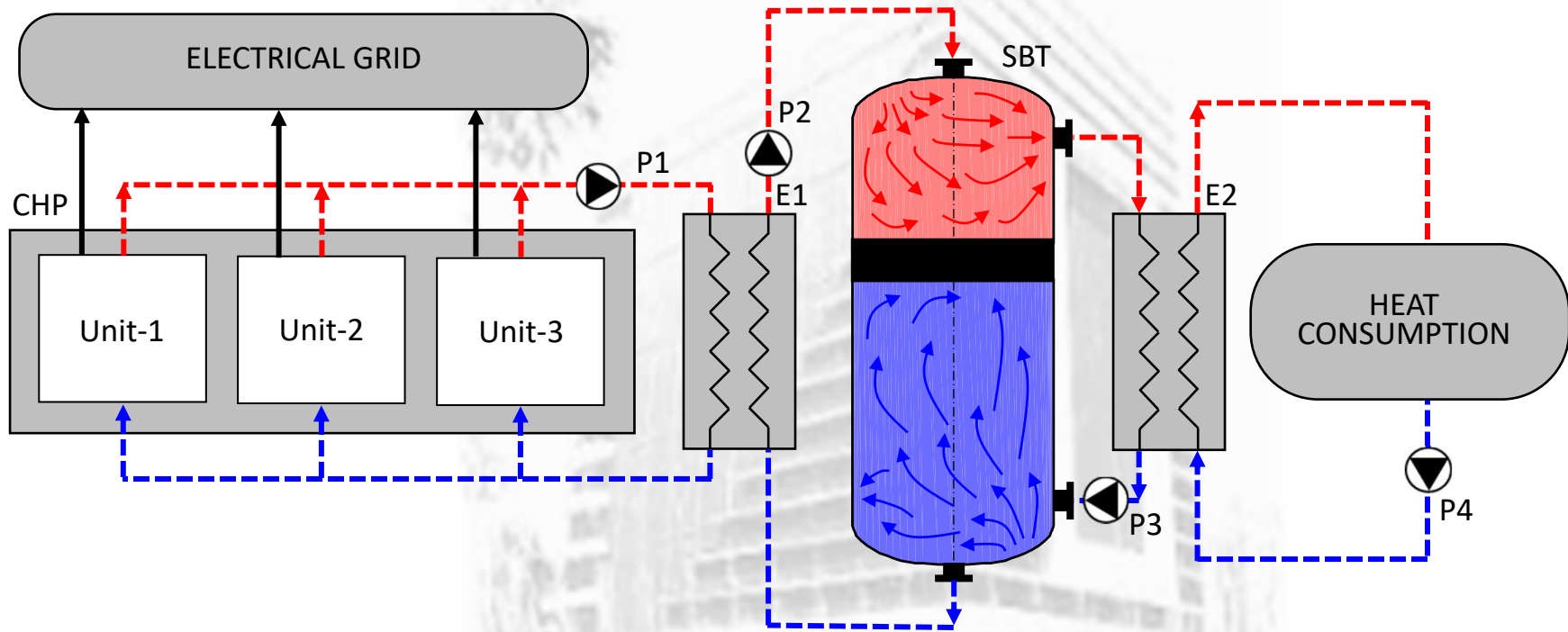


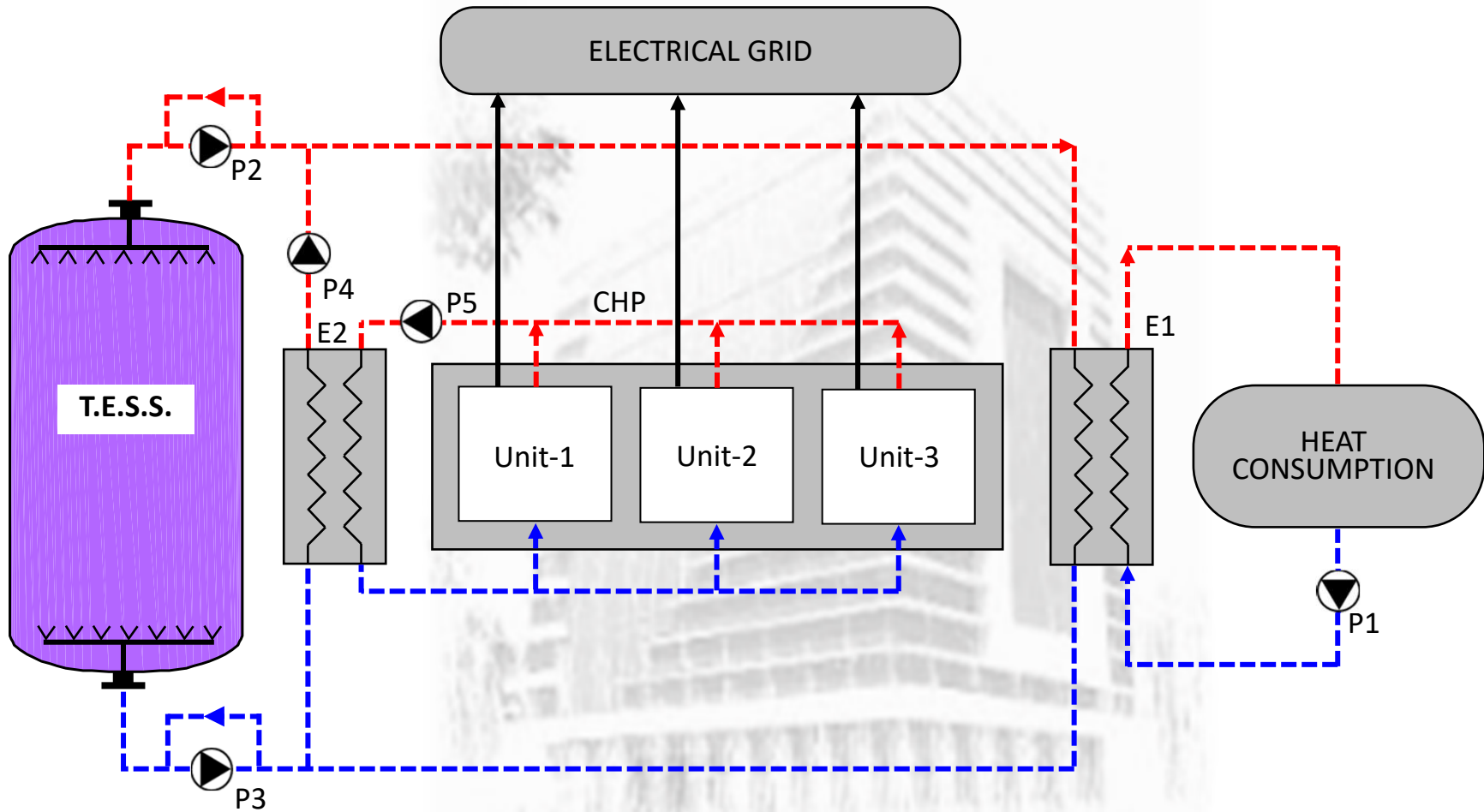
NEW SBT COMBINED HEAT & POWER
SBT THERMAL STORAGE SYSTEM



LEGEND:

- | | |
|---|----------------------|
| P – Pump | —> Low Temp. Return |
| E – Heat Exchanger | —> High Temp. Supply |
| SBT – Split Buffer Tank Thermal Storage | |

CONVENTIONAL COMBINED HEAT & POWER
T.E.S.S. THERMAL STORAGE SYSTEM



LEGEND:
P – Pump
E – Heat Exchanger
T.E.S.S. – Thermal Energy Storage System
—> Low Temp. Return
—> High Temp. Supply

CHP SBT-SYSTEM ADVANTAGES

- The SBT/ZERO-MIXING improves overall plant thermal efficiency by eliminating heat-transferring diminishing-returns due to Water-Mixing during the reheating and storing process in commercial TESS buffers.
- Improve overall CHP system performance/economy due to doubling thermal-mass storage [CHP SBT-System runs at $\Delta T \approx 40^\circ\text{C}/50^\circ\text{C}$ compared to customary $\Delta T \approx 10^\circ\text{C}/20^\circ\text{C}$].
- Reduced conventional CHP-system hydronics oversize [including, piping & valves, pumps and VSDs].
- CHP SBT-System creates opportunities for greater CO2 emissions reductions.

HEAT BALANCE:

