

## UNIT INVESTMENT COSTS INDICATORS FOR ENERGY INFRASTRUCTURE CATEGORIES

(04.07.2023)

Asset category	Subcategory	Average UIC	Median UIC	Q1	Q3	N. of assets
<b>Overhead line (million EUR/km)</b>	110-150 kV 2 circuits	0,325	0,26	0,224	0,393	3
	220 kV 1 circuit	0,412	0,362	0,303	0,543	7
	220 kV 2 circuits	0,53	0,503	0,442	0,673	21
	330 kV 2 circuits	0,574	0,530	0,522	0,573	5
	380-400 kV 1 circuit	0,465	0,397	0,298	0,606	18
	380-400 kV 2 circuits	1,261	1,05	0,533	1,635	45
<b>Underground cable (million EUR/km)</b>	110 - 150 kV 1 circuit	0,831	0,551	0,425	0,643	14
	110 - 150 kV 2 circuits	2,232	1,68	0,847	3,065	4
	220 - 225 kV 1 circuit	1,778	1,91	1,234	2,108	16
	220 - 225 kV 2 circuits	4,402	4,387	4,232	4,556	4
	300 - 500 kV 1 circuit	1,309	1,131	1,046	1,394	4
<b>Submarine cable (million EUR/km)</b>	AC	2,007	2,468	1,203	2,527	9
	DC	1,108	1,086	0,903	1,258	6
<b>Offshore transmission cable (million EUR/km)</b>		3,289	3,003	2,761	4,339	7
<b>AC substations (million EUR/asset)</b>	0-5 bays New AIS	11,713	6,692	3,589	16,907	24
	0-5 bays New GIS	10,468	8,204	5,166	11,083	8
	0-5 bays Refurbishment/Upgrade AIS	3,401	2,789	2,116	4,300	28
	0-5 bays Refurbishment/Upgrade GIS	4,448	2,405	1,991	6,397	13
	6-9 bays New AIS	12,141	9,943	8,179	16,681	24
	6-9 bays New GIS	9,821	9,554	7,815	11,530	20
	6-9 bays Refurbishment/Upgrade AIS	15,378	11,803	6,807	23,436	14
	10-60 bays New	43,572	30,601	22,72	58,867	13
	10-60 bays Refurbishment/Upgrade	29,246	24,459	20,876	41,917	10
<b>Transformers (million EUR/asset)</b>	150/60	1,212	1,098	1,098	1,27	3
	220/66	1,536	1,592	1,34	1,72	12
	330	2,445	2,494	2,419	2,495	3
	400/110	4,356	4,345	3,633	4,729	15
	400/220	4,631	3,847	2,944	6,816	7
<b>HVDC converters (million EUR/kWh)</b>		0,150	0,147	0,127	0,193	7
<b>SSSC (million EUR/MVA)</b>		0,03	0,025	0,018	0,04	15
<b>Synchronous condensers (million EUR/asset)</b>		46,599	50,682	36,463	51,041	5

<b>Compression station (million EUR/MW)</b>	<1MW	14,511	16,046	10,868	18,271	6
	10-50 MW	4,274	4,284	4,252	4,300	3
<b>Advanced metering equipment - chromatograph (million EUR/ asset)</b>		0,126	0,123	0,114	0,137	3
<b>Hydrogen pipelines (million EUR/km)</b>		2,271	2,244	2,216	2,299	4

**The list of abbreviations:**

*UIC – Unit Investment Cost*

*Q1 – first quartile*

*Q3 – third quartile*

*N. of assets – the number of assets submitted and taken into account for calculation*

*SSSC – Static Synchronous Series Compensator*

*EUR/MVA – Costs per unit – Eur per capacity/(installed power) in Megavolt Ampere*

*EUR/km – Costs per unit – Eur per length in kilometres*

*MW - Megawatt*