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Limits and potentialities of embedding energy provision from the SSE (social and solidarity economy) realm

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1. Introduction: 21st century society at the energy crossroads

Throughout human history, societies have experimented moments of profound changes that have led the institutionalisation of new structures, new systems of social interaction and new ways of organisation and representation of life. To put it briefly: concrete periods of time that have implied the complete transformation of society. This article is linked to a critical juncture of change. Nowadays, we live in times of uncertainty due to the present –and coming– radical transformations related to the effects of a long-lasting crisis, which is multidimensional (economic, political, ecological, cultural) and multi-scale (it ranges from the local to the global).

The issue of energy provision is one aspect that makes us assume the 21st century society is living a crucial moment for the future of Humanity (Brown 2015). It is undeniable that one of the greatest challenges facing the world today has to do with the urgency of moving towards a model of energy provision that must be completely different to that that is taken shape since the Industrial Revolution. Depletion of fossil fuels and uranium and their contribution to increase global warming, environmental change and pollution levels are among the main reasons. Given the inevitable dependence of human being with regards to «exosomatic energy», it is unavoidable to overcome the fossil and nuclear energy model and to institutionalise another one based on non-polluting and renewable energy sources (RES) and a responsible and efficient use of them. Despite the empirical evidence that supports such urgency, energy transition is

still in an incipient stage and there exist countless uncertainties to both its results and its articulation as a process.

That said, this paper aims to contribute to the debate about this eventual process of «energy transition» paying special attention to its socio-political dimension. That is, we wonder to what extent the energy transition can suppose not only an ecological transformation of the current fossil and nuclear energy model, but also a socio-political transformation. That means whether such transition could provide the opportunity for citizens to leave behind their passive role in the energy field and give them the possibility to take part in it further beyond their consumers' position. To put in other words: ¿to what extent the economy activity of energy provision could be subjected –into the frame of this transition– to democratic control and decision-making processes? And so for what this paper is concerned here: ¿how the social and solidarity economy (SSE) can contribute to make this?

In this sense, in the sphere of SSE, several innovative citizens-lead cooperative initiatives have emerged progressively in Europe moving towards a democratic renewable energy future. They implement alternative ways of renewable energy generation and consumption through innovative democratic decision-making processes. These SSE experiences are increasingly known by the name of «rescoops» (renewable energy source cooperatives). This term refers to cooperatives organizations –although it can be some exceptions that adopt another legal status due to the particularities of their legislation contexts– suited in the field of renewable energy sources[1].

This paper presents some of the results of a recent PhD research (Riutort 2015a, 2015b), which has been made between 2011 and 2015, and has studied the process of emergence and development of Som Energia (www.somenergia.coop), which is the first and more notable case of rescoop set up in Spain. Som Energia was founded in December 2010 in the city of Girona (north-east of the region of Catalonia) by nearly 150 citizens, but it soon spread across Spain. Nowadays, this cooperative has more than 25,000 members and membership is still growing. Their founders joined forces in order to develop a non-profit collective ownership model of responsible green energy production, investment and consumption.

The in-depth analysis of this pioneering initiative has been analytically relevant to discuss the questions announced above, despite the fact that a case study analysis suffers from a lack of statistic representativeness. As will be seen further on, the analysis of a case such as Som Energia –in relation with the institutional context in which it develops– allows to shed some light on two issues: on the one hand, the capacity of a rescoop to make possible a democratic relationship between citizens and energy provision; on the other hand, the limits and potentialities of SEE organizations to democratize the energy field.

[1] At the beginning of 2015 there were more than 2,400 rescoops in Europe. See the website of the European Federation of REScoops (http://rescoop.eu) for extended information.

2. The Polanyian perspective to consider democratic energy transition

The theoretical and conceptual tools of Karl Polanyi (Block and Somers 2014; Polanyi 2001, 2009, 2012) have become the appropriate glasses for tackling the latter. His frame contains some keys to contextualize and interpret historically and theoretically both Som Energia and its economic field of action, that is: the electricity sector.

