



**Seminar 2021-2022  
Cities and Energies in Europe**

Jean Monnet Chair  
Governance of Integrated Urban Sustainability in Europe (GoInUSE):  
Scales, Actors and Citizenship

<https://sage.unistra.fr/membres/enseignants-chercheurs/chaire-goinuse/>

Master 'City, environment and societies', Institute of Urbanism and Regional Planning,  
Faculty of Social Sciences, University of Strasbourg  
& Research team 'Territorial Dynamics, Cities and Mobilities', UMR 7363 Societies,  
Actors, Government in Europe (SAGE, CNRS-Unistra)

This seminar proposes to discuss and disseminate the results of recent research and ongoing experiments on the multi-level and integrative governance of urban sustainability in Europe: its actors, processes and challenges, major experiments and themes in and around urban spaces. To this end, it brings together specialists in social sciences. The objective is twofold:

- 1/ To address integrated sustainable development in European cities – 'green city' but also 'just city' – through the analysis of different groups of actors (including the role of inhabitants and citizens) and of multi-scale social and political configurations (global-local-individual), such as mobility, energy and 'popular ecology' practices.
- 2/ To think together, on the basis of empirically founded work, topics usually associated with European studies (European charters, agenda and objectives, etc.) and issues that cut across the social sciences and urban studies, both analytically and notionally (including in critical and reflexive terms: governance or governmentality of change?, etc.).

For the coming year, the issue 'Cities and energy in Europe' will be particularly explored, notably the challenges of renewable energies (production/consumption) and their scales (urban amenities and services, individual responsibility for 'eco-citizenship' and 'sobriety', smart city, etc.), the relations between cities and territories in the energy transition in Europe, the socio-economic and housing dimensions, etc.

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Le séminaire propose de discuter et de diffuser les résultats de recherches récentes et d'expériences en cours sur la gouvernance multi-niveaux et intégrative de la durabilité urbaine en Europe : ses acteurs, ses processus et enjeux, ses expérimentations et thématiques majeures dans et autour des espaces urbains. Pour cela, il réunit des spécialistes de sciences sociales. L'objectif est double :

- 1/ Aborder le développement durable intégré dans les villes européennes – « ville verte » mais aussi « ville juste » – à travers l'analyse de différents groupes d'acteurs (dont la place des habitants et citoyens) et des configurations sociales et politiques face à des enjeux pluri-échelles (global-local-individuel), à l'exemple des mobilités, des rapports à l'énergie et des pratiques d'« écologie populaire ».
- 2/ Penser ensemble, à partir de travaux empiriquement fondés, des questionnements attachés aux études européennes (chartes, agenda et objectifs européens, etc.) et les problématiques qui traversent les sciences sociales et les études urbaines, sur le plan analytique et notionnel (y compris en termes critiques et de réflexivité : gouvernance ou gouvernementalité du changement ?, etc.).

Pour l'année à venir, la thématique « Villes et énergies en Europe » sera particulièrement explorée, notamment les enjeux des énergies renouvelables (production/consommation) et leurs échelles (aménités et services urbains, responsabilité individuelle 'éco-citoyenne' et 'sobriété', smart city...), les relations entre villes et territoires de la transition énergétique en Europe, les dimensions socio-économiques et du logement, etc.

**Responsables scientifiques** : Philippe Hamman et Nadine Roudil

## Programme

**21/9 : 10-12h : séance préparatoire spécifique pour les étudiant.e.s du master VES :**

**Philippe Hamman – en distanciel *via* BBB**

**21/9 : 13h30-16h30 : séance 1 : en distanciel *via* BBB**

**Introduction au séminaire : Philippe Hamman & Nadine Roudil**

**Présentations et échanges :**

**Nadine Roudil**

**Teenagers and young adults awareness on energy savings at school in Northern EU:  
Between accountability and user knowledges**

This presentation focuses on teenagers and young adults concern on energy savings in high school in five northern EU countries (France, Luxembourg, Netherlands, Ireland and United Kingdom). It will characterise the place of the school setting as a specific situation where the learning and promotion of a norm of sobriety emerges. As learning places, it is therefore interesting to examine how schools take up the energy issue to make it a principle of sobriety education.

