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François Balaye, Lisa Bienvenu, Gilles Debizet and Pierre-Antoine Landel

Translator: Andre Crous. (andrejohancrous@gmail.com)

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AUTHOR'S NOTE

This article is the result of action research conducted by the Grenoble Alpes University's PACTE laboratory and the Transitions consulting firm that manages TEPOS in the Auvergne-Rhône-Alpes region. The aim of this action research is to qualify the relations between the urban and rural territories within the framework of the TEPOS process and to come up with criteria that can be used to analyse these relations. It was the subject of a student workshop that was also supported by the LabEx ITEM (Innovation and Mountain Territories).

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Introduction

- 1 Metropolisation and globalisation are altering local operations: The growth of urban centres “feeds more on the horizontal relationship with other centres than on traditional (...) relations with the hinterlands” (Veltz, 2014, p. 23, our translation). The question is whether the (current or future) dynamics of the energy transition are compatible with metropolisation and globalisation (Landel et al., 2017).
- 2 While successive energy transitions have been linked to globalisation (Kim and Barles, 2012), from wood in local forests in the early 19th century to imported fissile ores in

the late 20th century, as well as coal and fossil fluids, a bifurcation now seems to be taking shape. The expected substitution of fossils and fossil fuels with renewable energies is reflected in the mobilisation of resources closer to consumers. New relationships are emerging around energy production in rural areas (Durand, Landel, 2015), as well as new intermediaries between production and consumption in urban areas (Tabourdeau and Debizet, 2017). On both sides, local actors are giving themselves the means to control their own energy trajectories without ignoring their neighbours. Two generally accepted assumptions are to affirm the energy complementarity between these two types of territories and to propose its activation through market mechanisms. Applied to upland areas and their conurbations, the first hypothesis can be formulated as follows: The upland areas harvest renewable energies in order to supply the cities. The second is: The market bridges the cities' (residual) demand with the upland areas' potential excess of energy.

- 3 Recent literature shows the inadequacy of a techno-economic approach and the need to understand the spatial processes of energy transition (Theys and Vidalenc, 2011, Truffer and Coenen, 2012, Duruisseau, 2014, Debizet et al., 2016). In this respect, one current scientific debate focuses on the room for manoeuvre of collectives and local institutions on energy regimes, especially with regard to the functioning of large networks. Are local intermediaries between producers and consumers (Bulkeley et al., 2010, Hodson and Marvin, 2010) able to balance out supra-territorial organisations in charge of infrastructure (Geels, 2011, Poupeau, 2013)? The organisation of energy flows between deficient (urban) and potentially surplus (rural) territories is undoubtedly key to this debate. It has been treated from the point of view of energy operators (Vanier, 2015) and national regulations (Poupeau, 2013) or both at the district level (Debizet, 2016) but not – to the best of our knowledge – as relations between these two types of territories. This article deals with the hypothesis that territorial institutions shape the city-upland relationship that energy transition promises.
- 4 We consider a set of transactions relative to energy in order to characterise the relation between the two kinds of territories, with transactions defined as “trading relationships, economic or otherwise, but mostly trading relationships in which the parties are trading, that seek an arrangement to resolve or avoid a conflict by giving up some of their mutual claims” (Vanier, 2005, p. 6, our translation). We focus our attention on the innovative “Territoires à Energie Positive” (TEPOS) initiative led by the Rhône-Alpes region¹ and ADEME² since 2012 and subsequently by the French government,³ represented by DREAL at the local level since 2015.
- 5 The first part provides contextual elements on metropolisation in the Rhône-Alpes region and socio-technical energy regimes in France. The second presents the construction of a corpus of case studies and the methodology. The results are presented in the third part, which focuses on the nature of institutional transactions considering energy flows and decision arenas.
- 6 Finally, we will discuss the role of territorial approaches in a city-upland (and, more broadly, urban-rural) relationship in the energy transition.

