IN TIME?

Analytically energised.

Sectional drawings expressing the dynamic morphology of the changing ground activating various use cases for the same space whilst showcasing a possible scenario of fucntional adaptation.

Geometry optimization.

Pre-Optimization Radiation analysis

April — — — — — — — — — — — — November

PIE 1   PIE 2   PIE 3   PIE 4   PIE 5   PIE 6   PIE 7

Post-Optimization Radiation analysis

April — — — — — — — — — — — — November

Production and Consumption Matrix

Primarily incident radiation on the geometry of each pie is calculated for the summer, starting from the month of April to the month of October. The geometry is further **optimised algorithmically in order to maximise its radiation exposure.** Twenty-four of the "hour-columns" are organised in the same geometric pattern for each of the pies. However, the modulations and the resulting variations of the optimised geometry reflect in the differential heights of these columns. The column design remains fixed proportionally.

The Solar-Fins on these columns are made up of Multi-Junction Solar Cells which have a higher conversion efficiency (theoretically C.E. = 86.8%) than that of traditional photovoltaics (theoretically C.E. = 33.3%). However for the energy production calculation for this proposal, the *conversion efficiency is assumed to be 42.5%* to reflect a real-life scenario. On Calculating 42.5% of annual incident radiation, the proposal is set to generate 1077.6 MWh. Each Pie has a significant contribution with, Pie 1 at about 14.67%, Pie 2 at about 16.38%, Pie 3 at about 15.08%, Pie 4 at about 11.64%, Pie 5 at about 14.72%, Pie 6 at about 11.50%, and Pie 7 about 15.97% respectively.

About 67% of the total energy produced is directed to the city grid, supporting approximate 200 households based on the average household consumption of 3500kWH (2), and the remaining 43% is utilised by the proposal itself.

Energy production and consumption.

| PIE 1 | with Sub-Fins. | 27% | 376.50 MWh |
| | Main-Fins. | 73% | |

| PIE 2 | with Sub-Fins. | 24% | 420.42 MWh |
| | Main-Fins. | 76% | |

| PIE 3 | with Sub-Fins. | 27% | 387.02 MWh |
| | Main-Fins. | 73% | |

| PIE 4 | with Sub-Fins. | 45% | 298.90 MWh |
| | Main-Fins. | 55% | |

| PIE 5 | with Sub-Fins. | 45% | 377.90 MWh |
| | Main-Fins. | 55% | |

| PIE 6 | with Sub-Fins. | 47% | 295.16 MWh |
| | Main-Fins. | 53% | |

| PIE 7 | with Sub-Fins. | 27% | 410.03 MWh |
| | Main-Fins. | 73% | |

Interior View of the PIE 1 , design addressed by a Jogging Track with stepped sides allowing indefinite functional take-overs.