The background of the page is a complex, abstract composition of numerous overlapping, translucent blue rectangular blocks. These blocks are arranged in a way that creates a sense of depth and three-dimensional space, with some blocks appearing to be stacked on top of others, while others are offset to the side. The overall effect is a dense, architectural-looking pattern of light blue and white tones, reminiscent of a modernist or Bauhaus style. The blocks vary in size and orientation, creating a dynamic and layered visual texture.

# Energy Histories

**David Gissen** asks how architectural history might be reshaped by the new focus on energies, which will leave the conventions of the discipline redundant. Through three projects he investigates how the tools and preoccupations of history might be reinvented; whether it is through visualisations and conceptual reconstructions of a previously gas-guzzling age or through an atmospheric and climatic archive that replaces the primacy of the photographic archive.



David Gissen

## Reconstruction of Midtown Manhattan c 1975

2002

The drawing engages with the long history of architectural reconstruction, imagining the reconstruction of the corporate milieu of the fully serviced buildings that first permeated Midtown Manhattan in the 1960s. The intention is not to represent the services themselves, but rather to visualise the overall urban effect of the energy-age building. The image portrays what this milieu is as an urban totality. It is in part a response to some of the images within Robert Augustyn's and Paul Cohen's book *Manhattan in Maps* (Rizzoli, 1997), in which the authors included efforts to map the highly corporate Midtown sector of the city. The 'Bollmann Map', one of the most graphically sophisticated representations of Midtown Manhattan included in the book, is an extraordinary image; though it shows the corporate terrain of Midtown well, it cannot capture either how it feels to be in the very spaces of Midtown Manhattan or the unique energy intensity that permeates this part of the city. For example, between the mid-1960s and 1990s, Midtown Manhattan was the world centre for intense indoor air-production; more indoor air was 'manufactured' (so to speak) through the numerous fully serviced buildings within this precinct than anywhere else in the world. *Reconstruction of Midtown Manhattan* captures the immense production of indoor air in these spaces – the scale of air conditioning and its corresponding image of energy use. Here, Midtown is imaged as indoor air and nothing else.

Reconstruction of Midtown Manhattan via an image of its collective air-conditioned spaces.

In an age of architectural concentrations on energy, what will architectural history become? In an era in which the energy model and the fluid dynamic diagram compete with the photograph, how will architecture enter that space we term ‘the archive’? How will the past that pre-exists the current energy obsession be revisualised and resurrected via a continued, yet expanded, emphasis on energy?

The three projects presented here begin to consider how energy as matter and media might impact a larger and new experimental approach to architectural history.

**Within discussions of energy in the history of architecture, energy is often visualised through a charting of energy use or flow – via charts and diagrams – or as something in which the image of the building itself (its photograph) is a synecdoche.**

Reconstruction of Midtown Manhattan, Urban Ice Core/Indoor Air Archive and Plume/Idling all examine energy as an expanded concept that might inform new historical analytical possibilities. They consider the very historical processes and image of history that a renewed focus on energy might engender, and further consider how this historiographic apparatus might beckon the production of a future work, specifically positioned to enter its particular logic. In other words, this historical work suggests as yet unrealised architectural efforts that, in turn, will be engaged by newly equipped historians.

These explorations of energy histories are forms of ‘experimental history’ – a historical analysis that simultaneously refers to a tradition of exploration while developing intrinsic norms in typically idiosyncratic ways that dismantle and reconceptualise those traditions.<sup>1</sup> This experimental work revives non-written forms of historical analysis – namely historical reconstructions and archives – reoriented towards contemporary interests. Both the reconstruction and the archive move through architectural history and theory – consider the fantastic reconstructions of Julien David Le Roy or the incredible image of the architectural archive developed by John Soane within his home and studio as but two of the myriad examples.<sup>2</sup> Both of these early modern projects explore the image of antiquity – a deep concern of architectural thought in early modernity. Though the contemporary efforts illustrated here are situated within the larger programmatic efforts represented by these two works, they also explore how reconstructions and archives might respond to emerging architectural agendas. This latter work also suggests how reconstructions and archives might refer to concerns in architecture yet to be given their due. The reconstruction and the archive are reactualised as powerful historiographic forms – the fantastical reconstruction, the fantastical archive – in a new experimental manner.