Polanyi's thought itself highlights the need to take a plural view of social reality. His ideas are more up-to-date than ever because they allow us to interpret the place of economic activity in society today (Hillenkamp and Laville 2013). Our days echo those that took place between the 19th century and the first third of the 20th century that this author examined in detail. From the hand of his approach, we assumed that economic actions and relations are all institutionalized from political, social and cultural mediations. Thus, analysing the economy involves analysing social relations and processes too. Taking as valid this perspective, the model of energy provision —as an economic activity— is not something exogenous to the social world.

In particular, the contribution of Polanyi is relevant because provides a fundamental statement: depending on how such political, social and cultural mediations of economy are historically constructed, the economic activity can be *embedded* in the social fabric in one way or another, entailing different kind of impacts on the people and the environment. He underlines that the institutionalization of the economy —here understood following its substantive definition: the complex process of interaction among humans themselves and between them and the environment— can produce dangerous effects on society and nature if the process is mediated by the logic of wealth accumulation. That means without other motivation than the pursuit of chrematistic interest rather than the satisfaction of human needs. Thus, Polanyi advises on the need to create *democratizing and decommodifying* regulations to prevent society and nature from destruction.

Regarding the specific issue of this paper, taking Polanyi's approach generally means to study the place of electricity provision in the Spanish context. Therefore, it demands examine how the economic activity behind the provision of electricity has been institutionalized throughout history —in the frame of capitalism— and which are its effects on the people and the environment. Through this, it is possible to find out the particular role played by the state and the economic power in shaping and regulating the sector. Consequently, it is possible to detect to what extent that scenario turns into an obstacle for any attempt to transform the sector in ecological and democratic terms, as is the case of Som Energia.

In addition, Polanyi's approach allows contextualizing historically and theoretically Som Energia as follows: a social practice that seeks to subject the provision of electricity to meeting human needs and democratic control. The pioneering nature of Som Energia implies to analyse the innovative nature of its organizational dynamics. By means of a

broad review of literature on social innovation it has been critically identified an approach to frame the case of Som Energia. We refer here specifically to the ideas developed by Frank Moulaert and collaborators and by the Centre for research on social innovations (CRISES) of Montreal (Klein and Harrisson 2007; Klein *et al.* 2014; Moulaert *et al.* 2013). Hence this is perspective is regarded useful in two senses.

At a *theoretical and normative level*, this approach links social innovation to processes of democratic transformation of societies. Here, social innovation is conceived as an experimentation of models of social relation whose objective is that all the actors involved can define new challenges, problems or needs and the mechanisms to face them. Social innovation assumes the articulation of new dynamics that allow the exercise of a popular sovereignty over all spheres of social life, including the economic one. Thus, this approach identify SSE initiatives as the contemporary ways that enable to build and implement that popular economic sovereignty from the bottom and, as a result, to achieve significant levels of democratic control over certain areas of economic activity.

Furthermore, at a *methodological level*, this perspective acknowledges that any socially innovative practice should be conceived within an evolving, dynamic and historically dependent logic. They are experiences subject to the constraints imposed by the spatial and temporal context in which they emerge and develop. Besides, context is ambivalent because sometimes facilitates and sometimes obstructs the transformation the socially innovative practices promote. Thus, methodologically, it is necessary not only to observe what kinds of innovative dynamics take place within SSE organizations, but also to see how these dynamics are related to the context in which these organizations operate and, especially, to regulatory frameworks.

After all, this perspective of social innovation complements the ideas of Polanyi in a consistent manner. It assumes his postulates advocating the inseparability of economy from the other spheres of social life. Furthermore, it acknowledges the necessity of changes in economic and political power relations. This has to do with the idea of not considering the innovation in social relation as an end in itself but rather the variable that can contribute to institutionalise democratic forms of social interaction, including economic actions and relations.

3. Electric power in Spain: a story of dispossession

In Spain, the creation of the cooperative Som Energia has meant the appearance of an innovative model of providing electricity. The case of Som Energia contrasts significantly with the two main characteristics of the context in which it operates. The first one is that the Spanish electricity sector is far away from a horizon of energy transition because is still highly centralised and based on fossil fuels and nuclear power. More spe-

cifically, nowadays a little more than 60% of the electricity generated in Spain comes from non-RES (MINETUR 2014). The second one is that the Spanish electricity sector is strongly dominated by an oligopoly of large private corporations. According to their figures, they control the 70% of generation (mainly by non-RES plants), the 97% of distribution (i.e. transport in low and medium voltage grids into consumption points) and the 86% of commercialisation (UNESA 2013). Although it is a sector intensively regulated by the state, there is a lack of genuine control by citizens due to the enormous influence these corporation have over the government. This fact puts the sector away from a democratizing horizon.

