# **Gap assessment**

**Based on the port’s knowledge & energy mapping**

Guidelines: Use already filled-in data of port energy mapping and own knowledge of port premises to identify existing gaps in the following sections. You can tick boxes with given examples of drawbacks, but it is also recommended to add “own options”. The more complete these seven categories are answered, the better port problems or baseline is known and understood. This gap assessment will be applied in deciding on the selection process of applicable measures, which will form the foundation for the port's strategic energy management plan.

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|  | **METERS** |
|  | lack of electricity data for areas/buildings |
|  | lack of separate data: heating / cold and hot water / lighting / ventilation / fuel / gas |
|  | lack of real-time data |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **HEATING** |
|  | lack of room temperature regulators |
|  | malfunction of heater(s) |
|  | insufficiency of the current heater(s) |
|  | aged/obsolete heating equipment |
|  | inadequate heating technology |
|  | high energy bills |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **LIGHTING** |
|  | low energy efficiency |
|  | heat generation |
|  | mercury content in light bulbs |
|  | lack of intensity controllers, occupancy sensors, time clocks, etc. |
|  | excessive electricity bill |
|  | low service life |
|  | flickering lights |
|  | long time to warm up for full lighting capacity |
|  | old-fashioned design |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **BUILDINGS** |
|  | low energy class |
|  | high monthly energy use |
|  | excessive energy (heating, electricity) bills |
|  | low indoor air quality |
|  | regular heat leakages on infrared images |
|  | occasional heat losses due to other factors |
|  | obsolete materials: walls, windows, roof |
|  | local defects: walls, windows, roof |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **ALTERNATIVE FUELS** |
|  | lack of chargers for plug-in vehicles |
|  | lack of parking for bikes when cycling is allowed |
|  | lack of LNG bunkering infrastructure |
|  | lack of onshore power supply for vessels at berth |
|  | lack of fuel alternatives for current traditional fuel use for heating or vehicle fuel: for instance, cleaner liquid (e.g., biodiesel, bioethanol), solid (e.g., wood pellets) and gaseous (e.g., biogas, LNG, synthetic gas) fuels |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **RENEWABLES** |
|  | lack of green energy solutions in port: own or contracted |
|  | unutilized potential: solar / wind / biomass / wave / geothermal energy |
|  | * Other [**own option**]: Click or tap here to enter text. |

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|  | **EFFICIENCY** |
|  | low level of energy-saving practices among personnel |
|  | lack of energy audit on an annual basis |
|  | lack of adaptive and smart lighting systems |
|  | lack of thermoregulators for heating |
|  | lack of thermal infrared images for port buildings |
|  | lack of hybrid engines in port vehicles |
|  | existing leakages in pipes or other systems |
|  | lack of modern digital solutions for efficient energy management |
|  | lack of energy policies and strategies |
|  | lack of environmental policies and strategies |
|  | * Other [**own option**]: Click or tap here to enter text. |