MAON

Maon Power Market Forecast
Europe's market simulation

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FORECAST

Base Price in $€_{real,2023}$ / MWh — XLSX spreadsheet

Country	Bidding zone	2025 National Trends	2030 National Trends	2030 Distributed Energy	2030 Global Ambition	2040 National Trends	2040 Distributed Energy	2040 Global Ambition	2050 Distributed Energy	2050 Global Ambition
Albania	AL	88	87	61	82	85	52	56	35	74
Austria	AT	102	82	108	100	87	68	82	54	76
Bosnia & Herzegovina	BA	87	87	80	84	85	59	81	33	82
Belgium	BE	100	78	110	96	73	84	92	63	91
Bulgaria	BG	90	87	69	84	84	61	63	43	64
Switzerland	CH	100	81	106	92	91	80	83	63	90
Cyprus	CY	142	137	48	51	83	43	47	52	45
Czechia	CZ	111	90	101	95	93	79	83	59	79
Germany	DE	101	80	110	104	83	81	95	64	93
Germany	DEKF	104	108	109	99	106	82	95	63	98
Denmark	DKE	113	105	104	91	95	86	89	63	99
Denmark	DKKF	105	96	104	91	90	83	93	63	101
Denmark	DKW	102	87	115	98	91	89	98	67	106
Estonia	EE	107	144	73	73	90	68	69	17	84
Spain	ES	58	47	53	40	38	56	59	40	59
Finland	FI	88	118	44	27	85	66	69	19	84
France	FR	91	59	97	68	68	73	68	57	77
France	FRC	88	76	65	66	77	57	59	29	51
Great Britain	GB	97	67	124	100	74	87	108	61	108
Greece	GR	90	84	47	51	83	42	47	34	45
Croatia	HR	95	86	82	83	94	59	81	46	79
Hungary	HU	95	86	83	83	95	68	81	55	79
Ireland	IE	113	74	124	95	72	91	101	56	101
Italy	ITCN	90	78	77	76	89	73	74	57	66
Italy	ITCO	88	76	65	66	77	57	75	29	67
Italy	ITCS	81	78	68	66	80	59	59	31	42
Italy	ITN	91	79	81	77	94	78	79	61	79
Italy	ITS	80	78	58	53	79	46	59	24	42
Italy	ITSAR	88	76	65	66	77	56	63	29	45
Italy	ITSIC	94	86	50	45	83	40	59	16	41
Lithuania	LT	115	119	94	87	98	72	85	52	96
Luxembourg	LU	101	80	110	104	83	81	95	64	93
Latvia	LV	107	116	81	73	79	73	82	53	98
Montenegro	ME	87	87	74	83	85	52	68	33	76
North Macedonia	MK	90	87	61	82	84	52	56	35	74
Malta	MT	93	90	80	60	89	43	58	18	42
Northern Ireland	NI	113	74	97	79	72	89	91	60	95
Netherlands	NL	101	79	110	97	64	85	92	60	86
Norway	NO1	96	89	114	95	90	87	101	61	109
Norway	NO2	96	89	114	95	90	87	101	61	109
Norway	NO3	102	99	102	84	81	78	100	46	108
Norway	NO4	95	98	64	58	81	72	86	14	96
Norway	NO5	96	89	114	95	90	87	101	61	109
Poland	PL	122	152	101	107	109	71	88	54	74
Portugal	PT	58	46	44	38	36	47	59	36	54
Romania	RO	89	86	57	86	83	51	78	41	74
Serbia	RS	88	87	83	87	85	65	82	42	82
Sweden	SE1	87	83	33	26	67	73	82	11	93
Sweden	SE2	97	93	96	76	73	75	91	39	100
Sweden	SE3	100	94	96	76	76	75	91	40	100
Sweden	SE4	100	94	97	78	74	79	89	53	95
Slovenia	SI	95	86	83	83	95	68	80	57	79
Slovakia	SK	108	86	88	95	94	80	84	62	82
Tunisia	TN	107	101	95	95	84	89	90	69	70
Turkey	TR	101	94	97	96	91	74	73	68	74

AIM

- Provide exemplary fundamental long-term power price forecast for Europe
- Quantify typical input parameter set
- Define transparent keywords, scenarios, additional assumptions and method

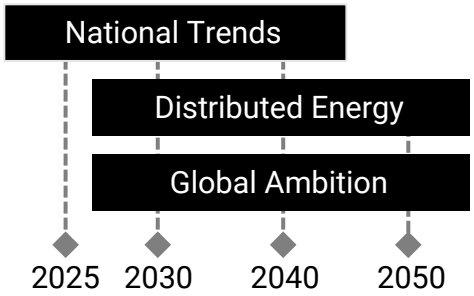
KEYWORDS

- Maon: Market simulation web software
- European: All generators, storages and consumers in every country in Europe
- Power: Market for power and its interplay to other markets and sectors
- Wholesale: Consider only wholesale markets without taxes, levies and fees
- Price: Derive hourly spot price estimation and its annual average as base price
- Forecast: Predict prices long-term based on assumed future scenarios
- Fundamental: Use traceable simulation method from scientific research
- Simulation: Derive dispatch of supply and demand for given capacities and costs

SCENARIOS

Scenario funnel from grid operators

- Demand and supply: Ten-Year Network Development Plan (TYNDP) 2022
- Profiles for renewable feed-in, heating, cooling and load: historical year 2018



ASSUMPTIONS

- 2025 fuel and emission cost set to traded future prices from 24/01/2024 and afterwards TYNDP growth rates apply
- 2050 hydrogen generation capacity reaches 50% of total gas capacity
- Years in between simulated accordingly

METHOD

Fundamental power market simulation — *Documentation*

Input data
Exogenous values
- Batteries
- Conventional consumers
- Demand-side responses
- Electric vehicles
- Electrolyzers
- Hydropower
- Interconnectors
- Renewables
- Thermal power plants
- Various other inputs

Optimization

Target function
- Total cost minimization

Degrees of freedom
- Dispatches
- Exchanges

Restrictions
- Dispatch restrictions
- Economic equilibria
- Exchange capacities

Hourly results
Endogenous variables
- Assessments
- Dispatches
- Emissions
- Exchanges
- Operating expenses
- Power prices
- Remaining capacities
- Social welfares
- Storage levels
- Various other outputs

DISCLAIMER

- Prices need to be interpreted against the assumptions which will change over time
- Suitable assumptions and interpretations necessary to answer individual questions
- Maon excludes any liability for any use derived from this price forecast example

REQUEST EXPERT KNOWLEDGE

Selected companies currently using Maon and providing excellent market foresights

Accenture
www.accenture.com

BBH Consulting
www.bbh-beratung.de

e-venture consulting
www.e-vc.org

E-Bridge Consulting
www.e-bridge.de