This presentation will examine the reasons why young people are considered as accountable in the fight against global warming. It allows us to question the extent to which normative school situations make it possible to assert the responsibility of pupils in some public problems, which legitimises an intervention on behaviours.

Based on a qualitative survey conducted in ten high school in five different EU countries, this presentation will underline the reality of environmental and energy awareness among adolescents and young adults at school. But it also shows what their sobriety practices in schools are while incentives for change are promoted.

**Nadine Roudil** is professor of sociology at the National School of Architecture of Paris Val de Seine in France and a member of the management board of the UMR CNRS 7218 LAVUE research unit.



**Julie Neuwels**

**Du paradoxe d'une politique environnementale forte : le cas de la réglementation de la performance énergétique des bâtiments en Région de Bruxelles-Capitale**

La « performance énergétique des bâtiments » constitue un axe d'action prioritaire des politiques environnementales européennes. Pourtant longtemps à la traîne, la Région de Bruxelles-Capitale fait figure de bonne élève à cet égard avec une réglementation calquée sur la « construction passive », en vigueur depuis 2015, non sans avoir fait l'objet de controverses et de ruses pour la faire accepter.

Prenant appui sur la sociologie de l'action publique, en particulier sur le concept de référentiel, cet exposé retrace la genèse de cette réglementation à partir des instruments d'action publique et des récits qui gravitent autour, en s'intéressant à leur signification plutôt qu'à leur efficacité. Il s'agit ainsi d'analyser comment les problèmes, les enjeux et les solutions ont été pensés et formalisés à l'échelle des pouvoirs publics, pour en comprendre les fondements idéologiques et en questionner la portée transformative. Cette attention pour les agencements entre référentiels met en évidence un paradoxe : si l'institutionnalisation de la réglementation en question relève d'une politique environnementale forte dépassant – de prime abord – les logiques anthropocentristes, elle repose en même temps sur l'hégémonie de la croissance économique et technicienne. Ce paradoxe n'est pas anodin. Il implique trois grandes dérives déproblématisantes : le développement d'un modèle normatif, une « architecturalisation » des politiques environnementales et un renforcement du supposé bien-fondé de la modernisation écologique.

**Julie Neuwels** est chargée de cours à la Faculté d'Architecture de l'Université de Liège (Belgique) dans le domaine de l'approche sociotechnique de la production architecturale.



**Présentations et échanges :**

10h-12h

**Adeline Cherqui, Pierre-Henri Bombenger & Marie-Joëlle Kodjovi**  
**Comparaison des processus d'émergence et de structuration de projets de biométhanisation agricole en Suisse et au Canada**

Le développement de la valorisation énergétique des résidus agricoles constitue pour les exploitants un domaine en forte expansion dans nombre de pays occidentaux. Traitement préalable des résidus agricole polluant pour l'environnement, amélioration des intrants de fertilisation, diversification des revenus d'exploitation, production endogène d'une énergie réputée renouvelable sont parmi les principaux facteurs qui justifient pour les acteurs de la profession agricole le développement d'installations de valorisation énergétique des résidus issus de leurs productions. Pour autant, le développement des installations de biométhanisation se heurte aujourd'hui à des obstacles croissants. Citons en particulier : les coûts de rachat des énergies produites (électricité, gaz et/ou chaleur), les oppositions des riverains, la pérennisation des intrants, les rendements de production des installations, la protection des secteurs agricoles face au développement d'autres activités.

En s'appuyant sur la comparaison de trois centrales de biométhanisation en Suisse et au Canada, cette communication interroge les processus différenciés d'émergence des projets portés par les agriculteurs lors de niveaux de structuration distincts des processus d'institutionnalisation des politiques de protection des espaces agricoles et de transition énergétique. Elle propose une analyse à l'échelle des projets des effets ambivalents, voire contradictoires, des politiques concomitantes de soutien économique à la filière énergétique et de régulation des effets territoriaux et environnementaux.

