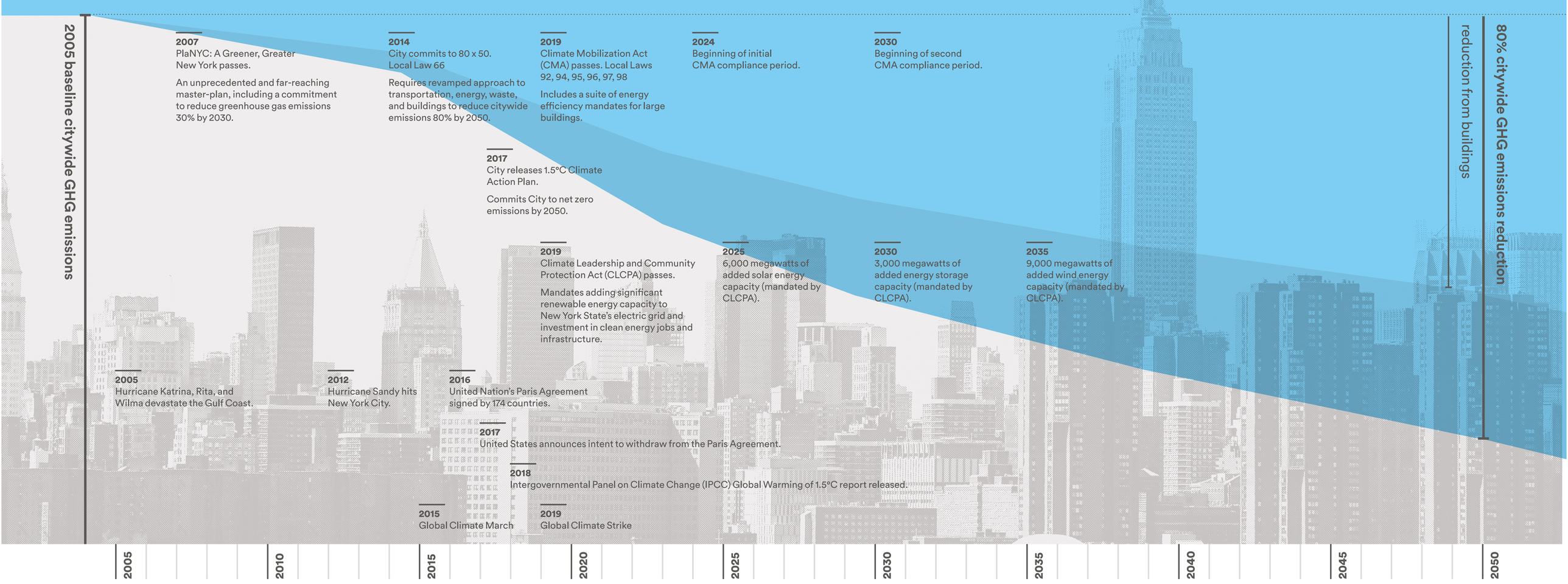
the road to 80 x 50

New York City law requires that greenhouse gas emissions be reduced 80% by 2050. Reducing emissions across all sectors, including buildings, necessitates collaboration between City and State governments, utilities, building decision makers, and occupants to make this law a reality.

reducing building emissions 80% with state and city legislation

According to United Nations climate scientists, developed countries must reduce emissions 80% (relative to 2005 levels) by 2050 to limit global temperature increase to no more than 1.5 degrees Celsius above pre-industrial levels and avoid the worst effects of climate change. New York City and State climate policies are aligned to meet this goal. New York City's Climate Mobilization Act (CMA) places increasingly stringent limits on emissions from the City's multifamily, commercial, and other large buildings, with an eye towards an 80% reduction in sector-wide emissions by 2050. Reduced building emissions will account for the majority of New York City's overall 80% reduction in emissions.

New York State's Climate Leadership and Community Protection Act (CLCPA) mandates a shift in how electricity for those buildings is produced. The CLCPA requires that New York State add significant renewable energy and energy storage capacity by 2035, providing reliable access to the clean energy sources buildings need to meet City-mandated emissions reductions.



tools for 80 x 50 buildings

Clean Buildings

Accelerating the transition to clean, efficient buildings is central to New York City's plan to reduce emissions 80% by 2050. Currently, buildings account for 66% of New York City's emissions. On-site combustion of natural gas, primarily for heat and hot water, accounts for 46% of that total. Combustion of fossil fuels to produce electricity to power building systems, meanwhile, is responsible for another 40%.[1] The City's 80 x 50 commitment requires replacing fossil fuels with clean, renewable energy sources while increasing energy efficiency in buildings. The Climate Mobilization Act meets these goals by:

- **Establishing** annual emissions limits for buildings over 25,000 sqft and imposing fines on buildings exceeding those limits
- **Promoting** the use of renewable energy credits (RECs) to support growth of local renewable energy capacity
- **Mandating** the installation of solar photovoltaic and green roof systems for all new roof construction
- **Requiring** buildings to publicly display energy performance grades

Clean Power

As buildings shift away from on-site fossil fuel combustion, they will increasingly rely on electricity—a process known as electrification. To maximize emissions reduction, there must be an accompanying shift away from fossil fuel as a primary means of generating electricity. New York State's Climate Leadership and Community Protection Act lays the groundwork for New York to phase out fossil fuels by:

- **Mandating** that New York State generates 70% of its electricity using renewable sources by 2030, increasing to 100% clean electricity by 2040, through the addition of:
  —
  6,000 megawatts of solar energy capacity by 2025
  —
  3,000 megawatts of energy storage capacity by 2030
  —
  9,000 megawatts of offshore wind energy capacity by 2035
- **Committing** to reaching a net-zero greenhouse gas emissions economy, across all sectors by:
  —
  Requiring 85% emissions reductions by 2050
  —
  Requiring carbon capture projects to reduce or offset remaining emissions

1 *One City Built to Last: Technical Working Group Report*, NYC Mayor's Office of Sustainability (MOS), 2016, p. 34.