

Energidataservice Data catalog

This data catalog is based entirely on metadata from Energi Data Service. The catalog is updated at least each time a new dataset is released. The catalog consist of the follwing two catalogs:

- Short catalog list the tables only, and the desctiption of the content.
- Long Catalog also list the fields and the description of the fields.

Both catalogs are sorted after first Organization, second the name of the dataset.

Short Catalog:

Organization: Gas Storage Denmark
Storage expected availability <p>The expected injection and withdrawal capacity is calculated one month in advance. The actual capacity is calculated every morning for the current gasday. These percentages show if there are active restrictions compared to technical capacity.</p> <p>The values listed are for informational purposes only and are not suited for settlement purposes. Though Gas Storage Denmark (GSD) considers the numbers to be true, we cannot guarantee the accuracy.</p>
Storage available capacity <p>The data is updated on daily basis. The data is updated shortly when new contracts are finalized.</p> <p>The values listed are for informational purposes only and are not suited for settlement purposes. Though Gas Storage Denmark considers the numbers to be true, we cannot guarantee the accuracy.</p>
Storage utilization <p>Storage utilization shows the actual use of volume, injection and withdrawal capacity based on the contracted capacities.</p> <p>The values listed are for informational purposes only and are not suited for settlement purposes. Though Gas Storage Denmark considers the numbers to be true, we cannot guarantee the accuracy.</p>
Organization: TSO Electricity
aFRR, automatic Frequency Restoration Reserves, DK1
Auction of Capacities, PTR DK1-Germany <p>Data represents the overall balance of consumption, production, import and export of electricity in an area.</p> <p>Production is divided into main production types. Data is based on online power measurements for SCADA, and therefore with some delay.</p>
Auction of Capacities, PTR DK2-Germany <p>The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)</p>
CO2 Emission <p>Please note that the values are based on a number of assumption (if needed more information can be found on www.energinet.dk).</p> <p>Please also note that the resolution of the data is 5 minutes but the up-date frequency is a bit slower, viz. 15 minutes.</p>

CO2 Emission Prognosis

Please note that the values are based on a number of assumption. Depending on the time within the day an update may include estimates for more than 9 hours but every update will at least have 9 hours into the future (if needed more information can be found on www.energinet.dk).

Please also note that the resolution of the data is 5 minutes but the update frequency is a bit slower, viz. 15 minutes.

Consumption per Municipality**Production per Municipality****Electricity Balance**

Gross consumption = sum of production + sum of exchange to connected areas. A positive exchange is import of electricity, while a negative is export. The total production is the sum of all production types. Transmission losses is Gross consumption - net consumption. Electric boilers consumption is included in gross and net consumption.

Electricity Balance Non-Validated

Gross consumption = sum of production + sum of exchange to connected areas. A positive exchange is import of electricity, while a negative is export.

The total production is the sum of all production types.

Elspot Prices

In Nord Pool Spot market players can buy and sell electricity for delivery the following day in their own area - Norway, Sweden, Finland, Denmark or Germany. The day-ahead prices indicate the balance between supply and demand.

FCR, Frequency Containment Reserves, DK1**FCR, Frequency Containment Reserves, DK2**

The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)

Fixed Residual Consumption**mFRR, Frequency Restoration Reserves manual, DK1****mFRR, Frequency Restoration Reserves manual, DK1****mFRR, Frequency Restoration Reserves manual, DK2**

The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)

Nordpool Market

In NordPool Spot market players can buy and sell electricity for delivery the following day in their own area - Norway, Sweden, Finland, Denmark or Germany. The day-ahead prices indicate the balance between supply and demand. NordPool Elbas is the Nordic trading center for trading electricity up to one hour before delivery hour. At the Elspot market it may take up to 36 hours from a contract has changed hands until the actual delivery hour. During this time the consumption and production situation may easily have changed. Elbas makes it therefore easier for the market players to reach balance through trading.

Operational capacity

comment

Realtime Marked Volumes and System Balance

The market balance is based on the difference between actual production, consumption, export and import compared to the scheduled after intraday. The balancing actors rarely comply with their plans fully during the operating hours. For example, wind turbines can produce less than expected, or consumers can use unforeseen much electricity. During operation, it is therefore necessary for the system operator to constantly balance production and consumption. A large part of this balancing is through purchase of up and down regulation with regulating power, and some manage through "Netting" (IGCC)."

Realtime Market

Scheduled operation, Intraday

comment

Transmission Lines

The TSOs decide how much capacity is to be transferred, and the capacity for the coming day is published at Nord Pool Spot every day before 10:00.

Scheduled trade on the transmission lines is the flow of electricity from areas of surplus to areas of deficit resulting from the Nord Pool Spots price calculation. The physical exchange is the actual measured exchange of electricity. Negative values indicate export of electricity out of the area to the connected area, and positive values indicate import.

Congestion rent is calculated as the difference in spot prices between the two price areas multiplied by the estimated exchange between the two areas concerned. The international connections to Norway and Sweden are completely at the disposal of NordPool Spot and in return the TSOs receive the congestion rent. In NORDEL (Denmark, Norway, Sweden, Finland, Iceland) the congestion rent is distributed according to a scale agreed upon. With regard to the KONTEK interconnection the congestion rent is paid to Energinet.dk, Vattenfall Europe Transmission and Vattenfall AB (Vattenfall's trading company in Sweden) according to a scale agreed upon.

The interconnection between Western Denmark and Germany is at the disposal of the market at annual, monthly and daily auctions at which payment for utilization of the interconnection - and thereby the congestion rent - is calculated on the basis of demand and supply. The congestion rent is equally divided between Energinet.dk and E.ON Netz.