**Adeline Cherqui** est chargée de recherche à la Haute école spécialisée de Suisse Occidentale – Haute école d'Ingénierie et de gestion du Canton de Vaud.



**Pierre-Henri Bombenger** est professeur en aménagement de l'espace et urbanisme à la Haute école spécialisée de Suisse Occidentale – Haute école d'ingénierie et de gestion du Canton de Vaud.

**Marie-Joëlle Kodjovi** est professeure en économie régionale à la Haute école spécialisée bernoise – Haute école des sciences agronomiques, forestières et alimentaires.



14h-16h

**Hélène Nessi**  
**De la stratégie à la mise en œuvre d'un modèle énergétique décentralisé aux échelles métropolitaines européennes**

Cette présentation se concentre sur l'émergence d'une territorialisation des questions énergétiques aux échelles métropolitaines. Lancés à l'initiative de l'Union européenne, des premiers engagements se formalisent suite aux COP (conférences des parties) introduisant, telle une norme, la territorialisation urbaine du système énergétique à l'échelle locale. Le modèle énergétique décentralisé repose sur la production d'énergies renouvelables afin de rapprocher la production de la consommation énergétique. Des instruments normatifs, tels que les Master Plan, Schéma Régional Climat Air Énergie (SRCAE) et le Plan Climat Air Énergie Territorial (PCAET), sont ainsi créés pour cadrer et diffuser ces politiques. Pourtant, ce modèle fragilise celui de l'urbanisme des réseaux en raison de plusieurs grandes transformations concernant la nature et le volume des flux, l'organisation matérielle qui les transporte et les institutions qui en ont la compétence et la gestion. À partir de travaux empiriques sur deux métropoles européennes en Italie et en France, nous analyserons (1) la déclinaison de cette norme dans les outils stratégiques, (2) les tensions entre le modèle de décentralisation énergétique et le modèle centralisé remettant en cause la cohésion territoriale et l'urbanisme des réseaux, (3) enfin, l'intégration de la production d'énergie renouvelable dans un véritable système énergétique. Nous cherchons ainsi à comprendre les relations et les modalités de gouvernance entre les différents acteurs urbains, humains et non humains. D'objet technique, le réseau devient un objet sociotechnique dans l'analyse mais aussi dans la pratique des aménageurs.

**Hélène Nessi** est maîtresse de conférences en Urbanisme et Aménagement à l'université de Paris Nanterre et membre du laboratoire LAVUE (UMR CNRS 7218), France.



**Présentations et échanges :**

**Grégoire Wallenborn**

**How cities will cope with energy mutation. A critical analysis of existing scenarios**

Among the flows that structure urban fabrics, energy has a special place. Indeed, when we talk about energy, we are talking about powering machines that provide us with a multitude of services, machines that are perfectly integrated into the daily ballet of social practices. But we know that energy flows will change. And it is the whole of society, its institutions, infrastructures and practices that will be modified. Firstly, energy flows will be reduced. This means that the number of activities will decrease, and that it should be possible to discuss democratically which activities to eliminate. Secondly, energy flows will be variable because the storage of electricity will be limited by material constraints. The logic of demand will give way to a logic of supply: daily practices will have to adapt to the energy available at each moment, which will be predictable a few days in advance. It is therefore the entire organisation of work and other activities that will have to change. In fact, the energy transition is a profound process in which questions of power, resistance, social inequalities, etc., are omnipresent.

This presentation explore how cities will be affected by these changes – inevitable because of the decline of oil in particular. Cities have always been places of concentration: of power, knowledge, capital, energy (including food). What could a democratic and socially just city look like under strong ecological constraints? Grégoire Wallenborn will analyse various scenarios found in the literature concerning the possible futures of cities and will screen them for the new energy constraint, without forgetting the other ecological constraints (climate, mineral resources, biodiversity, etc.).

