



eNeuron

optimising local **energy** communities

eNeuron Database

The eNeuron Database is a collection of time series based on real and synthetic data that will support the simulation of the scenarios in the eNeuron project. It includes an important distribution of energy carriers and technologies to be used in the eNeuron scenarios. The time series are devoted to generation, consumption and storage, divided in several energy carriers (e.g. electricity, natural gas, hydrogen, heat and cooling) and technologies (e.g. photovoltaic, wind, CSP, diesel generators, CHP, Electrolizers, batteries). There is an intention for the eNeuron database to continue growing with new time series inputs during the eNeuron project duration. In what follows, a summary of the inputs available at this moment is presented.

ID	Vector Type	Energy carrier	Technology/Type of consumption	Sector	Data Origin	Data resolution (min)	Time Horizon (months)
001	Generation	Electricity	Wind	Industrial	Synthetic	60	12
002	Generation	Electricity	Wind	Industrial	Real	10	12
003	Generation	Electricity	Wind	Independent	Real	10	84
004	Generation	Electricity	Photovoltaic	Independent	Synthetic	60	360
005	Generation	Electricity	CSP	Independent	Real	10	60
006	Generation	Electricity	Photovoltaic	Independent	Real	10	60
007	Generation	Electricity	Wind	Independent	Real	15	24
008	Generation	Electricity	Wind	Independent	Real	15	12
009	Generation	Electricity	Wind	Independent	Real	15	12
010	Generation	Electricity	Wind	Independent	Real	15	120
011	Generation	Electricity	Wind	Independent	Real	15	156
012	Generation	Electricity	Photovoltaic	Independent	Real	15	120
013	Generation	Electricity	Wind	Independent	Synthetic	60	360



ID	Vector Type	Energy carrier	Technology/Type of consumption	Sector	Data Origin	Data resolution (min)	Time Horizon (months)
014	Generation	Electricity	Photovoltaic	Office	Real	1	12
015	Consumption	Electricity	Electric consumption	Educational	Real	1	24
016	Consumption	Electricity	Electric consumption	Educational	Real	1	24
017	Consumption	Electricity	Electric consumption	Educational	Real	1	24
018	Consumption	Electricity	Electric consumption	Educational	Real	1	24
019	Generation	Electricity	Hydro	Industrial	Real	60	78
020	Generation	Electricity	Hydro	Industrial	Real	60	78
021	Generation	Electricity	Hydro	Industrial	Real	60	12
022	Generation	Electricity	Hydro	Industrial	Real	60	84
023	Generation	Electricity	Hydro	Industrial	Real	60	14
024	Generation	Electricity	Hydro	Industrial	Real	60	14
025	Generation	Electricity	Hydro	Industrial	Real	60	78
026	Generation	Electricity	Hydro	Industrial	Real	60	78
027	Generation	Electricity	Hydro	Industrial	Real	60	12
028	Generation	Electricity	Hydro	Industrial	Real	60	12
029	Generation	Electricity	Hydro	Industrial	Real	60	24
030	Generation	Electricity	Hydro	Industrial	Real	60	78
031	Generation	Electricity	Hydro	Industrial	Real	60	65
032	Generation	Electricity	Hydro	Industrial	Real	60	78
033	Generation	Electricity	Hydro	Industrial	Real	60	78
034	Generation	Electricity	Hydro	Industrial	Real	60	58
035	Generation	Electricity	Hydro	Industrial	Real	60	78
036	Generation	Electricity	Photovoltaic	Educational	Real	1	24
037	Generation	Electricity	Photovoltaic	Educational	Real	1	60
038	Consumption	Electricity	Electric consumption	Residential	Synthetic	60	12
039	Consumption	Heat/Cooling	HVAC	Residential	Synthetic	60	12
040	Consumption	Electricity	Electric consumption	ALL	Synthetic	60	12
041	Consumption	Heat	HVAC	ALL	Synthetic	60	12
042	Consumption	Cooling	HVAC	ALL	Synthetic	60	3
043	Storage	Electricity	Battery	Educational	Synthetic	60	12