The Spanish electrical system is now as it is –both in its physical and business dimension– because it is the result of an historical process characterised by active collaboration between the political and economic oligarchy of the country. Historical economic studies prove that from the late 19th century and the early 20th century –when electricity began to develop– until today, the provision of electricity in Spain has taken shape on the basis of close relationship between economic and political power (Sudrià 2006, 2007; Tortella Casares & Núñez, 2011; Tortella Casares 2013). The high concentration of private power always observed in the field of electricity industry is duet to the commodification process in the frame of capitalist development. Electricity has been subjected to the logic of permanent accumulation of capital and, therefore, to its value of change, and a few private actors have generally dominated it. This has been permitted –and even promoted– during Francisco Franco's dictatorship (1939-1975) and the following uninterrupted democratic governments of social democrats (PSOE) and conservatives (PP). In all periods there have been intense business concentration processes, favoured by the state through forms of regulation that have been –and still are– opaque and complex.

On of the key points that history reveals is that, in Spain, state intervention has not given rise to processes of municipalisation of electric power or a model of state monopoly, as it has happened in other European countries. Instead of that, the historical development of electricity has led to a configuration of a model of provision of electricity based on the right of private property and the value of change. The most notable consequence has been the gradual private appropriation of all physical means of electricity provision: on the one hand, the generation plants and, specially, on the other one, transport and distribution grids. As has already been mentioned, this process has occurred because private actors have originally been those who have led and promoted the development of the electricity industry in the country. But also, because when at some historical moment it has been some parts of the system under public property, they have been privatised over the years.

These forms of regulation also involve two major dislocations. Firstly, livelihood of citizens is not guaranteed. As access to electricity is not considered a right, in Spain there are citizens who have serious difficulties to meet their energy needs because they are unable to pay the bill. Secondly, ecological collapse is far from been slowed down. The

current regulatory framework does not facilitate –and even obstruct– the transition to renewable generation and energy efficiency and savings.

The more discouraging is the regulation for developing RES projects, the more difficult is the democratisation of energy transition. Renewable technologies have the qualities for being appropriated for people, individually or collectively. Installation processes are technically simpler and more economical, and the implementation can be in a small-scale and in a decentralised manner. The point is that geographical decentralisation can lead to a political decentralisation, in terms of power control over electricity, breaking in that way with the current centralized and private and for-profit model of electricity generation. In addition, regulation imposes specific obstacles to self-generation, which is the clearest example of popular appropriation of the energy since it means having in the same site, and without intermediaries, generation and consumption, supply and demand, producer and consumer.

To summarize: a certain metabolic *status quo* (a sector with a predominance of non-renewable energies and inefficient) and a political *status quo* (a concentration of power in a very few hands) are maintained. To say in Polanyi's terminology, the Spanish electricity sector has historically suffered a tendency to «desembeddeness», in the sense that regulation has been institutionally subordinated to the logic of commodification and particular interests to the detriment of common good.

4. Som Energia: an innovative SSE practice in the Spanish field of energy

For its part, within this context, Som Energia aims to contribute to the development of a model of energy provision that does not correspond with the current forms of regulation of the sector, its business structure and technological base. In the same way, Som Energia represents an alternative to schemes of state-owned companies, private corporations and, besides, the few old-fashioned and non-renewable electric cooperatives, which still remain today in Spain. Leaving aside the context, an organizational analysis Som Energia allows highlighting its real contribution not only to energy transition but also to democratization of electricity provision. Thus, the analysis reveals that contribution in both metabolic and political terms.

4.1. Moving towards a new socio-natural metabolism

The activity of Som Energia aims to contribute to change the contemporary socio-natural metabolism. That means, to modify the way humans exploit and use all types of mineral resources and energy sources in order to guarantee their material existence and carry out countless psychosocial activities (González de Molina & Toledo 2014). The current socio-natural metabolism is endangering the continuity of human and natural life on the planet, and the transition to another socio-natural metabolism is con-

sidered as an inevitable process (Fischer-Kowalski & Haberl 2007, Haberl *et al.* 2011). Consequently, not only different forms of use energy must be practiced, but also new ways of generate it by renewables sources and technologies.

