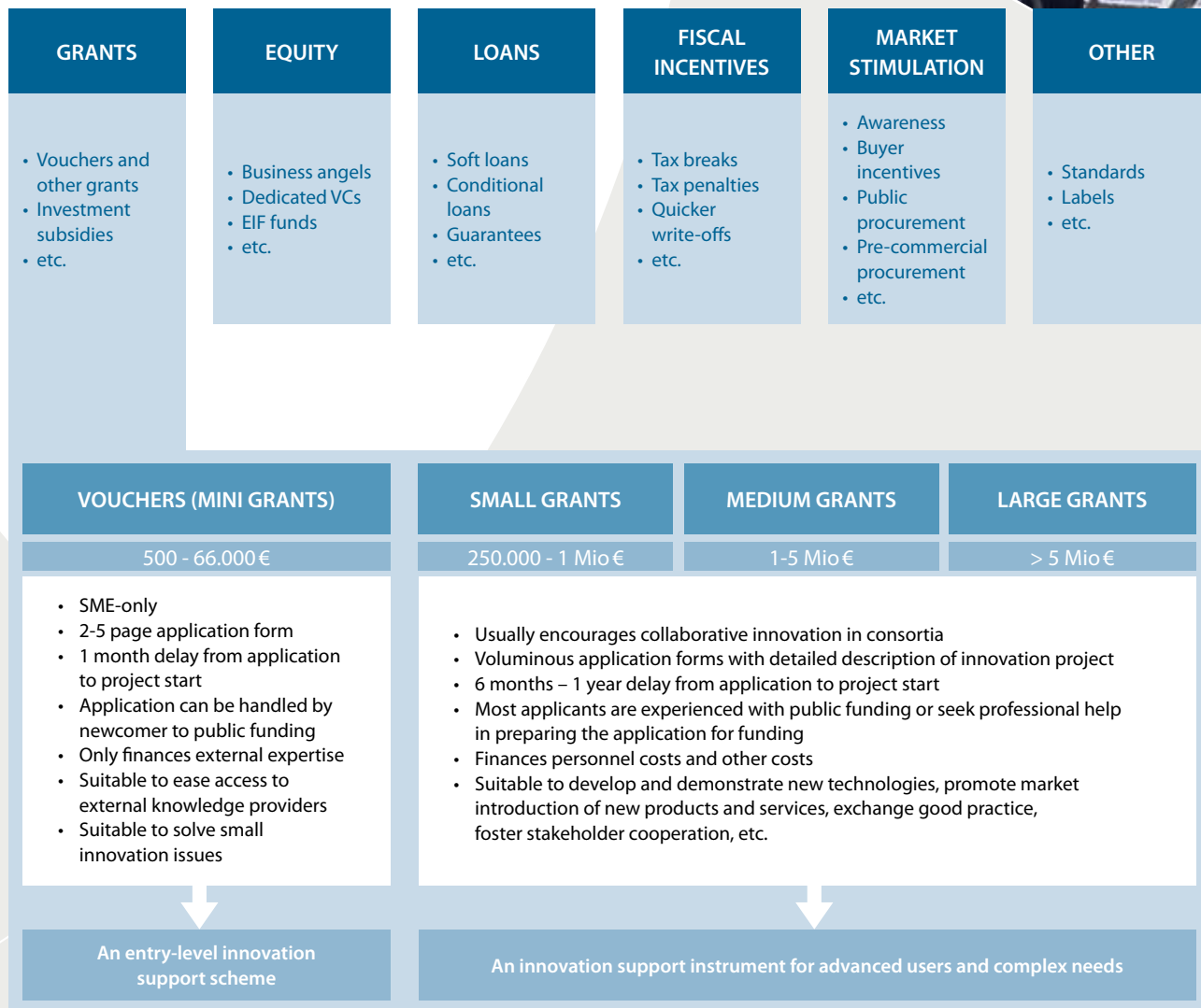
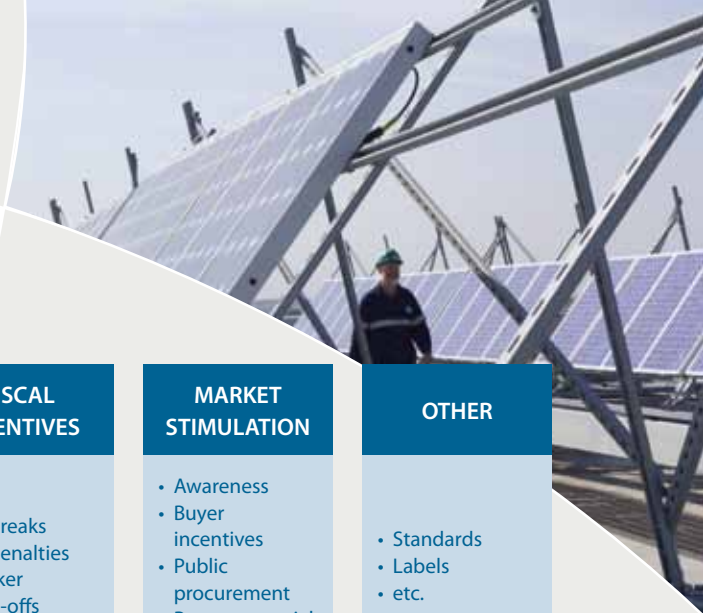


## When to use vouchers?

Vouchers are entry-level innovation support instruments and should be deployed as such by public agencies. They are user-friendly and can therefore target groups that do not belong to the “usual suspects”, which normally line up to request public funding. Vouchers can be used by SMEs or any other entity that does not have previous experience with public support.