**Grégoire Wallenborn** is Senior Researcher at the Institute for Environment Management and Land Planning (IGEAT), Université Libre de Bruxelles (Belgium).



**Thoma Lamb**

**Vulnerability and uncertainties of the smart meter roll-out in French cities.  
Linky, from a (big) data revolution to a (small) market innovation**

This presentation focuses on the main effects induced by the implementation of Linky smart meters in French territories. Building on theories related to the “Tools of government” and based on a sociological fieldwork study following the genesis and the introduction of the electricity smart meter in the French energy sector, this communication considers Linky as a new instrument of regulation for the electrical subsystem. After a brief review of the specific objectives initially assigned to Linky as a public policy instrument, the presentation will concentrate on the first concrete uses of the meter within French cities in order to confront these initial objectives and narratives to their reality. Two remarks will be drawn from this observation. First, the uses of Linky are scarce and unequal on the territories. Secondly, these uses are solely based on a market perspective that limits the use of Linky by local administrations and political actors. By discussing these points, this study more broadly helps to underline the relationship between a public policy instrument, the institutional environment in which it is deployed, and the actors supporting the program or opposed to it.

**Thoma Lamb** holds a PhD in political science and is research associate at the Center of research and study of political and administrative science (CERSA), University Paris 2, France.



**19/11 : 14h-17h : séance 4 : en présentiel à Strasbourg ou en distanciel *via* BBB  
(modalité à confirmer)**

*Présentations et échanges :*

**Maarten Wolsink**  
**Neighbourhood microgrids with distributed energy systems.**  
**Coproduction of renewables in polycentric governed natural resources**

Distributed energy systems (DES) are originally defined as units that are not part of a centralised power system. 'Distributed' implies more than simple decentralised generation locations. In addition to wide geographical dispersion of preferably renewable sources, it concerns generation, storage and management close to demand. DES imply optimised self-consumption, direct connection to the distribution network, and possibly at the customer side of the meter.

Harvesting renewable energy flows is nothing more than utilising a natural resource, so it makes sense to approach it from the theory of sustainable use of natural resources. DES are social-technical systems (STS) that need innovation both at the technical as well as the institutional – social – side before becoming part of a 'transition'. The concept of STS shows similarity with the concepts of natural or human-made social-ecological systems (SES), which are the foundation of Ostrom's Common Pool Resources theory.

Fundamental to SESs and common pools, is their wide variety. As these systems include both natural as well as social subsystems, and the key of 'distributed' systems is their geographic dispersal, so their geographic variety is huge. Besides the sunk costs invested in existing hardware of infrastructures, the rules that support the grid's strong centralist character are a key lock-in factor. The characteristics DES and their variety are at odds with the hierarchy and centralised design of current power supply systems. These already face strong existential pressures, partly through the insertion, without system modifications, of variable RE power plants, and associated reliability and capacity issues.

For renewables, the main scarcity factor is not the availability of energy flows, but the space. Hence, the systems in rural spaces with more space, and urban regions with high amount of demand may be very different. The presentation will discuss the STS of distributed power supply, with sources like PV, low temperature heating, storage, electric vehicles, demand-response, and digital monitoring, as well as distributed control, accounting and governance, as they may emerge in urban settings.

**Maarten Wolsink** is currently director of DebWo Independent Research, and as emeritus environmental geography connected to the University of Amsterdam (The Netherlands), first at the Department of Environmental Sciences and then the Department of Geography, Planning & International Development Studies.



