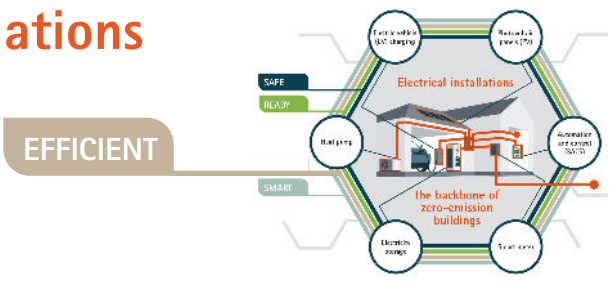
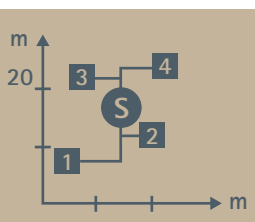
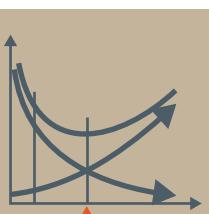
Efficient in-building electrical installations can save 1% of the electricity generated in Europe



Basic principles



Optimal location


Proper sizing

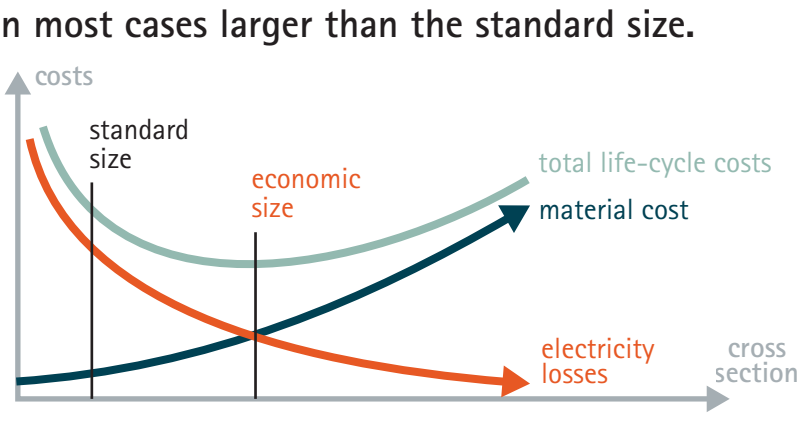

Load management


Control and monitoring

Proper sizing

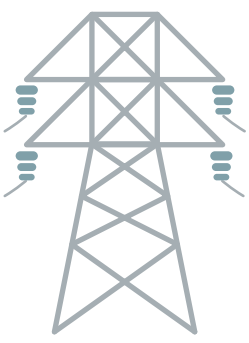
Increasing the conductor cross section reduces the energy losses.

The optimal size to achieve minimum life-cycle cost is in most cases larger than the standard size.

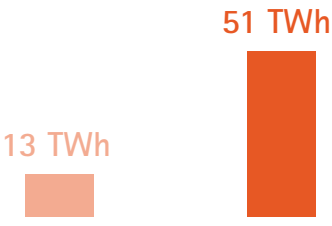


Electricity generation and losses in the EU in 2017

3,100 TWh generated



2% lost in behind-the-meter network



current losses: residential non-residential

Electricity savings potential (annual)

1% of electricity generated can be saved

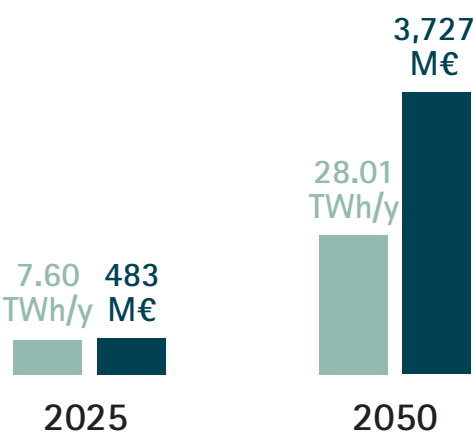
by optimisation of electrical installations of non-residential buildings

savings potential: non-residential

63% of losses in non-residential buildings can be avoided

By applying economic optimisation standards to new and renovated non-residental buildings