Som Energia is economically engaged in the activities of generation and supply of renewable electric power. After studying both activities, it can be argued that this cooperative makes a contribution to that energy transition in two ways. Regarding generation, Som Energia has developed some small-scale RES projects: five roof-top solar panel installations (730 kW), one biogas plant (500 kW) and one hydroelectric power plant (1 MW), which jointly represent the annual consumption of 1,660 households. These projects have been financed by direct investments supported by the members of around €4.5 million. Moreover, a wind turbine project (2.7 MW) and others are under consideration. The productivity of these projects contributes to increase the weight of green kW/h fed into the general grid.

On the other hand, Som Energia supplies 100% «certified» renewable electricity to its members. Nowadays the cooperative manages around 35,00 electricity bills. Som Energia purchases the amount of electricity their members consume from the whole-sale market and then it provides itself with «certificates of origin» –issued by the Spanish government– that guarantees that the total amount of electricity bought has also been produced by RES facilities. In reality, this is a symbolic rather than a material contribution to metabolic transformation of the current electricity system, because an electricity system of one single grid prevents to make a distinction between kilowatts-hour generated by renewable sources and kilowatts-hour that are not. Both are mixed into the grid. But in any case, this activity of Som Energia serves to make visible a demand of green electric power. It is interpreted as an activity that symbolise a popular claim for energy transition. Besides, Som Energia encourages its members to use responsible electric power.

However, this said, the impact of Som Energia in both areas is highly conditioned by the technical and regulatory characteristics of the Spanish electricity system. Even so, the study confirms the ability of Som Energia to implement creative solutions and establish strategic alliances to overcome the regulatory dependence and the great difficulty in operating in an oligopolistic market. It is this ability that maintains Som Energia as a viable tool in the energy field.

4.2. Energy democracy from a renewed cooperative model

In socio-political terms, it is proved that Som Energia is a significant example of the renovation of the cooperative model and, also, an example of uniqueness compared to other similar European rescoops. By definition, a cooperative is a tool for economic democratization: "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly *owned and democratically-controlled enterprise*"[2]. However, one thing is the theoretical description and another is the daily cooperative practice. In the case of Som Ener-

[2] International Co-operative Alliance: <http://ica.coop/en/what-co-operative>

gia this becomes especially clear thanks to its organisational innovation, which explain the depth of the control and democratic decision-making processes over the activity of electric power generation and use.

In this research, the organisational innovation of Som Energia has been identified by the name of «plural cooperative democracy» because this initiative combines –although not always with the desired quality– process of direct, representative and deliberative democracy. To these processes must be added specific spaces of «collective learning» and «territorial anchorage»: more than 60 local groups, a variety of working committees, an own online social networking platform and a September school for members. All these spaces allow sociability and community building. Besides, they become appropriate channels of access and information dissemination and creation of collective knowledge. From the approach of social innovation followed on this research, it is consistent to affirm that these spaces enhance members' capacity to act and, thus, give to the cooperative a greater democratic robustness. Although replicability is never assured, Som Energia's model could inspire to other cooperatives to strengthen their democratic dimension.

The members of Som Energia have access to information, voice and decision-making power on issues such as: how to generate electricity, with which renewable technologies, under which economic, social and environmental criteria, with which financial schemes or through which methodology the cooperative electricity tariffs are defined. The spaces of «collective learning» and «territorial anchorage» also contribute to cultivate a critical and responsible citizenry –to be exercised both inside and outside the cooperative– in relation to the field of energy and the Spanish electricity sector, which is an economic sector as opaque as complex and unknown. In this sense, this is the key message of Som Enegia: democratization of energy is not possible without transparent information and participation. In any case, this all depends on the way membership uses these spaces in the cooperative's daily life.

Finally, the analysis of the organisation has revealed that the twofold contribution of Som Energia to energy transition is also possible due to its ability to keep alive the fragile balance that any cooperative have to deal with: tensions between the «entrepreneurial dimension» and the «associative dimension» (Desforges & Vienney 1980; Desroche 1976; Malo *et al.* 2012). Or to put in other words: the balance between instrumental decisions, which seek economic sustainability, and socio-political decisions, which come from the model of «plural cooperative democracy». This said, only an extended research will reveal whether Som Energia is able to keep this balance safe. Otherwise, if Som Energia is not capable, it could run the risk of trivialisation (*banalisation*), whose consequences would nullify its democratic contribution to energy transition.

