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## EVALUATION OF INTERVENTIONS IMPLEMENTED BY RESCOOPS TO STIMULATE HOUSEHOLD ENERGY CONSERVATION; RESULTS FROM A SURVEY IN SIX EU COUNTRIES

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### 1. ABSTRACT

In recent years cooperatives for renewable energy supply (REScoops) have emerged as important new actors in energy markets. They provide their members (i.e., households) with renewably generated energy within a cooperative model that enables members to co-decide on its strategic and tactical goals, plans and business model. REScoops do not only collectively own renewable energy production facilities and supply this to their members. They also use their specific position as energy suppliers to take several actions to persuade their members (households) to engage in energy conservation. Because of their particular organisational and business model as citizens' initiatives REScoops are in theory well positioned for activities to influence and help their members conserve energy. This particularly has to do with REScoops being in close proximity of their members, which enables them to intervene and influence social structures and social norms. In a previous paper by the authors arguments were presented why and how REScoops do this, presenting a number of policy measures they engage in to persuade their members to conserve energy. Moreover, a number of measures were discussed that have actually been undertaken by REScoops [1]. Although this study disclosed information on the aims, the working mechanism ('policy theory'), the scope of, and a few experiences with these measures it revealed little about their impact in terms of household energy savings.

In this paper we tap into this issue and pay attention to the evaluation of a number of measures implemented by REScoops. The main research question therefore is how the implementation of selected policy measures by REScoops is experienced by REScoop members, and whether these measures contribute to (self-) reported household energy savings? The measures that will be assessed in this study include both antecedent strategies (i.e. information, awareness making campaigns,

workshops, tailored advice<sup>i</sup>), consequence strategies (i.e. online platform with feedback on energy consumption, billing<sup>ii</sup>) and combinations of those (i.e. integrated, ‘package approaches’<sup>iii</sup>).

The research of this paper is based on a survey conducted in the period of March-July 2018, among seven REScoops in six EU nations; i.e. Coopérnico (Portugal), Enostra (Italy), Ecopower (Belgium), Enercoop (France), EBO (Denmark), SEV (Southern Tyrol, Italy) and SOM energia (Spain). It comprises one of the few quantitative studies on REScoops in particular and community energy in general, and is thus far the only one that analyses assesses REScoop interventions, in particular on their influence on household energy conservation behaviour.

The analysis of survey data uses a ‘modus operandi’ approach to reveal evidence vis-à-vis the claim that the measures implemented explain for (self-reported) energy savings among households, and counter evidence to alternative explanations. Following this approach a number ways to assess the impact of the measures implemented by REScoops on energy consumption behaviour by households will be conducted; i.e., energy saving actions undertaken by households, and (self-reported) energy savings among households comparing between experiment and control groups (using independent sample T-tests). In addition, data on perceived contribution of the measure to (self-reported) energy savings, and satisfaction with the measure will be analysed. We also analyse the statistical relation between psychological variables, demographics and household energy conservation (using correlation coefficients analysis). Next to the quantitative analysis of the survey data qualitative insights regarding the implementation of selected REScoop measures will be collected and analysed. Following this triangulation of data we judge whether policy measures implemented by REScoops can be deemed effective interventions to stimulate household energy conservation.<sup>iv</sup>

This paper contributes to (a) the growing body of literature on REScoops as emerging actors in the energy domain, (b) to the growing body of literature of social innovation (i.e., social intervention) in energy transitions, and (c) to the body of literature in environmental psychology that studies the impact of different types of intervention strategies on household energy consumption and conservation [2].

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<sup>i</sup> i.e. ‘Energy savings wiki’; newsletters; ‘TupperWatt’ meetings; leaflets.

<sup>ii</sup> i.e. ‘Energie ID’; ‘Infoenergeia’.

<sup>iii</sup> i.e. ‘Dr. Watt’; ‘Package approach district heating’.

<sup>iv</sup> On the moment of writing of this abstract no (preliminary) results can yet be presented as data are still in the process of being collected.