

Post Carbon Strategy: the case of Fontainebleau

Friday 27 August 2010, by [quattrolibri](#)

We completed an assignment for ARENE (a regional agency promoting new energy and the environment, www.arenidf.org), producing the Post Carbon Strategy for the area of Fontainebleau (2009–2010). Our report is available [here](#).



ARENE also published the 3-min video we created to introduce the key tenets of the [Post Carbon Strategy](#).

(video designed by

[Bouchees Doubles](#))

Post Carbon Strategy

The EU held a conference on Sept. 28. 2007 and published a paper “[Towards a Post Carbon Society](#)“, highlighting that the challenge to cut carbon emissions lies beyond a shift from fossil fuels to renewables, but implies fundamental changes in the demand.

Two major challenges will have to be addressed on the way towards a “post-carbon society”: the adoption of new forms of energy (cf. security

of supply, availability of resources, oil price) and the adaptation to the climate change that is already taking place. Most of the time, these issues are tackled from the supply side and the technological perspective. But the demand side is crucial. The political initiatives, the economic incentives and the social behaviour can make a difference.

The French national agency in charge of the environment and new energy ([ADEME](#)) and the ministry for the Environment ([MEEDDM](#)) have since launched a multi-year research programme “[rethinking cities in a post carbon society](#)” (2009–2011). The programme is ongoing, and we’ve just been selected for the [3rd call for projects](#) to produce a case study based on our work in the Fontainebleau area. The key [findings](#) of the research are available on the programme’s website.

[ARENE Ile de France](#), whose mission is to promote best practices in the field of the environment and new energies in the Ile de France region, has launched a tender to devise the post carbon strategy for the area of Fontainebleau. The agency chose to focus on Fontainebleau for a range of reasons: it is on the fringe of the region, partly rural and partly urban, features a large forest, is surrounded by a natural park, has been the birthplace of the man and biosphere programme of the UNESCO etc. The Fontainebleau City Hall was a technical partner for the assignment and assisted us throughout.

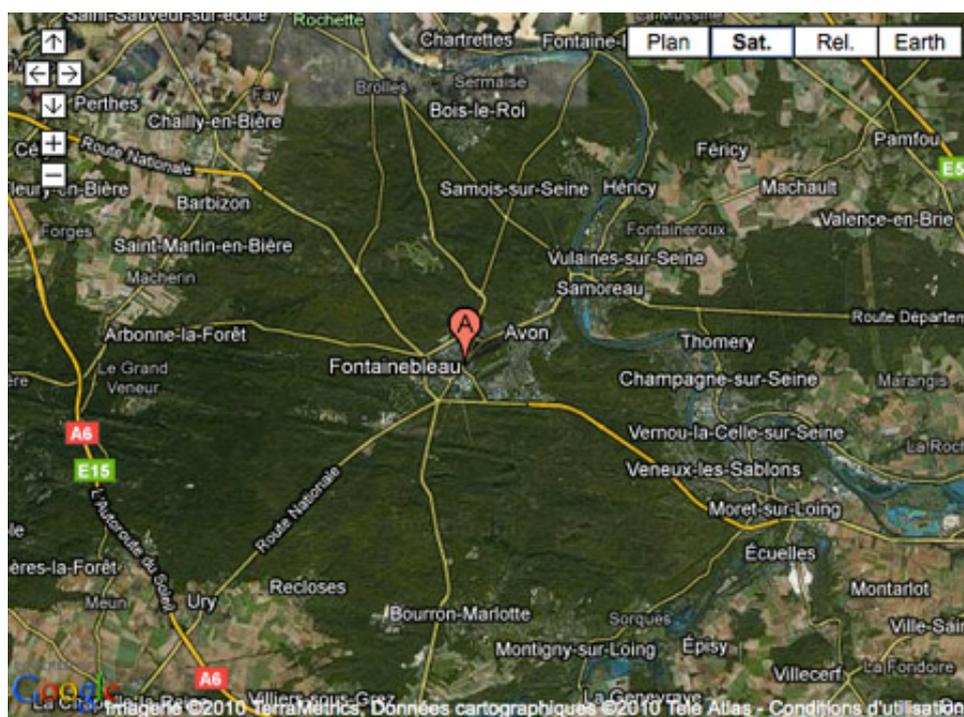
We had previously been working on a range of creation of social businesses around the commuter railway lines in the Paris region and had experimented with systemic design. We were delighted to have been selected for this assignment, which gave us an opportunity to refine and apply our vision of a transition path towards a post carbon society.