Investigating the city-upland complementarity

Interterritorial dynamics: metropolisation and mountain logics

- 7 Investigating city-upland relations includes analysing the forms taken by the largest cities and the impact they have on their relations with the surrounding territories. An observation of the dynamics of the French territorial reforms – especially in the Rhône-Alpes region – provides useful elements for analysis. In France, where municipalities are very small compared with other developed countries, the state has consolidated the power of territorial institutions on the level of urban areas for 20 years. Adopted in 2014, the French law regarding the “Modernisation of Territorial Public Action and Affirmation of Metropolises”, or MAPTAM, established a new status of “metropolis”, which today applies to 21 major French cities. The observation of changes relative to intermunicipal cooperation between 2012 and 2017 gives some key insights about the local authorities’ thinking.
- 8 One part involves spatial extension. The (former) Rhône-Alpes region spanned three metropolises: Lyon, Grenoble and Saint-Etienne. The latter two have had to persuade and integrate suburban and rural communes in order to reach the required population threshold to adopt the status. In parallel, the Swiss-French metropolis of Geneva also needs to mobilise its cross-border peripheries’ resources to cope with the saturation of its space on the Swiss side (Bertrand, Cremer-Schulte and Perrin, 2015).
- 9 A second part is defensive. The spatial extension of these metropolises runs up against the political resistance of adjacent intermunicipal communities. In the case of Grenoble, several neighbouring intermunicipalities rejected the proposal to expand the metropolis. Their opposition was especially strong given that they had been formed shortly before the 2010 reform as the result of a pro-active approach, as was the case with the “Pays du Grésivaudan” in 2009. This dynamic confirms the hypothesis of hierarchical compensation (Giraut and Chéry, 2000), according to which, in a context of globalisation, medium-sized cities must build up dependent hinterlands and position themselves as intermediary places to value the resources of the whole that they comprise together with their own hinterland. These dynamics come up against those of the metropolises.
- 10 Finally, exacerbated dynamics persist in the upland areas: Sparsely populated territories are organised – often under the status of a regional natural park (“Parc Naturel Régional”, PNR) – by the mountain massif to preserve their natural assets and control their development. PNRs are bordered by cities and metropolises located downstream in the valleys. Conversely, cities tend to fully take into account the “upland” issues by considering it as their hinterland. This tension between cities and the upland provides input for a regular dialectic of interterritorial configurations in many public action domains.

Socio-technical energy regimes as supra-territoriality

- 11 The current energy transition is characterised by the transformation of socio-technical regimes (STRs): An STR is defined as a coherent and more or less stable set of infrastructures and organisations with rules connecting them (Geels, 2004). As a characteristic of the current energy transition, the substitution⁴ of fossil fuels with

renewable energies is not limited to technological substitutions. The deployment of renewable energies opens possibilities for more circular energy flows in the city (Rutherford and Coutard, 2014, Hampikian, 2017) linked to its peripheries (Buclet et al., 2016).

- 12 In France, STRs can be identified by energy carriers (Debizet et al., 2016). Their spatial dimensions are different: The electricity and gas STRs are strongly framed by national regulations (Poupeau, 2013), whereas the STRs associated with the heat carrier fall much more within the scope of local action (Gabillet, 2015, Rocher, 2013). Finally, the STRs related to fuelwood carriers (Tabourdeau 2014) and to fossil fluids are not well-regulated by public authorities; they mobilise transport infrastructures providing functions other than energy transportation that are not controlled by energy actors. These five carriers (Table 1) co-exist in the territories: They intersect mainly upstream (on the international fossil fuel markets, in particular) and downstream through energy conversions at the places of consumption.