**Olivier Labussière, Julien Merlin & Alain Nadaï**  
**Geothermal energy in the Paris Basin: from geological and social heat policies to energy transition**

Our presentation focuses on the deployment of geothermal heat exploitation projects in the Paris basin from the 1970s to the present. It proposes an approach of these projects as geo-socio-technical arrangements whose organization in (geothermal) loop induces specific articulations and stakes, between actors, the underground and the different elements, sometimes free flowing, that compose it (strata, bacteria, corrosive waters, etc.). Important differences appear in the construction of these geothermal "loops" between their articulation with a "social policy of heat" in the 1980s, then with an environmental policy in the early 2000s. If the first one allowed the supply of heat to social housing in the outskirts of Paris at moderate costs, the other one is linked to more efficient buildings, less consuming and calling for other models of profitability, other ways of living and other uses of the underground. Since the 2000s, old boreholes have been renovated (e.g. Maisons-Alfort), new ones have been drilled (e.g. Alfortville), and new geological levels have been explored. The actors and audiences of geothermal energy are changing, initially aimed at social housing users, it is now developed to supply "eco-districts" and is sometimes at the heart of new socio-economic organisations through, for example, community geothermal energy (participatory financing), or the delegation of public services to private actors.

This presentation shows how the geothermal loop is progressively displaced and reconfigured while being connected to environmental policies. It analyses how energy transition policies and the dynamics of housing policies give to geothermal projects a new socio-political content in connection with the subsoil.

Another key point of the presentation is to follow the influence of an uncertain geological "environment" whose ontology is fluid and moving on these geothermal loops. The groundwater distribution, salt or bacteria are being animated while the process of production goes on. These feedback effects challenge the overall socio-technical arrangements (scientific knowledge, visions of profitability, national/local political cooperation) and

shed to the light the interdependence between political and geological realms. To do this, the authors mobilise archives and interviews conducted during their survey.

**Olivier Labussière** is a researcher at the French National Scientific Research Centre (CNRS) and a member of the PACTE Social Sciences Research Centre (Grenoble, France).

**Julien Merlin** is a postdoctoral fellow at Grenoble-Alpes University, CNRS, Sciences Po Grenoble, PACTE.

**Alain Nadaï** is senior interdisciplinary social scientist at CIRED, the International Research Center on Environment and Development, which is part of the French CNRS.



**Bienvenue et introduction : Philippe Hamman & Nadine Roudil**

**Présentations et échanges :**

**Barbara Koch & Ines Gavrilut**  
**A regional cross-border approach to the energy transition:  
Insights from the RES-TMO project with a focus on renewable energy potentials**

It has been found that high quality renewable energy sources (RES) in combination with increased energy efficiency, storage, sector coupling, demand side management and digitalisation can provide good prospects for a low carbon supply of electricity, heat, and fuels for households, transport, and industry. While most studies focus on the EU or national levels, policies are ultimately implemented at regional and local levels. The RES-TMO Interreg project investigates the technical potentials for renewable energy generation in the Upper Rhine region (URR), the opportunities and challenges for the use of these potentials and the necessary energy storage capacities. At the same time, it examines the economic, legal and socio-cultural framework conditions for a resilient and low-emission energy system for the region. This presentation provides insights into the preliminary findings from the RES-TMO project with a focus on the RES potentials. Our results indicate that the generation potentials from Agro- and Ground Mounted (GM)-PV in the region reaches about 968 TWh. Agro-PV alone constitutes the bulk of this potential with 762.3 TWh owing to the regions' high share of agricultural area. The total usable area for Agro- and GM-PV makes up about 33% of the URR total area and of this area about three quarters is designated for Agro-PV. The second largest potential in the region is wind. For wind, the total usable area is about 15.5% of the total URR area. Solar rooftop potential is also significant. According to Fraunhofer ISE, PV and wind power are considered as pillars of the future energy supply. They also constitute the bulk of this region's potential.

**Barbara Koch** is a Professor of Remote Sensing and Landscape Information Systems at the University of Freiburg, Germany. She is currently head of the Upper Rhine Cluster for Sustainability Research (URCforSR) engaging the universities of Eucor–The European Campus.



**Ines Gavrilut** is a researcher and project manager at the Chair of Remote Sensing and Landscape Information Systems of the University of Freiburg in Germany.