Why Fontainebleau?

First, urban areas are a key lever in the post carbon transition: more than 50% of the world population lives in urban areas (80% in France). Second, small urban areas on the periphery of bigger cities have a dual interest: as cities of their own, they face the standard issues of reducing their carbon emissions. As satellite cities, their inhabitants commute towards the bigger urban centres and are key factors of their congestion.

The assignment covered a loosely defined urban area Fontainebleau: Fontainebleau and its twin town Avon form a joint dense urban area at the centre of the forest (25

000ha) surrounded by nearby villages.



Fontainebleau is known the world over, with its castle and its forest attracting respectively 400,000 and 19 million visits each year and its higher education powerhouses (INSEAD, Ecole des Mines, Laboratoire de Biologie Vegetale, National Forest Office) hitting high places in national and international rankings. This is a remarkable achievement for a town of 16,000 inhabitants, about an hour South of Paris.

The area has been singled out in the region's strategic development scheme (Schema Directeur de la Region Ile de France) as one of several "satellites" which should be reinforced to create attraction points in the wider periphery of Paris. The business as usual scenario implies quadrupling the existing railways by 2030, a feat largely out of sight, not to mention the price to pay for new highways. Alternatively, developing attractive satellites away from Paris is seen as a cost effective way to cope with the demands on infrastructure: existing railways and highways could see their reverse traffic increase at marginal cost.

Diagnosis: a vicious circle

With such a prominent historical and natural heritage, it's hard to imagine the hardships of Fontainebleau. Fontainebleau has not found its second wind after the departure of the military (initiated by the departure of the NATO headquarters) and experienced the all-too frequent fate of territories dependent on mono-industries. The population decreased by 25% over the last 40 years; its ranking among the "rich

towns” of its department (Seine et Marne) fell from 2nd to 15th place lately. With less tax payers and increasing maintenance and investment costs, the city hall ran into heavy debts and had to be administered directly by the state in the early 2000’s.

The area is faced with a vicious circle: the local population is decreasing, jobs are being outsourced to Paris and other distant employment centres, inducing long commuter journeys for its active population, increasingly dependent on their individual car and the local railway station close to saturation levels with 6,000 passengers boarding in each morning.

This is a negative illustration of the “fiscal multiplier”: with a limited portion of the money earned in Fontainebleau spent locally, the area isn’t accruing riches or fostering reinvestment into new businesses or local business development.

Car-dependent commuters find it more convenient to shop in supermarkets, where parking is easier than in the crowded town centre (located in the historical part of town, with narrow lanes and limited parking space). Local shops don’t thrive and local employment opportunities shrink, inducing more locals to seek jobs out of town.

Moreover, commuters exiting Fontainebleau in the morning cross those entering town from the nearby villages to work or study there. Out of 10,000 pupils registered in the Fontainebleau schools, only 2,500 live in town. The vast majority of the local hospital’s staff (the main employer in Fontainebleau, with close to 700 jobs) don’t live locally, as wages are insufficient to allow staff to afford to rent or buy in Fontainebleau. The main thoroughfares of Fontainebleau are therefore and unsurprisingly congested at peak hours, with a struggle to create more parking space.

Meanwhile, food produced in the nearby plains of Chailly en Biere (biggest vegetable production centre in the Ile de France Region) is mostly sent out to the National market in Rungis, with a limited exchange of workforce / production between the heart of the forest (Fontainebleau/Avon) and their surrounding production areas. Similarly, the wood production from the forest is hardly used locally: a lack of local transformative industries and commercial structures mean that few houses are heated with local wood pellets or built / renovated with local timber.

The “business as usual” scenario has a high carbon cost: increased commuter journeys and in car usage, marginal use of natural resources for construction and of renewables for heating and power, a weaker business environment less able to finance the renovation of the local infrastructure (private buildings, public equipment), extending the use of energy-intensive buildings.

A business as usual development or a post carbon strategy will have a profoundly different impact on the area. The association [Pole Sud Paris](#) published in July 2010 two prospective scenarii projecting the consequences of such choices over the next 10 years. The scenarii can be found [here](#).