The conditions which regulate their use to buy external expertise make them ideal instruments for lowering the barriers of first contact with an external knowledge provider.

Their modest funding volumes allow for the definition of clear R&D requirements (R&D voucher) to solve small-scale innovation problems (business vouchers), or to acquire a precisely defined piece of know-how (audit vouchers). Vouchers are not supposed to provide full-scale innovation support or to help SMEs develop and market new products and services.



## Developing the first sector-specific green voucher scheme

The European project for Knowledge-intensive Services (KIS) in the Planning, Installation, Maintenance and Scrap (PIMS) services for renewable energy production systems started in January 2008. The project consortium was set-up as a public-private partnership between national and regional innovation and energy agencies, innovation experts, renewable energy specialists and cluster organisations in Austria, Finland and France.

KIS-PIMS aimed to boost innovation in all knowledge-intensive services surrounding the production of renewable energy. This was done through the design and implementation of a sector-specific voucher system, the qualification of innovation experts and the development and adaptation of an innovation toolbox.



### The KIS-PIMS voucher scheme

KIS-PIMS has designed and implemented an innovation voucher scheme for SMEs that are keen to tackle innovation and seek help in the process from idea generation to implementation of a new service. The voucher scheme has been financed by the innovation agencies TEKES in Finland, OSEO in France and by the regional energy agency LEV in Styria, Austria.

The vouchers enabled SMEs to access external innovation management expertise and to connect with external technology and knowledge providers. European innovation experts with in-depth sector knowledge were put in contact with the SME managers to analyse relevance and risk as well as technical and commercial viability. This analysis allowed SMEs to improve their competitive positioning and connect to suitable financing from public or private sources. At the outset of the project, the following voucher schemes were set in motion:

- 1| The Styrian energy agency LEV dispensed vouchers valued at 5,000€ with the possibility to be linked to a national research voucher of the same value issued by FFG.
- 2| The French innovation agency OSEO committed to handing out vouchers with a face-value of maximum 15,000€ to renewable energy service companies.
- 3| The Finnish Innovation Agency TEKES aspired to support service innovators with up to 50,000€ per voucher.

Following large-scale promotional campaigns in the participating countries, 233 SMEs expressed an interest in the voucher scheme. This original interest translated into 97 voucher applications and 52 vouchers granted.<sup>1</sup>

The project partners from Austria, France and Finland shared their experiences concerning the design and implementation of the voucher scheme on a regular basis. This exchange allowed them to incorporate adjustments and revise their approach where necessary.<sup>2</sup> In addition, the project consortium has shared its KIS-PIMS experiences with other interested European regions and their innovation stakeholders who are keen to implement similar sector-specific voucher schemes.

<sup>1</sup> In March 2011, three applications are still in the selection process

<sup>2</sup> For more information on experiences and lessons learned also see pages 16-18



## Qualification of innovation experts

The KIS-PIMS consortium designed and implemented a qualification scheme for innovation experts. The qualification procedure aimed to guarantee a minimum common base of knowledge and know-how to all the innovation experts willing to support SMEs in the framework of the voucher scheme.

The qualification scheme relied on a 2-days person-based training, which enabled the transfer of knowledge about the renewable energy sector as well as know-how concerning the use of the KIS-PIMS toolbox. The training sessions qualified the experts in the optimal use of the tools and highlighted their eventual strengths and weaknesses. It should be noted that the use of the tools is not compulsory. The eligibility criteria set to apply for the qualification were as follows:

- More than two years of experience in innovation management support to companies;
- Provide at least two references in company support to innovation;
- Experience in the renewable energy sector;
- Able to put SME projects in a EU dimension: fluent spoken and written English, as well as two cooperation actions at European level;
- Participation in a dedicated 2-day training.

Testing the KIS-PIMS vouchers was an interesting experience since this small and non-bureaucratic grant allowed us to attract many SMEs who have never used public funding before.

Jacques Gautray  
OSEO

## Innovation support toolbox

KIS-PIMS prepared a comprehensive innovation toolbox with generic and sector-specific tools, which allowed experts to assess the business aspects and planning of renewable energy service innovators. The toolbox includes:

- The **risk-assessment tool** which assesses the generic risks of an innovation project related to: technology, market, team, financing, and business model. This tool is sector-specific, and Excel-based. It proved particularly useful in supporting consultants in efforts to provide focus in risk assessment. On the technical side, the tool could be improved by introducing an algorithm that compares the calculated risk with the risk perception of the SME.
- The **innovation management (self)-assessment tool** IMP<sup>3</sup>rove helps to gain a better understanding of how an innovation process is managed. It is generic and web-based. IMP<sup>3</sup>rove was found to be an excellent means for establishing initial contact with SME Managers. However, it was confirmed that very small SMEs and especially service businesses found it difficult to partake in and complete the assessment. It is recommended that in the future, the tool be reserved for larger SMEs (50 to 250 employees).
- The **cash-flow-simulator** allows assessment of the financial implications of a company's innovation project over time. This tool is sector-specific and requires a sound financial management background for optimum use. The tool was found to be well performing, but better suited for investment decision support rather than for start-up financial planning. In the latter case, the start-up financial planning tool from the CIPN innovation centre in Portugal as promoted by the KIS4SAT project<sup>3</sup> seems better suited.
- The **IPR-Manual** is a sector-specific PDF-booklet outlining the legal approach toward service innovation. Service innovation requires different protection mechanisms for intellectual property rights when compared to technology innovation. The booklet is available for download on the Europe INNOVA website and was given to the SMEs during face-to-face meetings. The SMEs appreciated this tool as it provided them with a free-of-charge insight on issues and practices regarding intellectual property without having to go through formal registration procedures.