Table 1: Governance spatialities of the main STRs in France

	State	Local authorities
Carriers Electricity (99% of households) / Gas (50%)		
Laws and rules	. Technical regulation . Connection methods	. Town planning rules influencing density and connections
Infrastructure economy	. Taxes funding the operation of the network . Equalisation: urban towards rural . Subsidies for renewable energy	. Partial funding of extensions/reinforcements
Public utility operators relationship	. Regulation of the production/supply market . Network operator appointed (except for 7% of the municipalities and the new local gas network)	
Carriers Heat (5%)		
Laws and rules	. Technical regulation	. Town planning rules influencing density and connections
Infrastructure economy	. Obligation to balance revenues and expenditures	. Fixing tariffs while requiring balance . Partial funding of extensions
Public utility operators relationship	. Establishment of generic legal framework	. Choice of the single operator of production/ supply/network management
Carriers Fuelwood and fossil fluids delivered		
Laws and rules	. Technical regulations: heating appliances and transport vehicles	Urbanistic methods of accessing buildings from the road
Infrastructure economy	No public energy infrastructure but road network . Funding national roads . Funding departmental, metropolitan or municipal road network	
Public utility operators relationship	Not applicable because these kinds of energy are not supplied as part of a public service	

Source: Debizet et al. (2016)

- 13 The public authorities – diagrammatically distributed between the state and local authorities in the table above – are far from being the only organisations shaping the energy STRs. Energy operators play a key role especially because they fund highly capital-intensive infrastructures that are part of large technical systems (Coutard, 2002). In France, the monopoly network operators (gas, electricity and heat) are attached to large international groups listed on the Paris Stock Exchange and exercise most of the activities in the energy services sector.⁵ The position and influence of energy companies – whether incumbent or emerging – differ according to the energy carriers.

- 14 While the energy resources and consumption differentials between urban and upland territories offer a great deal of interest in the transfer of energy from the mountains to the city, we hypothesise that such transfer mechanisms vary according to the particular energy carrier. Having been deployed in the Rhône-Alpes region since 2012, the TEPOS process is utilised in analysing these mechanisms.

Methodology

TEPOS projects in the Rhône-Alpes

- 15 In 2012, ADEME and the Rhône-Alpes region put out a call to those interested in “positive energy territories” (*territoires à énergie positive*) aiming for the creation of “territorial demonstrators of an energy transition approach”.⁶ The goal was to locate territories on their way to achieving a “balance between energy demand and local renewable energy production by 2050”. The awarded territories benefitted from project management assistance funding of up to 80% of the cost (capped at €100,000): from the diagnosis and the actions programme to their implementation and evaluation. The initial call favoured sparsely populated territories and excluded large cities unless they associated with peripheral rural areas. Thirteen predominantly rural “territories” responded to the call and were selected in 2012 and 2013. Major cities (Saint-Etienne, Grenoble, French side suburbs of Geneva) and other rural areas joined the regional network in 2015, after receiving assistance from the TEPCV⁷ investment support scheme funded by the French government. The integration of the TEPCV into the TEPOS regional network enabled these territories to benefit from the experience of the TEPOS pioneers and also Climate Plans pioneers⁸.
- 16 The TEPOS process follows a twofold objective of territorial development and the mitigation of climate change. In the pioneering territories observed by Nadaï et al. (2015), it had the effect of reinforcing the dynamics of collective learning between the territory’s actors. Our sample includes both rural and urban areas and is taken from a more advanced stage of generalisation. Thus, the transactions between city and upland areas that are analysed relate to various situations, and the bias of the activist initiatives led by the pioneers of the TEPOS process is avoided.

Five TEPOS selected

- 17 Five TEPOS (project proposed by a territory) were selected from a list of 29 in the Rhône-Alpes region to cover a variety of territories and become more general:
- Saint-Etienne metropolis/PNR Pilat;
 - Grenoble-Alpes metropolis/PNR Vercors;
 - French side of Geneva;
 - Chambéry metropolis/Annecy conurbation community/PNR Bauges;
 - Voiron/PNR Chartreuse.
- 18 On the urban side, three of the four largest cities in the region are involved (Geneva, Grenoble and Saint-Etienne – all except Lyon), as well as two of the four medium-sized intermunicipalities (Chambéry and Annecy) and a small inter-municipality (Voiron) on the outskirts of a metropolis. On the upland side, the sample group includes hilly, plateau and mountain territories. Finally, the group includes a wide variety of

intermunicipalities: agglomeration community, community of communes, metropolis, urban centre, intercommunal syndicate and regional natural park.