**Philippe Hamman**  
**Landscape, citizen mobilization and social acceptability issues around wind energy projects:  
a Franco-German perspective**

This presentation brings the virtuous calls to the energy transition and its technical infrastructure in confrontation with its actual implementation through local renewable energy projects, by studying the case of onshore wind energy projects from a Franco-German comparative perspective. The analysis rests on a comparative review of the recent French-, German- and English-language literature in the social sciences in order to approach and frame the main issues, both on a theoretical and more practical level, related to conflict and participation among key players, scales of action, or the multiple socio-economic, environmental or aesthetic and sensory perceptions of wind energy. The aim is to identify fruitful approaches for the analysis of the “new landscapes” of wind energy, based on analysis of the controversies around citizen participation/mobilisation and social acceptability, while taking into account the insights of research on energy transition/*Wende* at the local scale in both French and German territories.

**Philippe Hamman** is a Professor of Sociology at the Institute for Urbanism and Regional Development within the Faculty of Social Sciences, and a member of the research unit “Societies, Actors and Government in Europe” (SAGE, UMR CNRS 7363), University of Strasbourg, France.



## Pia Laborgne Local Intermediaries in Energy Transitions

Cities are a major context for the consumption of resources, centers for innovation, and a privileged level for experimentation and implementation of new approaches to problem solving. They are thus important starting points for sustainability transitions. These transitions are only in part technical ones, but essentially embedded in, based on, and consisting of changes in social practices and in the organisation of societal problem solving. Following the definition by Zapf (1989), these can be social innovations, e.g. new ways of societal problem solving that are worth imitating and of being institutionalised. Based on case studies (with qualitative interviews) in German cities and on literature, the presentation analyses local energy strategies focusing on the role of social innovations. These can concern practices in energy usages but also in the organization and financing of energy transitions (e.g. building renovations and renewable/decentralised energy production). It e.g. demonstrates a central form of organisational change in local energy transition strategies: the creation of local intermediaries, defined by their function and position in between other actors.

**Pia Laborgne** is a sociologist and researcher since 2004 at EIFER and since 2021 at KIT– Institute for Technology Assessment and Systems Analysis (ITAS), Germany.



## Marius Albiez & Volker Stelzer Energy Transformation in Dialogue: From Knowledge Transfer to Real World Experiments

This presentation deals with the transdisciplinary project Energy Transformation in Dialogue (EDia). The main project goal is to develop, test, and explore different types of participation formats. The project offers spaces for various stakeholders to discuss how we could design energy transition (German Energiewende) as a project of the society as a whole. Marius Albiez & Volker Stelzer integrate disciplinary, interdisciplinary, and transdisciplinary research at the KIT, including questions on the Energy System or Sustainable Development. The presentation will raise the following questions: What are the differences between the so-called Old and New Energy World and what are the connections to the Concept of Sustainable Development? How do we design the different participation formats and who are our target groups? Finally, how do we combine niche technologies as well as questions of justice and diversity in Real World Experiments? One of the key aspects is to conduct knowledge transfer and transformative research at different levels which requires the integration of scientific (inter-) and non-scientific (transdisciplinary) stakeholders.

**Marius Albiez** studied Geoecology and works as an academic staff member at the Institute for Technology Assessment and Systems Analysis (ITAS), Germany.

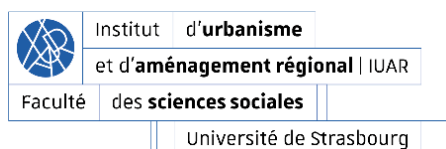
**Volker Stelzer** studied Geography, worked as a consultant and in the public sector, and is, since 2001, an academic staff member at the Institute for Technology Assessment and Systems Analysis (ITAS), Germany.



*Les communications se tiendront en français ou en anglais ; les discussions seront toujours possibles en français / Presentations will be made in English or in French; discussions will be possible in French.*

*Pour plus d'informations et obtenir le lien de connexion concernant les séances en ligne, merci de contacter / For more information and to get the login for the online sessions, please contact:  
Sophie Henck : [s.henck@unistra.fr](mailto:s.henck@unistra.fr)*

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