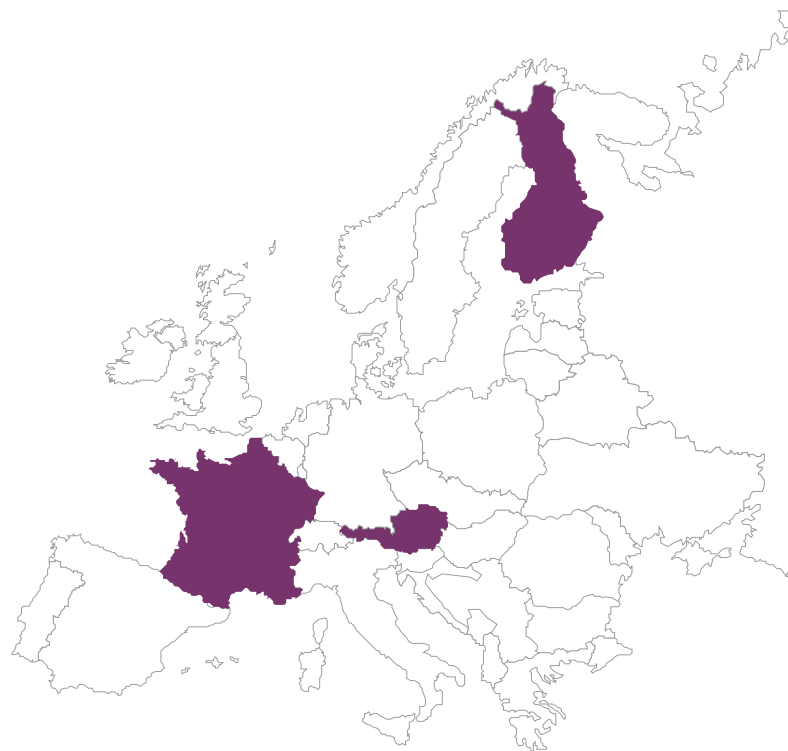
<sup>3</sup> For project details: [www.europe-innova.eu/kis4sat](http://www.europe-innova.eu/kis4sat)

## Testing service innovation vouchers in the renewable energy sector

The renewable energy sector is often described in terms of the technologies that are used to transform renewable energy sources into electricity, fuels, heat and cooling. What is less apparent is the growing service sector that is following in the footsteps of renewable energy technologies such as hydropower stations, wind parks or photovoltaic and solar power plants. All these renewable energy installations require knowledge-intensive services throughout their life-cycle for planning, installing, maintaining or indeed scrapping. The KIS-PIMS vouchers have supported the emergence of a wide range of renewable energy services in Austria, Finland and France. The following list and subsequent project examples provide a hint of such services identified.

### Renewable Energy Services – examples

- Forecasting tools and supervision system for off-shore wind farms and PV power plants;
- Engineering services for biomass waste gasification;
- Tool determining energy efficiency of new or extended district heating applications;
- Innovative drying services of solid biomass material for district heating systems;
- Intelligent networking of innovative energy and building technologies in urban areas;
- Services for air-conditioning and refrigeration on basis of renewables;
- Services for the integration of RE technologies in construction and refurbishment;
- Energy counselling for solar hybrid systems in building and construction;
- Electric bike rental stations charged with PV solar roofs and charging services for electric cars from PV car park roofing;
- Services for the optimization of domestic PV installations;
- Training of installers and engineers of innovative solar-thermal systems and geothermal heat pumps;
- Leasing service in the area of micro-hydro power;
- Cleaning service for PV installations;
- Experimental site for certification of submarine hydraulic turbines and wood quality certification services.



### ENERGY PLANNING SYSTEMS FOR FARMS

A Finnish company aims to provide comprehensive energy planning services for farms. The service allows for the optimisation of resources that are at disposal of the farmer including biomass, biogas and solar thermal energy. The process starts with an analysis of the resources available and the energy needs such as electricity, warm water and heat for drying the crops. Each farm requires a tailor-made approach according to its specification and specialisations. A pig farm for example, uses large quantities of warm water, thus making solar-thermal heating a valuable option. In some cases the farmer may express an interest in building a biogas plant. The information received is entered into the planning program and evaluated by taking different technology options and current fuel prices into account. The outcome is an optimal energy plan for the farm.

The KIS-PIMS voucher was used to revise the business model and to plan the calculation mechanisms. As a result, the business plan was improved particularly with regard to the promotion of the new service. It also included a layout of the programme and the programming of the software for the energy planning service.

## TOOLS AND METHODOLOGIES FOR THE OPTIMISATION OF DISTRICT HEATING

An Austrian energy contractor has used the KIS-PIMS voucher to support the development of an easy-to-use calculation tool that determines the economic efficiency of district heating applications. In addition to the simulation results of the calculation tool, a range of methodologies helped to evaluate and optimize the logistics system for the efficient use of woodchips in small-scale domestic heating and to derive options for business models. It supports decisions for effective planning along the entire supply chain, analysis of material, flows in production processes, the location and dimension of plants and related warehouses, energy demands on the territory (houses, buildings, etc.). On the technological side it was investigated how the moisture content decreases if trees are stored for 3 to 6 weeks before they are chopped to woodchips.

## CONSUMER-FRIENDLY ENERGY SERVICES

An Austrian SME used the expert inputs delivered via the KIS-PIMS voucher to initiate more consumer-friendly energy services aiming at an improvement of energy behavior. The challenge for the service provider is to change the perception of energy from an unspectacular everyday product to a product with specific features that can be tailored to cater for different lifestyles.