- 19 We should note that the city-upland relationship may be internal to the TEPOS area (for example, the Saint-Etienne metropolis/PNR Pilat) and indeed to an inter-municipality (Grenoble-Alpes metropolis). Such a relationship is also deployed between TEPOS territories.
- 20 The research corpus, which comprises application files, activity reports and interviews with TEPOS project managers, was analysed in two stages:
 - identification and classification of the transactions between the city and the upland area in the application files or communicated by the TEPOS project manager (see table in Appendix 1);
 - analysis of the city-upland transactions: apprehension, decision making and coordination with other trans-territorial systems.

Analysis and results

Themes linking cities and the countryside

Strong prevalence of mobility, buildings energy efficiency and fuelwood

- 21 Mobility-themed activities take place in every TEPOS. Their aim is to implement sustainable mobility to tackle climate change and air contamination issues, as well as traffic congestion and economic hardship. The most common of these activities is the promotion of carpooling by developing dedicated areas, sometimes through software applications. Electromobility ranks second thanks to charging stations that have been set up in both cities and the upland areas, where it meets ecotourism expectations: “It’s the hoteliers and the restaurateurs who stated, ‘If you come to my place, I will provide a charging point’” (territorial agent). In last position is telecommuting, which is used by one TEPOS linking a metropolis (Grenoble-Alpes) and a regional natural park (Vercors). Except for the TEPOS of the greater Geneva area in France, passenger transportation infrastructure and public services are not mentioned as levers for sustainable mobility.
- 22 All TEPOS are engaged in funding platforms to make existing buildings energy-efficient: Their aim is to improve contractors’ (architects, professional builder...) skills and offer (technical and often financial) support to households and small businesses. Transactions between the city and the countryside are carried out by metropolitan or departmental agencies⁹ backed by both ADEME and the Rhône-Alpes region, which run these platforms.
- 23 Most of the TEPOS develop fuelwood-related activities. As the result of logging, fuelwood is collected in rural territories to supply large heating plants or cogeneration units (including combined heat and power) in cities. “The fuelwood resource is really a rural resource brought to the urban area” (territorial agent). Located on a transit road to the city, the platforms collect fuelwood from the logging roads’ “catchment area”. They result from transactions between the upland intermunicipality, which often runs the platform, and the urban heating operator that runs the heating unit(s) and network within the framework of a public service delegation contract. TEPOS activities focus on

the funding of either of these elements or on supply studies. It should be noted that TEPOS also fund small upland-based heating networks.

The paradox of the low importance of renewable energy

- 24 Although electricity is the only continuously shared energy carrier between upland areas and the city, hydroelectricity, wind power and photovoltaics do not feature much in TEPOS programmes: A few solar cadastre activities and cooperative initiatives tied to the “town power plant” are carried out in several rural territories, but there is no explicit link with urban actors. While occasionally raised during discussions on the drafting of the TEPOS programme (e.g. Saint-Etienne metropolis/PNR Pilat), wind-power projects were not selected as TEPOS activities. Lastly, the TEPOS energy balances reduce the hydroelectricity produced by large exogenous energy operators.

Emergence of urban biogas

- 25 Biogas is produced by the anaerobic digestion of farm waste, house waste and sludge from wastewater treatment plants. For now, TEPOS actions only concern urban wastewater treatment plants (in Grenoble, Chambéry and Annecy). However, several bio-waste enhancement projects in rural areas are being studied, but it is never explained how the transfer to the cities will take place.

