



November 15th 2017, Brussels

To VITO, coordinating the consortium carrying out the European Commission's study on the Smartness Indicator, EnergyVille, Ecofys, Waide, Offis,

How to ensure a simple and effective Smartness Indicator

Our associations represent a broad range of businesses, companies and NGOs, within the energy, manufacturing, standardisation, construction, and building sectors. We welcome the introduction of a smartness indicator in the proposals for a revised Energy Performance of Buildings Directive, and we are following with keen interest the study which you are working on for the European Commission. We believe that the smartness indicator could be a key tool to unlock the flexibility of Europe's building stock, and support the wider energy system to integrate larger shares of renewables in a cost-efficient way.

In order for the smartness indicator to be a useful tool for building occupants, owners and users, and the energy system as a whole, it needs to be simple, both in its presentation and in its methodology. The current approach of the consortium addresses a number of directions and domains. Therefore, before further work is done in Task 1's categorisation of smart ready services and technologies, we must address the fundamental question of what a smartness indicator is for, and what it can achieve.

As signatories of this letter, we propose that such an indicator should assess a building's ability to actively connect and cooperate with both the electricity system and the occupants, and a building's ability to actively manage its internal load, self-generation and/or storage for both heat and electricity. It should also include the flexibility offered by heavy weight construction materials in demand response. This indicator will assess and support the active participation of consumers. It should complement the Energy Performance Certificate, which focuses on the passive efficiency measures within a building, by being an active measure of flexibility. This active measure of flexibility would look at both the building's internal and external flexibility; how much of the building's load can be shifted or curtailed at any one time, and how much on-site production of electricity can be self-consumed and/or delivered to the grid. This can be measured in kW, kWp, and/or kWh, and can be done through a simple assessment of the different loads and energy technologies within a building. In this regard, we welcome the work being done through the work of the IEA EBC Annex 67 on Energy Flexible Buildings.

The measurement of a building's flexibility would allow any prospective owner or occupant to immediately know how easy it would be for them to both save money on their electricity bills, and to earn money through selling their flexibility on the energy markets. It would also allow various actors in the energy system, such as aggregators (including of both self-generated electricity, and demand response), to know how much flexibility a building can offer, in order to include it in their portfolios. Once established, the smartness indicator could be used in the pre-qualification process for buildings to provide flexibility, notably to the balancing markets. At a later stage it could be expanded and extended to all parties in the system – clusters of buildings, grids, aggregators, suppliers, with the overall goal that the indicator reflects the entire smart energy system, and not only one area.

Several different factors will contribute to unlocking a building's flexibility, which are included in the services and domains that your consortium is exploring in Task 1; the automation of various systems within a building, the installation of smart meters, the use of control systems, sensors, and of visual interfaces delivering information to the building occupants. The technology in the building should

have functionalities to involve owners and tenants in the flexibility process and energy efficiency, by, for example, giving them appropriate information about energy consumption and potential and realised flexibility. However, in order to keep the indicator simple and effective, these variables must not be measured as a series of different inputs. Instead the focus should always be on the services needed in the future energy system, such as offering flexibility in the balancing markets, which appliances installed in buildings can provide. This will drive technology development, and not simply follow it. Therefore, these different factors will contribute to the overall amount of internal or external flexibility. In essence, the indicator should measure functionalities, rather than specific technologies. It must take building owner and occupant comfort and well-being as a variable that each individual decides on themselves, when choosing how much of their potential flexibility to monetise. Furthermore, we must not risk a confusing indicator where, for example, mood lighting or control over window blinds are given equal weighting to flexible appliances. A building's smartness rests on its ability to connect and interact with the outside energy ecosystem, delivering financial benefits to its occupants, and physical delivery of energy or shifting/curtailing of demand to the electricity system. Such better match between supply and demand would limit the volumes of renewable electricity curtailed, and reduce the dependence on inefficient and carbon-intensive back-up generation.

Therefore we, as signatories of this letter, call on you as a consortium to put flexibility at the heart of the smartness indicator, and the scope of your study. This is the best way to ensure that the indicator becomes a meaningful tool for building owners and occupants, in order to unlock the vast flexibility of Europe's building stock for the energy system as a whole, reducing overall system costs to the benefit of all consumers.

Supporting organisations:



CEMBUREAU – The European Cement Association based in Brussels is the representative organisation of the cement industry in Europe. Currently, its Full Members are the national cement industry associations and cement companies of the European Union (except for Malta and Slovakia) plus Norway, Switzerland and Turkey. Croatia and Serbia are Associate Members of CEMBUREAU. A cooperation agreement has been concluded with Vassiliko Cement in Cyprus.

COGEN Europe – COGEN Europe is the European association for the promotion of cogeneration. Its principal goal is to work towards the wider use of cogeneration in Europe for a sustainable energy future. Cogeneration or Combined Heat and Power (CHP) is the most efficient way to deliver heating, cooling and electricity. It is based on the simultaneous production of electricity and thermal energy, both of which are used. Cogeneration applications range from micro-cogeneration units, installed in homes and small businesses, to industrial cogeneration, providing high grade heat and electricity on industrial sites, and cogeneration supplying heat to district heating networks.

ECOS – European Environmental Citizen's Organisation for Standardisation. ECOS is a non-profit umbrella organisation working to promote environmental aspects in the development of standards and specifications at European and international level, especially those produced in support of EU environmental laws and policies. ECOS counts the support of more than 40 environmental NGOs across Europe and is the only environmental organisation worldwide specialised in standardisation and technical product policies.

ESMIG – ESMIG is the European voice of the providers of smart energy solutions. Its members provide products, information technology and services for multi-commodity metering, display and management of energy consumption and production at consumer premises. Its activities are

focused around systems for Smart Metering, consumer energy management and safe and secure data transfer. They work closely with EU policy makers and other EU associations to make Europe's energy and water systems cleaner, reliable, more efficient and the European consumer informed, empowered and engaged.

SEDC – Smart Energy Demand Coalition – The SEDC is the European business association dedicated to making the demand side a smart and interactive part of the energy system. It represents businesses and organisations active along the entire value chain, including technology providers, electricity suppliers, energy service companies, power utilities, consultancies, research institutes and other stakeholders in the field.

WindEurope – WindEurope is the voice of the wind industry, actively promoting wind power in Europe and worldwide. We have over 450 members, active in over 40 countries. In addition to wind turbine manufacturers with a leading share of the world wind power market, our membership encompasses component suppliers, research institutes, national wind and renewables associations, developers, contractors, electricity providers, finance and insurance companies, and consultants.