Several approaches to promote the use of renewable energy have been investigated including innovative marketing strategies, voluntary customer contributions as well as eco-labels and disclosure. "Green Pricing" or "Green Power Marketing" have been considered as instruments that offer special tariffs for renewable energy at a price that meets the generation costs over the longer term. Moreover, a scientific study on "Green Pricing" was provided to the service provider.

## CLEANING SERVICE FOR PV POWER PLANTS

The KIS-PIMS voucher was used by a French SME to check the business case for a cleaning service of photovoltaic power plants and to carry out a Europe-wide competitive analysis of products for PV plant cleaning.

A survey identified several potential partners for innovative products that are likely to confer a lotus leaf effect on the surface of solar panels thanks to their nanoscaled behaviour. In the second phase, a business model was simulated and revealed that the use of such innovative products would incur higher costs than traditional ones employed by competitors with regard to their application. The cash flow results clearly showed that the business model had to seek low labour costs to reach profitability. Hence, it was advised to analyze alternative solutions, even without obtaining a hyper-hydrophobic layer. Two alternative solutions were identified including a robotized solution to be developed in the framework of a European project.

## LEASING SERVICE FOR MICRO-HYDRO INSTALLATIONS

In order to develop a leasing service in the field of micro-hydro power, a French SME has been seeking advice on contractual documents and on a valid business model. On the one hand, the KIS-PIMS voucher analysed the regulatory constraints of the potential business and simulated the leasing business model from a financial stand point. On the other hand, the voucher provided the company's manager with a specialised lawyer to set-up a generic leasing contract for micro hydro facilities.

The risk assessment tool directed the scope of the voucher towards the mitigation of financial and managerial risks. The cash flow simulator was also used to perform business modeling and sensitivity analysis of various market parameters.



# Implementing procedures for vouchers

**For the success of each programme, design is crucial. Listed below are a number of key issues to take into account when planning to set up a voucher scheme.**

## Shaping the voucher

Vouchers can be used by public agencies at national, regional and local level

Vouchers are very versatile instruments that can support a multitude of innovation policy objectives at national, regional or local level.

### Vouchers can support specific policy objectives

Vouchers can be used for specific support to one sector or one policy objective. For example, a region with lots of tourism could aim at greening its hotel sector. It could set up a resource audit voucher for hotels to assess and identify the potential for using less water and energy and producing less waste.

### Vouchers can come in different sizes depending on their objectives

Decide the right amount for the vouchers; how many expert days should it be able to buy? Should the voucher only facilitate a first contact? In this case, a small voucher is better suited.

### Co-financing of vouchers has impact both on the recipient SME and on the public agency

Decide the co-financing requirements and the impact of co-financing on the cash-flow situation of the recipient SME as well as on the administrative burden of the public agency. Very small vouchers (up to 2.500 €) might be given with no co-financing obligations as they require verification from the public side. If the co-financing from the SME comes in the form of the SME's own personnel costs, it has less impact on cash-flow than if SMEs are required to co-finance by purchasing a part of the external expertise.

## Voucher application procedures

The procedure behind the application of vouchers may take place in a number of ways. Apart from a formal eligibility check of the applicant SMEs and their innovation problems, some agencies are performing qualitative assessments of the innovation projects of SMEs. A qualitative check requires longer application forms, more administrative resources, thus resulting in longer application procedures. However, it also helps in providing an indication of circumstances where vouchers are supposed to do more than merely put an SME in first contact with an external knowledge provider.

There is a trade-off between assessing only formal eligibility criteria of applicants or a more strenuous qualitative assessment of the innovation project presented.



Some voucher schemes are fully automated. SMEs can learn all about the vouchers and their eligibility criteria online. They can fill out the application forms online and upload all required supporting documents. The voucher is then available for download after an internal check. Such automated schemes require an initial investment in the design of a web-platform. They can then manage more voucher requests with a minimal administrative burden for the implementing agency. Online schemes are well suited to voucher schemes that run over the long-term without many changes. They are less suited for temporary schemes or those with changing features.

Public agencies can decide between investing in voucher online management platforms with low human resource needs, and putting additional human resources continuously into the management system.

## Reporting, payments and control

All schemes known to the authors require a report, either from the SME or from the external knowledge provider at the end of the service to trigger the voucher payment. Payments from public agencies may go either via the SME to the external knowledge provider, or directly to the knowledge provider. This depends on the funding policies of the implementing agency or the objectives of the programme under which the vouchers are funded.

The level of control in current voucher schemes differs substantially. These differences were mainly traced back to cultural differences between countries/regions, which are implementing the schemes. In general, it was found that there was less systematic control in Northern Europe when compared to the South. Systematic control is costly for the public hand and may not be justified for small vouchers up to 7500€. The larger the voucher, the higher the public risk and therefore a greater degree of control is more justified. Controls are also more important for schemes that provide vouchers based purely on formal eligibility criteria. Where voucher applications were assessed on their merit, the final reports were found to provide sound documentation for controlling whether or not the vouchers were being used properly.

## Finding the right implementing agency

It is important to identify the right implementing agency for vouchers schemes. The authors have come across agencies that have the public mission to run vouchers but that have turned out to be constrained by their internal procedures in the running of schemes. These internal constraints resulted in non-optimal voucher schemes with complex and lengthy application and controlling procedures.