Consulting-engineering-related indirect transactions

- 26 Consulting engineering features prominently when professionals speak. It is carried out by departmental or metropolitan energy and climate agencies.
- 27 The first kinds of transactions operate in rural areas and medium-sized towns. Along with the second ones, they sometimes capitalise on and transfer competencies from one territory to another. “Intermunicipalities call us for the technical part (...): rural ones do so because they have no one for the job; the urban ones do so in order to enhance their internal means” (energy counsellor at a departmental agency). Thus, they take advantage of the economies of scale that they have at their disposal thanks to their large perimeter of activities: “we share our experiences with each other (...) we try to pool as much as we can to avoid repeating reflexions and preparatory work” (idem). Transfer also includes awareness-raising tools: “we pool our means of communication (...) instead of having each one doing something different” (territorial agent). Finally, the TEPOS dynamic “makes it possible to offer consulting-engineering to rural intermunicipalities to look for funding, which they otherwise wouldn’t seek out, due to a lack of human resources or because they do not reach the threshold to claim such funding” (counsellor at a departmental agency). However, this third-party financing does not imply direct investment from urban intermunicipalities in the surrounding territories’ projects.
- 28 Institutional actors may not get the full benefit of these indirect transfers: “urban territories have important resources that could help rural territories in financial and/or technical ways (...) For now, this is not really happening, it seems complicated to expand it” (TEPOS project manager).

TEPOS left out of the major territorial and energy arenas

Focus on innovative albeit marginal activities

- 29 In the field of mobility and of housing, the activities undertaken by the TEPOS do not fall within the main institutional competences. Carpooling, electromobility and telecommuting are recent trends but receive little attention within the mobility and transport competence framework of the intermunicipalities, departments and regions; the economic cost of these actions is negligible compared with the budget allowance for roads and public transportation. Likewise, support for energy-efficiency activities is still on the cutting edge in rural (including mid-mountain) territories.

Little coordination between existing trans-territorial systems

- 30 In France, transportation infrastructure and spatial planning are covered on different levels in existing trans-territorial arenas. Two examples are the 'schéma régional d'aménagement, de développement durable et d'égalité des territoires' (SRADDET), which is a regional plan, and the 'schéma de cohésion territoriale' (SCoT), which usually covers the entire metropolitan area and its periphery. TEPOS programmes are developed outside of these trans-territorial arenas and created without establishing a direct or explicit link with the aforementioned plans.

Discussion

- 31 The TEPOS programmes that we have examined have in fact become arenas for transactions between rural and urban institutions in the sense intended by Vanier (2005, p. 6). They go beyond strictly energy transactions (consulting-engineering and financial flows), as illustrated by mobility, but they leave out the electric carrier and its renewable resources. The interterritorial transactions of the TEPOS have little to do with the actual energy flows between the city and the upland area.
- 32 As regional or national initiatives, the TEPOS are implemented over a limited period of time; therefore, their effectiveness and especially the sustainability of the relationships they create must be questioned. Our point of view is that, as it stands, the TEPOS is only one of many other cross-territorial arenas that together shape a mosaic and a juxtaposition and where numerous compromises have an impact on energy use, production and/or management. The energy future of the territories and their relations is largely played out in supra- and interterritorial transactions outside the TEPOS. However, this challenges the type of arenas in which the energy future is evolving.
- 33 The first arena is that of regulatory spatial planning – in particular, the domain of the SCoT. Its intermunicipal nature (unlike the PCET, the SCoT frequently brings together several intermunicipalities) makes it a relevant arena for inter-territorial debate. Admittedly, the practices are still part of a kind of traditional planning that does not incorporate energy transition to a significant extent. However, the role played by the SCoTs in incorporating all the national standards and rules will lead them to deal with energy issues, for example, by applying the recent Grenelle, ALUR and TEPCV laws.¹⁰