ID	Vector Type	Energy carrier	Technology/Type of consumption	Sector	Data Origin	Data resolution (min)	Time Horizon (months)
044	Consumption	Electricity	Electric consumption	ALL	Real	10	12
045	Generation	Electricity	Diesel Generat.	ALL	Real	10	12
046	Generation	Electricity	Hydro	ALL	Real	10	12
047	Generation	Electricity	Wind	ALL	Real	10	12
048	Consumption	Electricity	Electric consumption	Educational	Real	10	24
049	Generation	Electricity	Photovoltaic	Educational	Real	30	12
050	Generation	Electricity	Photovoltaic	Educational	Real	30	12
051	Generation	Irradiance	Photovoltaic	ALL	Synthetic	60	144
052	Consumption	Electricity	Electric consumption	Educational	Real	60	12
053	Consumption	Natural Gas	Natural Gas consumption	Educational	Real	60	12
054	Consumption	Cooling	HVAC	Educational	Synthetic	60	12
055	Consumption	Heat	HVAC	Educational	Synthetic	60	12
056	Generation	Electricity	Hydro	Industrial	Real	60	12
057	Generation	Irradiance	Photovoltaic	Industrial	Real	60	12
058	Consumption	Natural Gas	Natural Gas consumption	Educational	Synthetic	60	12
059	Consumption	Natural Gas	Natural Gas consumption	Educational	Synthetic	60	12
060	Consumption	Natural Gas	Natural Gas consumption	Residential	Synthetic	60	12
061	Consumption	Natural Gas	Natural Gas consumption	Residential	Synthetic	60	12
062	Consumption	Hydrogen	Hydrogen consumption	Industrial	Synthetic	60	12
063	Generation	Electricity	Electrolyser	Industrial	Synthetic	60	12
064	Storage	Electricity	Battery	Industrial	Real	15	<1
065	Generation	Irradiance	Photovoltaic	ALL	Real	60	12
066	Generation	Natural Gas	CHP	Industrial	Real	1	0
067	Consumption	Heat/Cooling	Electric boiler	Educational	Synthetic	1	12
068	Consumption	Heat/Cooling	Electric boiler	Educational	Synthetic	1	12
069	Consumption	Electricity	CHP	Educational	Synthetic	1	12
070	Generation	Electricity	Heat Pump	Educational	Synthetic	1	12
071	Generation	Electricity	CHP	Commercial	Synthetic	1	12



ID	Vector Type	Energy carrier	Technology/Type of consumption	Sector	Data Origin	Data resolution (min)	Time Horizon (months)
072	Generation	Electricity	CHP	Commercial	Synthetic	1	12
073	Generation	Electricity	Photovoltaic	Commercial	Synthetic	1	12
074	Generation	Electricity	Photovoltaic	Commercial	Synthetic	1	12
075	Generation	Electricity	Photovoltaic	Commercial	Synthetic	1	12
076	Generation	Electricity	Photovoltaic	Educational	Synthetic	1	12
077	Consumption	Hydrogen	Fuell Cell	Industrial	Synthetic	1	12
078	Generation	Electricity	Photovoltaic	ALL	Synthetic	1	12
079	Consumption	Electricity	Electric consumption	Educational	Real	1	12
080	Generation	Electricity	Diesel Generat.	Educational	Synthetic	1	12
081	Generation	Electricity	Diesel Generat.	Office	Synthetic	1	12
082	Generation	Electricity	Photovoltaic	Commercial	Synthetic	1	12
083	Generation	Electricity	Photovoltaic	Commercial	Synthetic	1	12
084	Generation	Heat/Cooling	Thermal	Commercial	Synthetic	1	12
085	Consumption	Natural Gas	Natural Gas consumption	Health	Synthetic	1	12
086	Consumption	Natural Gas	Natural Gas consumption	Health	Synthetic	1	12
087	Storage	Electricity	Battery	Commercial	Synthetic	1	<1
088	Storage	Electricity	Battery	Commercial	Synthetic	1	<1
089	Consumption	Electricity	Electric Vehicle	Commercial	Synthetic	<1	<1
090	Generation	Electricity	Wind	Other	Real	2	12
091	Consumption	Electricity	PVE	Residential	Real	30	12
092	Consumption	Electricity	Chiller	ALL	Real	30	12
093	Consumption	Heat	HVAC	ALL	Real	60	12