## GERMAN MATERIAL EFFICIENCY PROGRAMME BROADLY ADOPTS VOUCHERS

The REMake project (Recycling and Resource Efficiency driving innovation in European Manufacturing SMEs) develops new support services and innovation vouchers in five participating countries: France, Germany, Italy (Milano), Spain (Navarra and Valencia) and UK. REMake aims to design and test new sector-specific innovation support tools for eco-design, lifecycle analysis and eco-innovation management whilst at the same time simplifying the administration of the tools. In the REMake project, the German Materials Efficiency Agency (DEMEA) developed a new SME-friendly voucher system which was launched with a pilot phase in September 2010 via their programme to improve the efficient use of materials in SMEs. The voucher process began with an online self-check that allows a company to appraise its own materials efficiency by answering 13 questions. Based on the results of the self-check, the SME orders a voucher for up to 17,500€ worth consultation support by simply clicking a button in the online form, without further evaluation. The SME then pays the consultant (accredited by DEMEA) with the voucher, and the funding will finally be paid to the consultant after approval of the consulting report by the SME and the funding agency – a very comfortable way for the SMEs. As a result of the successful REMake voucher pilot, the entire German material efficiency programme will be changed to using vouchers. In addition, the scope of the programme will be enlarged to broadly address resource efficiency and recycling just as in REMake. The organisation of the voucher programme is currently redesigned based on lessons learned from the REMake voucher pilot. The new approach will be launched on 1 April 2011 on a broad scale.



## Experts for external expertise

Let us take a look at the external experts selected to support the SMEs in their innovation projects.

### National public technical centres

Given that the first vouchers were trying to link SMEs with R&D centres, it was obvious that research centres and universities were the appropriate knowledge providers. But within all these possible sources of technical knowhow, many voucher schemes limited the choice to public research centres and universities. It seemed easier for public agencies to ultimately channel public money to public knowledge providers. Still today, many voucher schemes keep this limitation to public centres.

Moreover, many schemes allow only knowledge providers from their own country/region. While it might be the political agenda of the responsible authorities to favour domestic providers, the authors have not found any constraint inherent to the funding rules of those budgets financing the vouchers, including the Structural Funds.

### Working with the private sector

Roughly half of the voucher schemes accept national private service providers; mostly private technical centres and technical consultancies. This is certainly because most vouchers are still limited to allowing access to technical expertise.

KIS-PIMS and other recent voucher initiatives have explored ways of working with private knowledge providers. Since KIS-PIMS vouchers allow SMEs to access business expertise, it was clear to all participating agencies that this kind of knowhow should primarily be sought in the private sector. While it is also possible to request such advice from business schools, the partners deliberately went for a private innovation consultancy approach.

The expertise is as good as the expert.

Christiane Egger  
OOES



But how can the quality of private services be guaranteed? – this was the first reaction of many stakeholders when learning about the business consultants approach. An obvious question. There is no defined academic career that leads to the title “innovation consultant”. Quality control of experts therefore seems to be more an issue regarding innovation consultants rather than technical experts. Furthermore, the expertise that the SMEs receive can only be as good as the consultant that provides them.

The KIS-PIMS project therefore developed training modules for innovation consultants to get familiar with a set of innovation support tools (see p.9). However, experience has shown that many public agencies do not have any problems in working with private consultants and that they even refuse to impose any obligation on consultants to get trained in order to be allowed to work on voucher assignments. We have observed a rather pragmatic approach. Agencies want “qualified people with experience”. They feel they are able to assess this by looking at the CV of a consultant.

## Working with foreign service providers

If access to external expertise is the defining criteria for vouchers, ideally, the voucher recipient should be able to select and receive the best available expertise on the market, Europe-wide. Yet, few existing schemes accept foreign (private commercial) service providers. Contrary to that tendency, the recently established green voucher schemes (KIS-PIMS, GreenConServe) allow access to foreign experts, be they private or public. The only “national” criteria being that the SME receiving the voucher must be headquartered in the country giving out the vouchers. However, experience showed that most SMEs prefer to work with an expert speaking their language and pertaining from the same background. Not one SME in the experience of KIS-PIMS has asked for an external foreign expert, even when given the choice.

## Free choice, a pool of experts, or one designated expert

There are different means by which public agencies may guide voucher recipient SMEs to a knowledge provider for their innovation project:

- SMEs can freely choose their knowledge provider among national public centres;
- SMEs can freely choose their knowledge provider among national public and private experts;
- SMEs can choose their expert from a pool of experts established beforehand by the agency:
  - Agencies published a call for expression of interest and admitted those experts whose credentials they thought to be qualified. After the initial call, the pool of experts was closed;
  - Agencies published a continuous call for expression of interests and admitted on continuous basis those experts they thought to be qualified;
- SMEs can chose their expert themselves but need to seek approval for working with that expert from the public agency;
- SMEs are assigned an expert by the public agency on a case-by-case basis depending on the particular innovation project presented in their application.

Agencies managing a pool of experts sometimes excluded non-performing experts in case of under-performance. Basis for such actions were the final report assessments or negative feedback from voucher recipient SMEs.



## Engineering services for valorisation of vineyard waste

A French start-up used the external expertise brought by the KIS-PIMS voucher to prepare for the market access of a novel service: design and engineering services to implement energetic and chemical valorisation of vineyard waste. Powder vineyard waste obtained after grinding can be used to first extract polyphenol antioxidants that are highly valued as pesticides for the vineyards. These are then burnt to produce both energy and heat using small CHP units. The services would be offered to clusters of wine producers with the aim of minimizing waste collection and grinding costs, whilst maximizing both the energy and chemicals that can be produced from such waste. The company has proposed experimental feasibility studies for each type of vineyard and, if proven successful, detailed design studies of the full valorization chain based on its patented concept.