Key Findings

The main section of our report details our conclusions and recommendations, which can be summed up as follows:

The nature of change towards a post carbon era requires massive changes in usage patterns, equipments, infrastructure (a factor 4 of reduction is required by 2050, at the very least),

The pace of change needs to significantly quicken (in the 2006–2050 period we'll need to reduce emissions 7 times as fast as in the 1990–2006 period),

The levers of change need to target the biggest emissions sources (four of the basic needs in the Maslow pyramid are the main issues: Buildings, Employment, Transport, Agriculture),

The policy of change needs to take a systemic view and needs to be coordinated between the key policy areas (little use of promoting cycling if commuters must travel at least 100km per day),

The actors of change need to complement each other (consumer choices, company purchases and investments, infrastructure upgrades, regulations and advocacy each play a role),

The actions of change need to self sustain, with the initial steps seen as “seeds” of a wider ecosystem (eg extend the remits of Community Supported Agriculture to car-sharing and building renovation),

The means of change need to involve private and public sources, with public sources and philanthropy most required to fund the early stages of transition actions,

The scope of change can't be limited to Fontainebleau and actions must be coordinated across the wider area surrounding the forest.

Next steps

We recommended:

To set-up a neutral, [cross party transition structure](#), involving citizens, elected officials, associations, local business people and researchers to coordinate the

transition programme,

To initiate “small steps” actions in key areas, designed to initiate wider streams of actions (we have listed 24 such projects in our [report](#), 13 of which are already implemented in other areas),

To position the area as an [experimental platform](#) for transition strategies, in order to attract new staff, new expertise and new sources of financing,

To replicate and widen the process in similar towns and form a [network of post carbon territories](#) which will share expertise and “learn by doing”,

To strengthen the network of “post carbon pioneers”, notably building on the local AMAP (Community Supported Agriculture) [groups](#).

In complement to our assignment, we took the initiative to submit a proposal for the 4th wave of selection of Living Labs. Our Do Tank Post Carbone (www.dotpoc.org) was selected to join the [European Network of Living Labs](#), an EU initiative launched to support the goals set by the Lisbon agenda (promoting Europe as an innovation powerhouse). The methodology of the Living Labs is centered around users, to ensure that innovations take root and prove useful.



We are now building a case study on this assignment which will feature in the 3rd wave of research from the ADEME / MEEDDM programme ([Repenser les villes dans une société post carbone](#)). We are also raising funds to finance the R&D and emerging stages of some of the recommended projects.

Methodology

We benefited from a wild card from our client and could innovate as we saw fit for this assignment, within the financial means allowed by the contract. We took inspiration from the [Transition Towns network](#) and its focus on a change in demand patterns, a positive and uplifting involvement of citizens and a relocalisation of activities. We were delighted that the ambassador for France of the Transition Network could give a talk in Fontainebleau during our assignment, with a small group of local citizens taking the lead in organising the event.

We started with building trust with key counterparts during our diagnosis phase. We then gathered 54 “VIPs” from the area for a one day session to share and enhance the findings of the diagnosis phase.



Our purpose was to highlight the deep correlation between the main four areas identified in our diagnosis: Buildings, Employment, Transport, Agriculture.

Participants were seated by groups of 10–15, focusing on specific themes in the morning, then shuffled to form multi-thematic tables in the afternoon. We distributed 400 factoids during these sessions, inviting participants to discover key facts about the area and to question why and how they had come out

Factoids and comments from the participants were relayed on twitter, tagged with “tpoc” (which reached to top spot in the most tweeted tags on the day). The sessions are archived on territoirespostcarbone.org/fontainebleau/.

We also asked participants to bring their own food and drinks for the luncheon. We

suggested to pick local produce in season, tongue in cheek as it was February and winter had been harsh. The experience helped participants mingle and level differences, as each was on a par with the others. We managed to keep waste under one binbag for the entire day.

The result was an inspiring mood and we received positive feedback on the experience: politics and personal rivalries were largely put aside, allowing congenial and constructive discussions around the tables.

On the second phase of the assignment, we organised thematic workshops around each of the main strands :

Buildings,
Employment,
Transport,
Agriculture.

A [second day of roundtables](#) was held on May 3rd, where we presented the strategy, then invited the 74 participants to review 24 project proposals to kickstart the first carbon reduction steps and indicate who would take which action when. Our point was to create a direct link between project leaders and the local VIPs and identify local sponsors to build on the projects.

Big thanks to the enlarged team who helped us run these two events and who provided valuable insight throughout.

[Contact us](#) if you want to find out more or have a full briefing on the strategy.



Attached documents

[Post Carbon Strategy for the area of Fontainebleau report](#) (PDF – 1.8 Mb)