- 34 In contrast to the formalism of the SCoTs, the malleability and creativity of the TEPOS make them arenas of innovation of “niches” that call into question the institutional regimes of energy and territorial planning. The TEPOS perform an interpellation function that the SCoTs can no longer ignore. Through the planning of energy production and transmission equipment, along with the management of land, natural and forest resources, the SCoT’s ability to integrate the energy transition can be assessed over the long term. So, spared by institutionalisation, the TEPOS could retain the malleability and creativity needed to steer the SCoTs and, in so doing, boost their sustainability.
- 35 The TEPOS also deal with operational dimensions such as energy equipment projects and targeted investment support schemes. Admittedly, these objects do not belong directly to the TEPOS since the projects and their facilitation are above all carried out by municipalities or intermunicipalities. However, the intermittent intervention of the latter does not allow them to consider the energy chains crossing several institutional territories. Effectively implementing the plans mentioned above assumes action by trans-territorial operators capable of ensuring the continuity of flows between equipment located in different institutional territories. Various companies provide some of these functions around equipment without necessarily getting involved in their management or control on a territorial – and therefore not interterritorial, either – scale. This situation does not address issues such as the sustainability of forests, the involvement of consumers in the control of demand or even citizen participation in the transition process.
- 36 This raises the question of the quality of relations between territories. We propose expanding the concept of Rosanvallon’s “equality-relationship” (2011) that consists of three dimensions: singularity, reciprocity and communality with interterritorial relations. If territories’ singularity can be established, the reciprocity of transactions implies the existence of measurable and quantifiable exchanges that still have to be established. Communality – understood as the ability to deliberate together, i.e. to debate, decide and act – underpins the existence of suitable arenas. The question is partially settled for planning, provided that the arrangements in place reinforce the participatory dimensions. It remains in place for the deployment of cross-territorial equipment chains: It will depend on the capacities and opportunities of local actors to influence the socio-technical regime of electricity and gas carriers. Path dependences of the energy transition to inter- and supra-territorial systems – and rules – do exist, and their multiplicity and entanglement open a wide range of possibilities in terms of the city–countryside reciprocity and, more broadly, a network–territory relationship.

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APPENDIXES

ANNEX: List of “interterritorial” TEPOS activities observed, based on application records and interviews

Title of the activity	TEPOS concerned	Main object of the exchange	Theme of exchange
<i>Mission mobilité</i>	PNR Pilat – Saint-Etienne	Expertise/skills equipment	Mobility
<i>Bornes de recharge de voitures électriques</i>	Grenoble-Alpes métropolis – Vercors	Funding	Mobility
<i>Bugez-vous: Autostop organisé</i>	PNR Bauges-Chambéry-Annecy	Mobile App	Mobility
<i>Démarche de covoiturage</i>	Voironnais – Cœur de Chartreuse	Sensitisation	Mobility

<i>Projet autour du télétravail</i>	Grenoble-Alpes-Métropole – Vercors	Scoping study	Mobility
<i>Plateforme bois-énergie</i>	Trièves – Grenoble-Alpes métropolis – Vercors	Funding equipment	Wood energy
<i>Plateforme bois-énergie</i>	Voironnais – Cœur de Chartreuse	Funding equipment	Wood energy
<i>Projet de cogénérateur</i>	Grenoble-Alpes métropolis – Vercors (linked to Grenoble heating plant)	Funding equipment	Wood energy, heat and electricity
<i>Plan d'approvisionnement territorial</i>	PNR Bauges – Chambéry – Annecy (with PNR Chartreuse)	Reports	Wood energy
<i>Réalisation d'une chaufferie</i>	Grenoble-Alpes métropolis – Vercors	Funding equipment	Wood energy and heat
<i>Projet de valorisation de la filière bois</i>	PNR Pilat -Saint-Etienne	Sensitisation and networking	Wood for construction
<i>Cadastre solaire</i>	PNR Bauges – Chambéry Annecy	Report et Web app	Consulting engineering
<i>Plateforme de rénovation énergétique</i>	Grenoble-Alpes métropolis – Vercors	Expertise/skills	Engineering consulting
<i>Plateforme de rénovation énergétique</i>	PNR Bauges – Chambéry - Annecy	Expertise/skills	Consulting engineering
<i>Plateforme de rénovation énergétique</i>	French side of Geneva	Expertise/skills	Consulting engineering
<i>Plateforme de rénovation énergétique</i>	PNR Pilat – Saint-Etienne	Expertise / Skills	Consulting engineering
<i>Conseil partagé en énergie</i>	PNR Bauges – Chambéry – Annecy	Expertise / Skills	Consulting engineering
<i>Projet d'éclairage public</i>	PNR Vercors – Grenoble-Alpes métropolis	Scoping study	Electric sobriety
<i>Projet d'éclairage public</i>	PNR Bauges – Chambéry	Scoping study	Electric sobriety