Therefore, to put it in Polanyi's terminology, Som Energia is a practice that can be understood as a «countermovement» to the historical institutionalisation of electric power that has been placed in Spain. Som Energia tries to find a way of embedding democratically electricity provision, responding to the satisfaction of human needs and the urgency of stopping climate change.

5. Discussion: possibilities of transformation within a troubled context

Both the analysis of Som Energia and the analysis of its relationship with its context, allow asserting that its members have been able, so far, to make the cooperative real and viable within the few margins that the form of regulation of the sector enables. Besides, they have done it without any institutional support. The case of Som Energia brings to light what Elionor Ostrom demonstrated in her seminal book *Governing the commons* (1990): individuals are able to organize themselves in relation to the management of certain resources –also the energetic ones– without being organized by external authorities; and, through that way, sometimes they get most efficient results although its organization is liable to tensions, weakness or failure. Som Energia is an initiative that proves that citizens are capable to capture adequately renewable energy flows by means of self-managing.

However, this research have demonstrated that all the great achievements of Som Energia –which are neither few nor have to be underestimated– rest almost totally confined to the cooperative. After all, Som Energia is a well-defined space for exercising a kind of energy sovereignty because its members are the only ones who are privileged to participate in such emancipatory experience, where they debate and decide over its activities. Thus, here there is its limit, which is legitimate and enabler but also circumscribed. The fundamental point is that the ecological and democratic contribution of Som Energia as a SSE practice does not transcend its own organizational sphere. Som Energia contributes to strengthen the cooperative model and to contribute to energy transition in the terms mentioned above. But, Som Energia is no able to attack the root of the problem since the form of regulation and the oligopolistic structure remain intact.

The main factor that hinders the potential of transformation of Som Energia –but also that of any similar SSE initiative located in Spain– lies in the following conflict: from a metabolic and political point of view Som Energia is trying to promote a renewable and decentralized-distributed model of electric power generation within the margins of a form of regulation that is geared to perpetuate a non-renewable and centralised-vertical model. As the Spanish electricity sector is heavily regulated, the form of regulation –the definition of which is responsibility of the central administration– influences directly on the action capacity of all actors involved.

This question brings up the Erik O. Wright's typology of strategies of transformation to transcend a social dominant order that he proposes in his book *Envisioning Real Utopias* (2010). The case of Som Energia fits in with what Wright (2010: 303-305) calls a collective strategy of «interstitial» transformation. According to his definition, interstitial transformations seek to build new forms of social empowerment in the niches, spaces and margins of existing social structures of power, often where they do not seem to pose any immediate threat to *status quo.* Nevertheless, they are initiatives that allow the collective re-appropriation of certain economic activities. Gradually in time –but

depending on its articulation and how they thrive– these initiatives can erode the hegemony of the dominant institutions and contribute to reach the turning point for making a real structural change. An interstitial strategy means to build progressively an alternative world inside the old one, "ignoring the State" (or what is the same: "without using the State") and not challenging explicitly the main centres of political and economic power. Generally, Wright includes in this category the SSE initiatives.

Identifying Som Energia as an interstitial action raises questions about the relationship between an SSE initiative for the democratization of energy and a broader transformative project. That is, an interstitial action might be able to gradually introduce ways of change from the niches of the existing regulation. From these spaces it is possible to reinforce disruptive practices by the hand of social innovation, as the case of Som Energia illustrates. However, it should not be forgotten that an interstitial practice as Som Energia is not able to achieve on its own the legislative reorganization that is needed to move toward an ecological and participative energy model that it goes for. At the end, the form of regulation contains itself both the limits (obstacles) and opportunities (niches and cracks) for change.

6. Conclusion: ¿from cooperativism to forms of commons regulation?

Taking Polanyi as a frame of reference, it is coherent to assume that a broad process of re-regulation is needed to *embed* electric power in society, that is: to institutionalise a model of electricity provision where the social and the natural are not subordinated to the logic of commodification. In this sense, moving towards a model whose goal is to meet human needs and to stop climate change is a process that requires tackling at least three questions.