Within discussions of energy in the history of architecture, energy is often visualised through a charting of energy use or flow – via charts and diagrams – or as something in which the image of the building itself (its photograph) is a synecdoche.<sup>3</sup> Consider on the one hand charts of energy use that rely either on vector diagrams or energy metrics (for example, ventilation diagrams and comfort charts) or the recurring image in architectural historical examinations of the mid-20th-century curtain-wall skyscraper, where a fixed, inoperable skin stands in for a larger reliance on energy. These non-textual forms of energy illustration (which first entered architectural history via the work of Reyner Banham)<sup>4</sup> have been useful in considering the history of energy in architecture. But neither the metric nor ventilation diagram nor the photograph of the sealed skin adequately convey the particular intersection of its intense

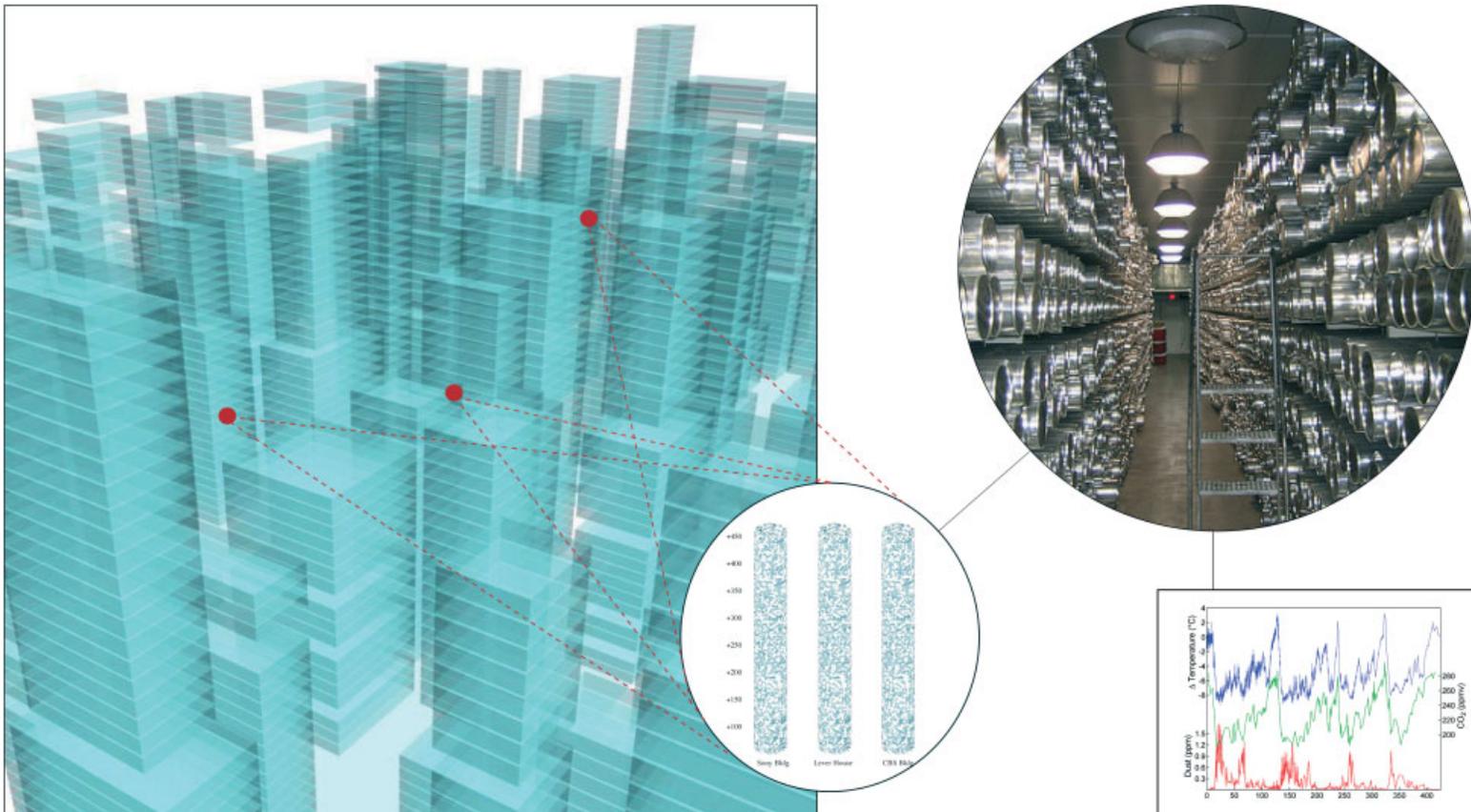
David Gissen

## Urban Ice Core/Indoor Air Archive

2008

Urban Ice Core/Indoor Air Archive carries the reconstruction efforts from Reconstruction of Midtown Manhattan into an exploration of the archive. It considers how this particular environment might be archived, both in Midtown and more broadly. This appears to be an important question as architects such as Philippe Rahm and WEATHERS increasingly experiment in their buildings with the production of new forms of indoor atmospheres in response to energy as a material and discursive form. While this work presents exciting new possibilities for producing new energy flows registered in air, neither the photograph nor the drawing suffice as means of 'storing' such buildings as historical artefacts. The specific content of the air of the interiors of the past is lost to us (its biophysical make-up gone); however, the Urban Ice Core/Indoor Air Archive is a fantasy archive for the retrieval of future data related to the types of manufactured atmospheres that now permeate indoor aircspaces such as those of Midtown Manhattan and the work of selected contemporary architects. A speculative proposal, it imagines using current tools to study the air of the past, but wiring them in reverse. It appropriates the very archive that charts the collective, human impacts of energy use stored in air – the US ice-core project in Colorado – to archive the air within buildings. Samples of the air inside buildings are collected, injected into water and stored in tubes of ice, just like core samples from the North Pole or Antarctica. The project is intended as an agitation and reflection – a commentary on the work of contemporary architects interested in energy flow and its seeming resistance to traditional archival destinations.