NOTES

1. In 2016, as part of a restructuring of regional institutions, the Rhône-Alpes region merged with the Auvergne region to create the Auvergne-Rhône-Alpes region.

2. French Environment and Energy Management Agency.
 3. The process set up by the state is called TEPCV, acronym for *territoire à énergie positive pour la croissance verte* (positive energy territory for green growth). As a sign of continuity and to keep the flow, we will use the expression TEPOS to designate both the eponymous version set up by the pioneering regions and the one used by the state.
 4. Substitution is generally associated with a decrease in consumption because the substitution effort by renewable energies would be much heavier in the absence of an improvement in energy efficiency and sobriety.
 5. In addition to activities on the public network such as production, aggregation and supply, these companies advise, install, operate and control energy systems at the request of property owners and managers.
 6. Our translation. Région Rhône-Alpes et ADEME, 2012, Appel à manifestation d'intérêt Territoires à énergie positive, 16 pages, <http://www.territoires-energie-positive.fr/documents/cahier-des-charges-de-l-ami-tepos-rhone-alpes>, accessed on 24 July 2017.
 7. The TEPCV (cf. footnote 5) concerns 400 territories – 58 of which are in the Auvergne Rhône-Alpes region, including the initial TEPOS – that benefit from funding of between €500,000 and €2 million for studies of and investments in sobriety and renewable energy.
 8. Unlike the Local Climate Plan, the most common approach to fighting climate change in France, but little developed in rural areas. Local authorities with more than 50,000 inhabitants (more than 20,000 since the “Energy Transition” law of 2016) are required to have a Climate Plan, now called “Plan Climat Air Energie Territorial”. Grenoble and Lyon metropolises have been the French pioneers of Climate Plan.
 9. In France, a department is one of three administrative divisions; the other two are “region” (*région*) and “municipality” (*commune*).
 10. The Energy Transition for Green Growth Act of 2015.
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ABSTRACTS

Changing energy production patterns are posing a challenge to the relations between rural territories, where production could potentially exceed consumption, and their urban counterparts, where the opposite tends to hold true. Energy flows between places of production and places of consumption have largely been considered from the point of view of networks and less from the perspective of the institutional relations between territories. This article analyses transactions between cities and upland institutions carried out within the framework of the “Territoires à Energie Positive” (Positive Energy Territories) – or TEPOS – process in France’s Auvergne-Rhône-Alpes region.

There is a disconnect between the TEPOS topics and the reality of the flows, and it underlines the gap between the promise of rural/urban complementarity (called by energy transition policies) and the weak position of the TEPOS within a mosaic and juxtaposition of decision-making arenas pertaining to spatial planning or energy carriers. Thanks to its agility and creativity, the TEPOS process could find relevance and sustainability, in addition to institutionalised planning that - variously and slowly - incorporates the energy transition aims.

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Keywords: interterritoriality, TEPOS, transaction, socio-technical regime, energy

AUTHORS

FRANÇOIS BALAYE

UMR PACTE-Université Grenoble Alpes. francois.balaye@umrpacte.fr

LISA BIENVENU

UMR PACTE-Université Grenoble Alpes. lisa.bienvenu@agroparistech.fr

GILLES DEBIZET

UMR PACTE-Université Grenoble Alpes. gilles.debizet@univ-grenoble-alpes.fr

PIERRE-ANTOINE LANDEL

UMR PACTE-Université Grenoble Alpes. pierre-antoine.landel@univ-grenoble-alpes.fr