Savings in ENERGY and ELECTRICITY COST



Payback time from 2.5 years with expected installation lifetime of 25 years

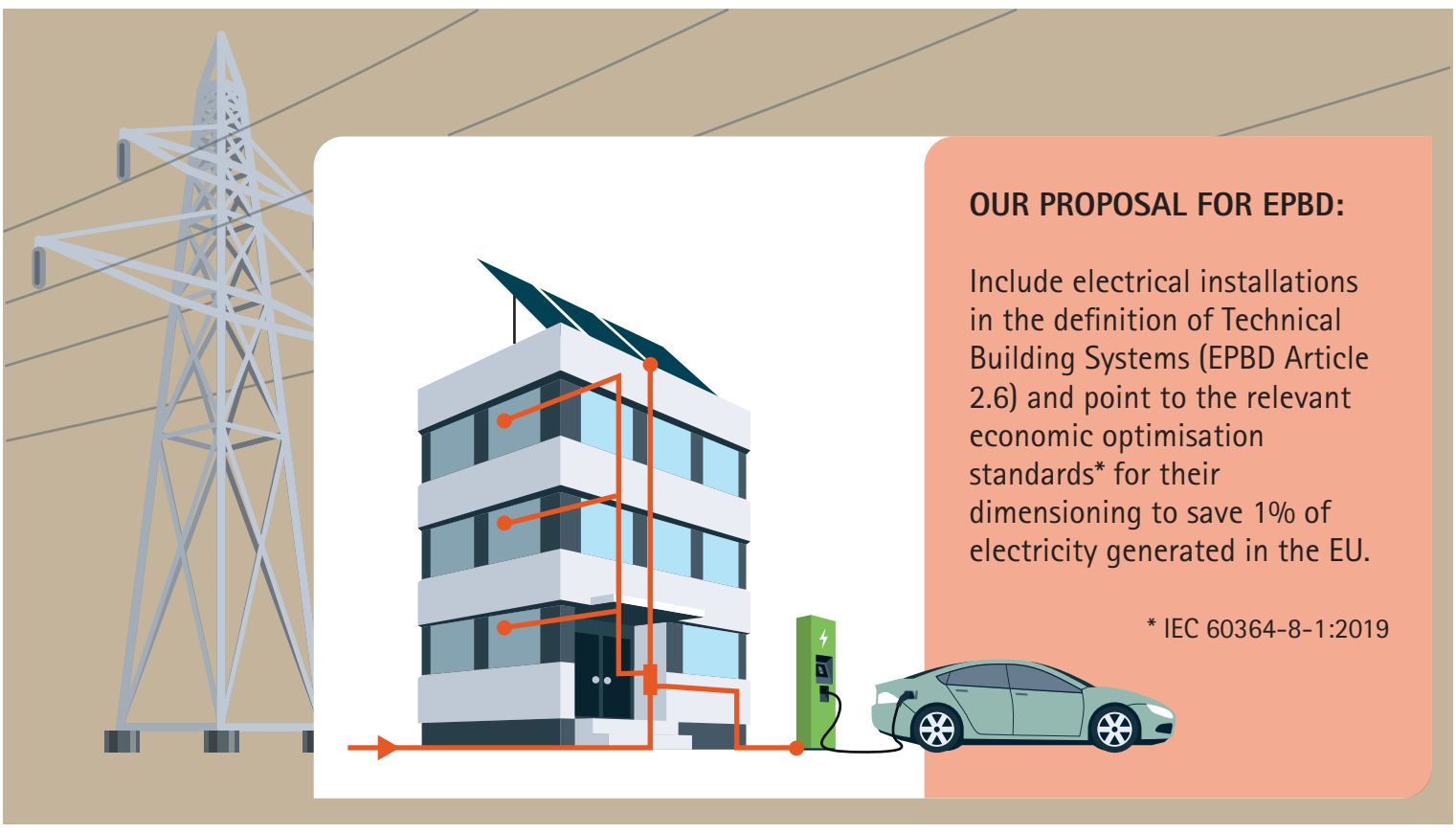
Additional advantages ...


Improved power quality


Improved fire safety


Higher overload capacity

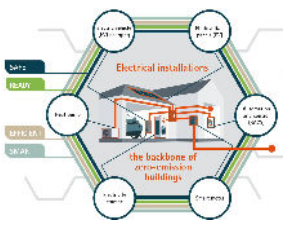
... making buildings future ready



OUR PROPOSAL FOR EPBD:

Include electrical installations in the definition of Technical Building Systems (EPBD Article 2.6) and point to the relevant economic optimisation standards* for their dimensioning to save 1% of electricity generated in the EU.

* IEC 60364-8-1:2019



Further information:

ECONOMIC CONDUCTOR SIZE OPTIMISATION IN BUILDINGS - White Paper, ECI, December 2020

Electrical installations are the backbone of zero-emission buildings

The EPBD must make them safe, ready, efficient and smart - Infographic, ECI, December 2020

Cu European Copper Institute
Copper Alliance

Copper is a key element for decarbonisation of the building stock due to its inherent properties, particularly its excellent thermal and **electrical conductivity**, making it the material of choice for low carbon, efficient and smart building technologies.