































## 6 Appendix

Below are the leading indicators for capital investments for two sample cities.

### Leading indicators for capital investments in city decarbonization

Example: City D

Category	Indicator	CapEx (MEUR 2020-2030)	Indicator unit	Indicator in 2020	Indicator in 2030	CO <sub>2</sub> reduction (Mt CO <sub>2</sub> 2020-2030)	
Transportation	Electrification of cars	213	% of total vehicle-kilometers electrified (alternatively % of fleet electric vehicles)	12%	95%	0.4	Fleet of internal combustion engines increasingly replaced with battery electric vehicles
	Electrification of trucks	207		12%	95%	0.3	
	Electrification of buses	42		0%	100%	0.02	
	Shift to public & non-motorized transport	77	% of passenger-kilometers as public transport or walking/cycling	28%	40%	0.4	Public transport includes shift to buses and trains
Buildings	Major renovations <sup>1</sup> (excluding district heating)	343	% of building stock deep energy retrofitted between 2020-2030	0% <sup>3</sup>	32%	3.1	Low CO <sub>2</sub> heat generation includes shift to electrical heat pumps
	Low CO <sub>2</sub> heat generation including district heating	569	% of total heating demand supplied by renewables	79% <sup>4</sup>	100%	1	New buildings and renovation indicator based on EU Taxonomy
	Efficient lighting & appliances	79	% of building stock retrofitted	0%	36%	0.09	For example, washing machines
	New nearly zero-energy buildings (NZEB) <sup>2</sup>	56	% of building stock composed of new NZEB <sup>3</sup> 2020-2030	0%	5%	0.02	New buildings and renovation indicator based on EU Taxonomy
Electricity	Low CO <sub>2</sub> electricity generation	601	% of total electricity production coming from renewables	32%	100%	7.6	Shift from fossil to renewables such as wind and solar
<b>Total</b>		<b>2,187</b>					

Note: 1) EU Taxonomy Report, Technical Annex, EU Technical Expert Group on Sustainable Finance, March 2020, Page 380 (2) Page 375 of Taxonomy Report, Technical Annex, "net primary energy demand of the new construction must be at least 20% lower than the primary energy demand resulting from the relevant nearly zero-energy buildings' requirements." (3) Not including previous retrofits, i.e., not counting earlier retrofits conducted under other financing (4) Including certain share of solar waste incineration (5) Not counting previous construction of energy efficient building, i.e., not counting earlier building retrofits conducted under other financing

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### Leading indicators for capital investments in city decarbonization

Example: City E

Category	Indicator	CapEx (MEUR 2020-2030)	Indicator unit	Indicator in 2020	Indicator in 2030	CO <sub>2</sub> reduction (Mt CO <sub>2</sub> 2020-2030)	
Transportation	Electrification of cars	971	% of total vehicle-kilometers electrified (alternatively % of fleet electric vehicles)	1%	30%	1.2	Fleet of internal combustion engines increasingly replaced with battery electric vehicles
	Electrification of trucks	11		0%	25%	0.3	
	Electrification of buses	58		5%	50%	0.4	
	Shift to public & non-motorized transport	316	% of passenger-kilometers as public transport or walking/cycling	49%	53%	0.7	Public transport includes shift to buses and trains
Buildings	Major renovations <sup>1</sup> (excluding district heating)	2,850	% of building stock deep energy retrofitted between 2020-2030	0% <sup>3</sup>	26%	0.7	Low CO <sub>2</sub> heat generation includes shift to electrical heat pumps
	Low CO <sub>2</sub> heat generation including district heating	2,910	% of total heating demand supplied by renewables	12% <sup>4</sup>	63% <sup>4</sup>	12	New buildings and renovation indicator based on EU Taxonomy
	Efficient lighting & appliances	1,543	% of building stock retrofitted	0%	33%	2	For example, washing machines
	New nearly zero-energy buildings (NZEB) <sup>2</sup>	110	% of building stock composed of new NZEB <sup>3</sup> 2020-2030	0% <sup>5</sup>	7%	0.1	New buildings and renovation indicator based on EU Taxonomy
Electricity	Low CO <sub>2</sub> electricity generation	1,535	% of total electricity production coming from renewables	57%	88%	20	Shift from fossil to renewables such as wind and solar
<b>Total</b>		<b>10,301</b>				<b>38</b>	

Note: 1) EU Taxonomy Report, Technical Annex, EU Technical Expert Group on Sustainable Finance, March 2020, Page 380 (2) Page 375 of Taxonomy Report, Technical Annex, "net primary energy demand of the new construction must be at least 20% lower than the primary energy demand resulting from the relevant nearly zero-energy buildings' requirements." (3) Not including previous retrofits, i.e., not counting earlier retrofits conducted under other financing (4) Including certain share of solar waste incineration (5) Not counting previous construction of energy efficient building, i.e., not counting earlier building retrofits conducted under other financing

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