Proposed archival techniques for archiving indoor air in buildings, appropriated from techniques used by scientists to study the Arctic and Antarctic.



David Gissen

## Plume/Idling

2008

Plume/Idling returns to the issue of architectural reconstruction. It entails a conceptual reconstruction of the exhaust plumes from the idling buses that once existed within a bus shed designed by Walter Netsch of Skidmore, Owings & Merrill (SOM) in San Francisco in 1951; the building now houses the California College of the Arts. The experience of energy in architecture is often through the environment that is produced for comfort or for specific forms of labour. However, the experience of energy often involves less pleasant, often odious substances – namely the by-products of energy produced by combustion. The reconstructed image of a historical architecture invariably eliminates these latter forms of energy flow. For example, in photographs of important historical buildings in Chicago at the turn of the 20th century, the skies are often filtered or fixed to minimise the city's often dense soot and smog, and the emissions of soot from the buildings themselves are eliminated in historical records. Certainly the published images of the original SOM bus shed lacked any sense of the noxious exhaust that moved through San Francisco at the time. The reconstruction of the plume not only forces a consideration of the particular form of materialised energy that once existed in this space; it also enables us to reflect on its relationship to the current comforting indoor environment of the school and the forms of production that bring it into being. In 'reconstructing' the plume, existing smoky emissions from a neighbouring coal-fired energy plant are filmed and projected onto the floor of the former bus shed.



character – the fleeting sense of temperature and sensation – within a more extensive framework that predominantly defines architecture. Most significantly, such images, which became the dominant historical representations of energy, were incapable of conveying what energy felt like, or the scale of energy as a form of matter in particular space-times. The energy-intensive interiors of the immediate past were spaces in which goose bumps and new chemical odours intermingled in vast zones of atmospheric production – zones that encompassed millions of cubic feet throughout corporate sectors of cities. Additionally, most historical analyses of architectural energy-use often miss all the other myriad forms of energy consumption that swirl around the architectural milieu. The energy-intensive city was one in which energy was pumped into buildings, but it was also a place expressed in plumes of exhaust and soot released from automobiles and power plants.

Considering the above methodological and historical concerns, how can energy be brought experimentally into that set of practices we label ‘architectural history’? How can we both reconstruct the idea of energy that moves through aspects of postwar architectural history and archive our current energy-intensive interiors? One area considered in earlier work is indoor air – a substance that is both the product of architectural energy and a barometer of its effects. But air also needs to be considered more broadly as that sphere in which the by-products of energy – hydrocarbons, carbon dioxide, odours, smoke – are registered. Through various historical reconstructions and considerations of archives the three projects here arrive at images of air that are at the same time images of energy. They are by no means the only examples of how explorations of energy might involve experimentations in architectural history, but they do suggest how a reconsideration of energy and a reconsideration of history might coexist. **D**

#### Notes

1. I am grateful to my colleague Federico Windhausen, a historian of experimental film, for this definition of experimentation. For more on experimental history in social history see Daniel S Milo and Alain Boureau (eds), *Alter Histoire: Essais d'histoire experimentale*, Les Belles Lettres (Paris), 1991, and Daniel Milo, ‘Towards an Experimental History of Gay Science’, *Strategies*, No 4/5, 1991. See also the collection of essays edited by Robert A Rosenstone in *Rethinking History* 5:3, 2001, and Martha Hodes, ‘Experimental History in the Classroom’, *Perspectives: The News Magazine of the American Historical Association* 45, May 2007, pp 38–40.

2. See Julien David Le Roy, *The Ruins of the Most Beautiful Monuments of Greece*, Getty Publications (Los Angeles), 2003.

3. An excellent example of this is Reyner Banham, *The Architecture of the Well-Tempered Environment*, University of Chicago Press (Chicago, IL), 1969. Banham’s imaging strategy is repeated in any number of environmentalist histories of architecture. For social histories of indoor air see Gail Cooper, *Air Conditioning America*, Johns Hopkins University Press (Baltimore, MD), 1998, and Michelle Murphy, *Sick Building Syndrome and the Problem of Uncertainty*, Duke University Press (Durham, NC), 2005. For a geo-architectural approach see David Gissen, ‘The Architectural Production of Nature, Dendur/New York’, *Grey Room*, No 34, 2009.

4. An exception to the Banhamite image of energy can be found in Luis Fernandez Galiano, *Fire and Memory: On Architecture and Energy*. MIT Press (Cambridge, MA), 2000, where the author explores energy as a transhistorical abstraction from Vitruvius to contemporary environmentalism.

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Film and video animation reconstruction of an exhaust plume from one of the buses once housed in a Skidmore, Owings & Merrill bus shed in San Francisco.

