We are surrounded by potential sources of sustainable energy, many of which are currently being exploited for power generation—the sun, wind, water, geothermic activity—but still more remain untapped. The role of the architect in this ecological discourse is to provide practical solutions but also to educate and critique prevailing attitudes about energy; in this spirit, we propose focusing the search for sustainable energy inwards and examining the potential of our own bodies. What are the possibilities for human power?

The CROWD FARM—which reoccupies a train station in the center of Torino, Italy—considers the body as an essential, participatory, and kinetically-charged agent of sustainable urban and architectural environments. We propose to harness these everyday movements and ambient exertions as a means of generating power. The future of sustainable energy production will reject monolithic power plants in favor of varied and dispersed microgeneration.

Within the CROWD FARM, the energy expended in each step is harnessed by a responsive flooring system; the accretion of footsteps across an urban scale site generates the power supply for a series of public spaces. While the energy gathered from such human movements may be relatively slight, the energy to be gained from the movements of an entire population becomes significant.

The CROWD FARM tectonic system facilitates the creation of new urban landscapes in which human tendencies for gathering and movement are used to generate architectural forms. A fitting test case—a train station and public space in Torino—demonstrates the CROWD FARM’s potential for shaping the urban environment.

Designed to promote human movement across the site at all hours of the day, the project encourages (and actively responds to) various flexible spatial conditions which engender crowd-generating programs. In addition to a regional train station, the site also includes two subway stations, an athletic field with a spectator area, music halls, theatres, night clubs, and a large gathering space for rallies, demonstrations, or celebrations.

There is a growing urgency to develop alternative sources of energy, and we must look closely at the interaction of the human body with its built environment. The potential for power generation from the simple act of walking is significant across large populations; the CROWD FARM provides a method for harnessing this energy while also promoting an awareness of the role we play in the ecology of urban spaces. We see the opportunity for a new type of self-sustaining civic landscape, where tectonics and architectural form actively engage the occupants in a participatory, dynamic, and generative relationship.