First, electric power has to gradually loose its absolute condition of commodity. The reasons for this are twofold. On the one hand, treating electricity as a commodity implies to be in contradiction with the limits of the planet. Defining electricity for its value of change is necessary condition for the constant accumulation of capital and natural resources. On the other hand, the commodification of electricity means that it is accessible only to those individuals who have the capacity to pay for it. Besides the fact that this situation creates a social dislocation of huge magnitude such as «energy poverty» (the inability to meet basic energy needs and to experience a dignified life), commodification is an important barrier to democratic mediation.

Thus, second, it has to be taken into consideration the need to recognize and guarantee the right of access to electric power either by means of the grid or self-generation. This should be presented as a precondition to articulate processes in which citizenry as a whole –and in conditions of equality and freedom– can exercise a significant degree of democratic control over a «common good» such as the energy, which determines the material conditions of existence and the variety of forms of social interaction.

Finally, for all these reasons, it is essential to institutionalise such structural change

through a new regulatory framework, which is only possible with state intervention. In the end, it is the form of regulation what determines whether the model of electricity provision is defined in favour of public interest or particular interest, of satisfaction of human needs or for-profit, of sustainability or biosphere destruction, of distributed schemes of control and management or centralised ones. The point is that, in any case, the institutional design does matter. In this sense, only a political project that has state intervention in favour of the majority will be able to lay the foundations for further structural and political changes to protect society and biosphere from privatization and commodification effects.
This question implies to think about the possibility of designing regulation models of electric power from the commons approach. Therefore, the debate on the management, governance and property of the model of provision of electricity must be faced at all levels. Henceforth, there is a broad path for research in relation to commons approach (Coriat 2015). Another issue that should be taken into account is related to what kind of actors could be involved in a commons provision of electricity based on democratic governance.

A model merely based on the participation of public actors does not provide enough guarantees to turn electricity provision into a «common», no matter if public administration is the sole owner and manager of all the means to provide electric power (i.e. generation plants, grids and the other supply and trade structures). In any case, it depends on the existence –and the quality– of mechanisms to make real a popular sovereignty –decision and control– over such energy public action. This means, at least, that it is required a scenario where there are continuous access to transparent information, channels that give voice to people and different forums for being heard (Pettit 1997). In addition, a 100% public property model could restrict *per se* the involvement of citizens in such energy issues. In essence, the exercise of a real citizenship not only of rights but also of responsibilities can be jeopardised if the state is the first and foremost responsible for electricity provision and adopts a kind of paternalistic role.

According to this, the possibility of provisioning energy through the commons approach lays on the table the reflection about the potentialities of a «symbiotic» strategy, which is another type of Wright's transformations. We refer here to a collaborative dynamic that is articulated between bottom-up initiatives –such as Som Energia, with all its assets and limits already mentioned– and top-down interventions that come from any scale of public administration. Regarding democratic energy transition, it should be highlighted the advantaged position of municipalities. It is at the local level where mechanisms of citizen control and participation are more effective and achievable. But, moreover, it is from the local proximity where the green and distributed electricity model is going to be built up. Thus, the issue of the scale matters too. A symbiotic strategy may give rise to consensus to shape new forms of regulation and democratic governance that are going to be capable for managing a common good through the commons logic.

This said, in Spain the current political situation is still far away from an enable environment for a commons regulation. But it has not to be ruled out that the conditions of possibility are going to exist in the not-so-distant future. The future is unpredictable,

but this research has contributed to better understanding what is going on here and now. SSE initiatives –such as Som Energia– are the anticipation of a hypothetical symbiotic scenario, the germ of profound structural and political transformations. These initiatives have a variety of features that pave the way for the articulation of a broader democratic «countermovement»: e.g. the constant strengthening of their economic activity, the creation of strong advocacy and inter-cooperation alliances and the cultivation of a critical and responsible citizenry. Also, SSE practices have the potential to turn into self-protecting measures against possible models of public energy governance that cause social disempowerment. Ultimately, they are emerging initiatives often exposed to experimentation, but their continuous development means having tested forms of energy provision subjected to decommodification and democratic logics that could be ready for the design of a new commons energy regulation.

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