

LEGEND: KPI'S PRINCIPLES

KPI's principle 1:

- ➔ KPI 1.1 measuring the internal exchange of the DHC system; an ideal 5GDHC grid will only need a very limited amount of energy supplied from sources, because of the optimal exchange of heating and cooling between the buildings/end-users
- ➔ KPI 1.2 measuring the self-sufficiency of the DHC system; an ideal 5GDHC network will need no, or only a very limited amount of, energy supplied from sources outside of the defined boundaries of the system.

KPI's principle 2:

The goal of this KPI is to assess the (mis)match between the quality of the energy supplied to the system and the requested quality (temperature) level of the demand. An ideal 5G DHC network should maximize the use of the local (both internal and external) low-grade energy sources.

KPI's principle 3:

The goal of the KPIs associated with this principle are to provide a measure for the demand drivenness and the measure of decentralization of the system. Therefore, two different KPIs have been defined:

- KPI 3.1 quantifying the demand-drivenness of the system for both heating and cooling
- KPI 3.2 quantifying the measure of decentralization of the system

KPI's principle 4:

The goal of the KPIs associated with this principle is to get an idea on the peak load shaving or peak load reduction

- KPI4.1: compare the virtual heating power required, to the installed power (capacity) in design or in operation
- KPI4.2: compare the virtual cooling power required, to the installed power (capacity) in design or in operation
- KPI4.3: overall COP (Coefficient of Performance) of the DHC system

KPI's principle 5

The goal of the defined KPIs associated with this principle are to assess the use of local energy source by quantifying the proximity of the energy sources:

- KPI 5.1 – relates only to the energy sources other than electric energy
- KPI 5.2 – assesses the proximity of electric energy sources directly incorporated in the network