A sound business model was defined and a market access strategy was developed. The company was advised to protect the coupling of their innovative technologies to maximize waste valorization. As a result, innovators were able to effectively secure their access to the market. Secondly, the minimum size of vineyard waste production and the necessary equipment to fine tune waste grinding and polyphenol extraction rates for each type of vineyard were defined, thus making the business plan more attractive for technology manufacturers and chemical producers.

## Getting it right: Designing the voucher calls

**Initially, the calls for vouchers in Austria, Finland and France were starting with different voucher values, co-financing rates, selection and marketing methods. The calls were evaluated after the first phase to make eventual adjustments.**

### Austria combines research and business vouchers

In Austria, two agencies were involved in the publication of calls for proposals: the research promotion agency FFG at national level and the Styrian Energy Agency LEV at regional level. FFG started publication in November 2007 with classic “access to research” vouchers (value: 5,000€). The call for proposals will be open on a continuous basis until the end of 2011. On 1 January 2009, LEV activated its add-on voucher scheme for “access to research and business expertise”, targeting renewable energy service innovators. The same voucher value of 5,000€ was chosen with a 100% public financing rate.

After running successfully for two years, a review of the voucher scheme highlighted that this support instrument is particularly attractive to single innovators and start-ups. It was concluded that in order to reach larger companies, the current maximum voucher value of 5,000€ should be reconsidered. This view was further supported by experiences made with KIS-PIMS voucher schemes in Finland and France. The lessons learned in the KIS-PIMS project will be taken into consideration when planning for the continuation and future design of the voucher schemes.

### Finland customizes support to companies

In Finland, a nation-wide call for proposals opened on 5 March 2009 offering a voucher value of up to 50,000€. The TEKES’s “Grant for Acquisition of Innovation Services” financed the vouchers at 75% and required the cash-out financing to be matched by the SME. The call was extended twice and finally closed on 31 January 2010. Despite extensive marketing efforts during this first phase, interest in the voucher scheme remained minimal. One reason for this low success rate was attributed to the fact that companies’ needs and funding instruments did not always match. In addition, small companies indicated difficulties in understanding the innovation process and in defining the concept of their services. This was a major factor affecting the low rate of funding applications.

## TELEMONITORING AND MAINTENANCE OF DECENTRALISED ENERGY RESOURCES

A French start-up used the external expertise brought by the KIS-PIMS voucher to prepare for market access with a novel service: software accessible to both maintenance teams and end users of facilities such as PV panels or DER generators for UPS applications. The company set up a development project for such software to be implemented on iPhones, together with two candidate business models addressing either maintenance of dispersed units by providing production forecast and alerts with diagnosis in case of malfunctioning, or data gathering about the availability of installed technologies. This data is highly valuable for manufacturers who are willing to improve availability figures of their future products based on the analysis of real life breakdowns. The SME was able to raise 500,000€ to launch the first operating service platform at the end of 2012.

The Finnish project group analysed the situation and chose a different approach for the second phase, which started in the spring of 2010. A new support package was created consisting of a more comprehensive and customized support service for pre-selected SMEs whose service ideas displayed high potential. The new package offered the revision of business or project plan, an IMP3rove analysis, the selection of appropriate funding instruments and assisting in the application procedure. Furthermore, it included optional company visits which were used by all the 12 companies. A presentation of different funding options was given to all of the companies which led to six funding applications.

**The KIS-PIMS voucher was the ideal match for our policy objective “boosting innovative developments in renewable energy”. At the same time, we have been able to support small and new players using financing mechanisms that are normally too slow and too complicated for fast-moving innovators.**

Christian Sakulin  
LEV



### France: transforming more applications into vouchers granted

In France, the implementation of the voucher scheme was coordinated by OSEO, issuing KIS-PIMS vouchers worth up to 15.000 € to be rewarded as grants. OSEO applied decentralized working procedures; involving regional delegation in the selection process and the validation of the voucher reports. The French voucher call opened in December 2008 and was extended after one year to finally close in November 2010. After the first year of operation, the following observations were made:

- Although many innovation hubs and renewable energy clusters were involved in the promotion of the call for proposals and thousands of SMEs received the information about the opportunity, the number of applications received remained below expectations. The main barrier to a higher application rate observed by the KIS-PIMS team was a lack of understanding of both the concept of services and the innovation process itself.
- Only 14% of SMEs who had an innovation idea actually submitted applications for vouchers.
- Many proposals failed on formal eligibility criteria, while others were out of the KIS-PIMS scope, i.e. proposing energy efficiency services instead of renewables-related services.

The French team concluded that the voucher scheme was attractive to start-ups and SMEs, that the amount of up to 15.000 € was well sized, but that SMEs required individual support to prepare the application file. A revised action plan was implemented increasing the idea-to-application ratio from 14% to 63% and resulting in higher quality applications.

### INNOVATIVE DRYING SERVICES FOR SOLID BIOMASS

An Austrian district heating company investigated the business potential of innovative drying services for solid biomass material with the support of the KIS-PIMS voucher. The most important quality features of solid biomass are moisture content and particle size, which are influenced by the raw material and its storage conditions. Furthermore, the quality of woodchips can be increased by sieving and drying.

The business case of the proposed drying services concerned a substantial reduction in the operational costs of district heating systems. The voucher experts evaluated the feasibility of drying services and made recommendations on the business model and the necessary quality of woodchips for small-scale domestic heating. The risk assessment tool was used to support this project.



## Drawing some lessons for the design of green voucher schemes

Despite the differences in the implementation of the KIS-PIMS voucher schemes, there are some findings that apply to all the support schemes and can be useful when designing similar schemes in the future.

- The voucher should be launched as a specific financial instrument, clearly positioned in its innovation financing chain;
- Setting the value of the voucher is important. The implementation of the calls in three countries shows that 10,000-15,000 € support usually covers the early stage requirements in industrial service projects;
- The administrative process related to voucher application should be adjusted to the size of the voucher scheme;
- Especially small SMEs place value on the possibility of covering their own expenses using the voucher and that the cash out requirement for the company's contribution are limited;
- The voucher scheme seems to be most suited for small and very small companies. However, they need a great deal of support to materialise these ideas;
- SMEs often did not see themselves as service providers and had difficulties in understanding the concept of service innovation. The concept of service innovation should be clearly defined, since it is not well understood by SMEs. Both Services and Innovation need to be well explained;
- Development of new services is often linked to research and development activities. The voucher should be designed so that it can cover both areas: technology and service innovation. This also facilitates the marketing of vouchers;
- Plenty of resources should be reserved for counseling during the application process. There is a great risk that service ideas do not materialise if SMEs do not get support as needed at any step along the innovation process;
- The required levels of innovation should be carefully estimated. Innovativeness can sometimes be harder to depict in services than in technology. This can lead to a situation, in which the supporting services are trailing behind the existing technology. Therefore, the market demand criterion should place more weight on funding decisions;
- Many renewable energy SMEs have a strong focus on R&D. It should be made clear in the marketing of the call that there is great potential in services and that growth could be found there. In order to clarify this, examples of successful projects should be used as references;
- Events and direct contacts proved to be a successful way to promote this type of voucher.



The "Riga Declaration" proposes general guidelines for the design of Innovation Voucher Programs by Member States and regions in order to fully realise the potential of these micro-grant schemes for a diverse range of innovative SME activities. It encourages the EC to develop a voluntary collaborative framework and knowledge brokerage system that facilitates access to excellent innovation support across Europe. The Riga declaration is the outcome of cooperation between the Europe INNOVA platform and managers of innovation voucher programs in the Member States and regions.



## RIGA DECLARATION

### Realising the full potential of innovation voucher programmes

Innovation voucher programmes have been established by many European countries and regions to encourage innovation activities of SMEs. Experiences are very encouraging and confirm that innovation vouchers lead indeed to more innovation activities by SMEs and strengthen their ties with research and other knowledge providers. They have the potential to offer flexible and non-bureaucratic innovation support “on demand”, provided by the best available innovation experts and at the moment when it is needed. This should be the future of innovation support in all Member States in order to support the objective of smart, sustainable and inclusive growth of the Europe 2020 strategy as effectively as possible.

With the view to fully exploit the future potential of innovation vouchers for better innovation support, the participants of the Baltic Dynamics Conference 2010 in Riga recommend to respect the following seven principles and policy recommendations for the design and management of innovation voucher programmes:

1

The primary objective of innovation vouchers is strengthening the innovation capacity of SMEs, by supporting them in the best possible manner to build new knowledge networks or to benefit from them. Innovation vouchers are demand-driven innovation support measures and should therefore be defined and implemented in a way that serves practical needs of SMEs. Innovation vouchers can be instrumental to better link SMEs with all forms of knowledge and creativity that are supportive to innovation.

2

Innovation vouchers should support all forms of innovation. This calls for providing access to innovation experts from diverse fields of expertise; the definition of eligible service providers should be based on transparent criteria that promote competition and support the further implementation of an Internal Market for services. This could be supported by commonly agreed definitions of innovation support services concepts that would facilitate their mutual recognition by innovation voucher programmes from different Member States.

3

The administrative costs of implementing innovation voucher schemes should be kept as low as possible. The administrative procedures and control mechanisms should be proportionate to the size of the innovation vouchers and continuously be benchmarked against the “best in class”.

4

Innovation vouchers schemes should be subject of regular impact assessments. Main impact indicator should be the increase of the innovation capacity of SMEs, for which specific targets should be set in advance, depending on the scope and objectives of the innovation voucher schemes.

5

Innovation vouchers schemes should be implemented at local, regional and national level, thus fully taking into account the subsidiarity principle. The European level is encouraged to develop with national and regional entities a voluntary collaboration and brokerage framework for innovation voucher programmes that aims at making excellent knowledge, skills and innovation support services from both public and private service providers across Europe more effectively accessible for SMEs.

6

Innovation voucher programmes have the potential to raise the quality of innovation support to SMEs. New and better approaches to innovation support should be developed and tested through European pilot projects and rolled out at local, regional and national level as widely as possible. In order to speed-up the implementation of better practise in support of innovation, new forms of policy coordination between the different policy levels may be considered.

7

The European Commission, Member States and regions are invited to consider the wider use or promotion of innovation vouchers wherever possible, with the objective to support all forms of innovation more effectively and cost-efficiently and to reduce the gap between innovation leaders and those still lagging behind.

## REGIONAL FUNDS TO INVEST MORE IN ENERGY EFFICIENCY, RENEWABLE AND ECO-INNOVATION SKILLS

On 26<sup>th</sup> January 2011, the European Commission published a Communication entitled “Regional Policy Contributing to Sustainable Growth in Europe 2020”, the aim of which was primarily to incite regional policy stakeholders to take action and “invest more in sustainable growth”.

About 30% of the total figure for Regional funding for the period (344 billion€) is available for activities in the area of “sustainable growth”. Investments in energy and environmental programmes have been insufficient so far. There is still time for a change of priorities for existing projects in the Operational Programmes.

The Communication calls for a specific focus on buildings, energy efficiency and renewable. It draws attention to the fact that regional policy funds can now be used in the residential sector in all Member States, and no longer just in public and commercial buildings. The Communication stipulates that Managing Authorities should see renewables and energy efficiency as “drivers of development” and job creators, especially in rural and coastal areas. Another eco-innovation priority singled out is investing in human capital so as to ensure that people have the skills to actually bring to life a new and much promoted “resource efficient society”.

## Going beyond traditional voucher use

As rather recent innovation policy instruments, voucher schemes have so far been mostly deployed independently and agencies are still learning how to make them work best. It can however be interesting to use them in combination with other instruments, such as green procurement or soft loans. Or to use one voucher after another, with differing conditions, as a two-step support scheme. Below are some real and imaginary examples for illustration and inspiration.

### Green vouchers in combination with soft loans for energy or resource efficiency

An interesting option is to use vouchers as entry-level schemes and combine them with follow-up funding. This is particularly suitable for meeting the policy objective of making the existing building stock more energy efficient, or to get resource efficiency into companies.

A green voucher may be used for carrying out an energy efficiency audit – this typically requires access to external expertise. The recipients would be private or public owners of existing buildings. Experience from Austria has shown that while interesting public incentives are available for carrying out energy efficiency investments, they are not carried out optimally due to a lack in understanding of their full savings potential. Indeed, small market surveys have shown that there would be a huge demand for publicly supported energy audits in the housing sector. Therefore, using vouchers to build up the knowledge to guide the subsequent investments would be an effective use of public money. Following the energy audit paid for by the voucher, building owners could be offered soft loans to carry out future targeted and informed efficiency investments.



### Green vouchers in combination with further public funding schemes

The French innovation agency OSEO understood quickly that green vouchers for technology or service innovators could bring forward and highlight a host of innovative companies that might be looking for follow-up funding. The implementation of their projects can be supported with the help of large public schemes, such as conditional grants (i.e. the innovator gets a grant that has to be paid back if the project is successful, in a percentage of the annual profit. If the project fails, the loan is converted into a grant that the SME won't have to pay back.) In that sense, the voucher acts as a “teaser” for further potential support.

### Two-step vouchers with different amounts and co-financing requirements

The German material efficiency agency DEMA is running a two-step voucher scheme for industrial SMEs. The first voucher is a resource efficiency audit voucher that identifies the savings potential. If the SME decides to put into practice some of the findings of the audit and gets ready to invest in efficiency measures, it can obtain a second voucher with a larger volume and a higher own co-financing requirement. This provides SMEs with the know-how regarding what they should invest in, as well as a financial incentive to actualize the investment.

### Using vouchers to enhance green public procurement

An innovative use of the vouchers is currently being tested in Norway. The largest public procurer of building works NDEA, has published an invitation to tender for the construction and equipment of a modern gas-mixing building complex in Bergen. The tender specifications are so demanding that according to Knud Mohn, staff of the CEO of NDEA “nobody in Norway can do it”.

What is so demanding about the tender? NDEA has requested the use of digital building information models and a high degree of efficiency in the construction process and over the life-cycle of the building. The procurer is ready to award 5 contracts for building/site, electrical, automation, water/sewer, and ventilation. The contracts will be awarded based on best price and best strategy for BuildingSmart and digital construction. Along with the contract, it is expected that the successful bidder will use an innovation voucher from Innovation Norway to acquire the missing skills for implementing the job and to develop further the business opportunities. Consequently, companies are being both pulled and pushed to adapt innovative practices, whilst receiving the means to acquire the necessary external knowhow. This forced use of green public procurement (a demand-side instrument) together with innovation vouchers (a supply-side instrument) illustrates how public agencies can combine innovation support tools in a very innovative way.





## Promoting and mainstreaming green vouchers

With this brochure, the authors aim to show that the first green voucher experience has provided useful inputs and many successful examples for policy makers and innovation experts.

The KIS-PIMS team went on a tour to interested regional authorities, promoting the results of the KIS-PIMS voucher scheme and its ability to support innovation and green growth particularly with SMEs. The KIS-PIMS experience has inspired several agencies, and today green voucher schemes are being tested in sustainable construction, recycling and resource efficiency for manufacturing companies as well as water and wastewater technologies in Austria, Cyprus, Finland, France, Italy, Germany, the Netherlands, Norway, Spain and the UK.

KIS-PIMS trained innovation experts in several European countries and has made the toolbox available to interested experts. In addition, a train-the-trainer session with 13 eco-innovative clusters was carried out to share the experiences that were made in setting up green voucher schemes and in using the KIS-PIMS toolbox with innovative renewable energy ventures. In addition to the national and regional efforts in promoting the KIS-PIMS voucher to thousands of SMEs, the KIS-PIMS experience has been presented at many relevant European events. These include the European Sustainable Energy Week, Baltic Dynamics conferences, Europe INNOVA conferences and partnering events, ETAP Forums, Green Week, KIS High-level Group meetings, ECOLINK+ platform events and many more. Finally, this guide has been produced and a final event has been organised for European energy and innovation agencies to further share results and recommendations of this exciting green voucher pilot. The authors hope that this brochure inspires many more green voucher schemes throughout Europe in the future.

The KIS-PIMS partners remain committed to contribute to the future development of green vouchers and invite all interested parties to approach us with innovative and creative ideas.

[www.europe-innova.eu/kis-pims](http://www.europe-innova.eu/kis-pims)

[www.greenovate-europe.eu/innovation\\_vouchers](http://www.greenovate-europe.eu/innovation_vouchers)









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