Organization: TSO Gas

Monthly allocated calorific values

The dataset contains allocated gross calorific values and allocated normal densities for the meter and regulation stations in the transmission grid.

Entry/Exit gas quality

The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information.

The information can be auto validated by the user with the validation rules written for each factor in Meta Data.

Gas composition and quality for transmission

The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information.

The information can be auto validated by the user with the validation rules written for each factor in Meta Data.

Gas composition and quality for transmission, monthly

The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values.

Gas composition and quality for transmission, yearly

The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values.

Gas quality for MR stations

The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information.

The information can be auto validated by the user with the validation rules written for each factor in Meta Data.

The described gas quality is not necessarily the gas quality that will be delivered to the consumers, since upgraded biogas can enter at the distribution level.

Gas Storage Denmark

Storage expected availability

DatasetName	storageavailablepct	UpdateFrequency
		P1D
Comment	The expected injection and withdrawal capacity is calculated one month in advance. The actual capacity is calculated every morning for the current gasday. These percentages show if there are active restrictions compared to technical capacity.	Resolution
	The values listed are for informational purposes only and are not suited for settlement purposes. Though Gas Storage Denmark (GSD) considers the numbers to be true, we cannot guarantee the accuracy.	
Notes	The expected and actual availability of injection and withdrawal capacity shown as percentage of the total technical capacity.	

Attributter (Felter)		
GasDay	Days	-
Storage actual injection capacity %	%	The actual injection capacity in % of total injection capacity. The percentage is calculated each morning. If the storage filling is very high the injection capacity is reduced (e.g. above 95% filling level the available capacity is reduced to 75%)
Storage actual withdrawal capacity %	%	The actual withdrawal capacity in % of total withdrawal capacity. The % is calculated each morning. If the storage filling is very low the capacity is reduced (e.g. if the storage filling is below 20% the withdrawal capacity is reduced to 85%)
Storage expected injection capacity %	%	The expected injection capacity in % of the total capacity. The expected % is calculated one month ahead. If the expected storage filling is very high the injection capacity is reduced.
Storage expected withdrawal capacity %	%	The expected withdrawal capacity in % of total withdrawal capacity. Calculated one month ahead. If the filling is very low the withdrawal capacity is reduced.

Gas Storage Denmark

Storage available capacity

DatasetName	storagecapacity	UpdateFrequency
		P1D
Comment	The data is updated on daily basis. The data is updated shortly when new contracts are finalized.	Resolution
Notes	<p>Storage capacity provides information about total and reserved capacity for</p> <ul style="list-style-type: none"> * Volume capacity * Injection capacity * Withdrawal capacity 	

Attributter (Felter)		
Reserved injection storage capacity	MWh per hour	The injection capacity contracted by storage customers and the TSO.
Reserved injection storage capacity TSO	MWh per hour	The injection storage capacity reserved by the TSO
Technical injection storage capacity	MWh per hour	The technical injection capacity is the maximum injection capacity available for booking.
Reserved volume storage capacity	MWh	The reserved volume capacity is the total contracted capacity for all storage customers and the TSO.
Reserved volume capacity by TSO	MWh	The total volume capacity contracted by the TSO.
Technical volume storage capacity	MWh	The technical volume capacity is the maximum volume capacity available for booking.
Reserved withdrawal storage capacity	MWh per hour	The withdrawal capacity contracted by storage customers and the TSO
Reserved withdrawal storage capacity by TSO	MWh per hour	The withdrawal capacity contracted by the TSO.
Technical withdrawal storage capacity	MWh per hour	The technical withdrawal capacity is the maximum withdrawal capacity available for booking.
GasDay	Days	-
Capacity injection available	MWh per hour	Capacity injection available for booking
Capacity withdrawal available	MWh per hour	Capacity withdrawal available for booking
Capacity volume available	MWh per hour	Capacity volume available for booking

Gas Storage Denmark

Storage utilization

DatasetName	storageutilization	UpdateFrequency
		P1D
Comment	Storage utilization shows the actual use of volume, injection and withdrawal capacity based on the contracted capacities.	Resolution
Notes	The values listed are for informational purposes only and are not suited for settlement purposes. Though Gas Storage Denmark considers the numbers to be true, we cannot guarantee the accuracy. Utilization of volume, injection and withdrawal capacity	

Attributter (Felter)		
GasDay	Days	-
Stored gas total	MWh	The total stored gas.
Stored gas on interruptible terms	MWh	Stored gas on interruptible terms. The storage customer is storing gas outside their contracted terms. The customer can be required to withdraw the gas on short notice when the total storage filling reaches (e.g. 95%).
Limit for interruptible storage	MWh	<sadasd
Total injected gas per day	MWh/day	Total injected gas.
Injected gas on interruptible terms	MWh/day	Out of the total injection this quantity has been injected on interruptible terms. The injection is a customers firm injection capacity.
Expected available injection capacity per day	MWh/day	The expected available injection capacity. If the percentage is less than 100 % there is a reduction. The reduction can occur when the storage filling is above certain level (e.g. above 95 % filling level).
Withdrawn gas in total per day	MWh/day	Total withdrawn gas for the gasday.
Withdrawn gas on interruptible terms per day	MWh/day	Total withdrawn gas on interruptible terms per day.
Expected available withdrawal capacity per day	MWh/day	The expected available withdrawal capacity is forecasted one month ahead. The reduction can occur when the storage filling is below certain level (e.g. below 20 % filling level).

TSO Electricity

aFRR, automatic Frequency Restoration Reserves, DK1

DatasetName	afrrreservesdk1	UpdateFrequency
		P1D
Comment		Resolution
Notes	Frequency Restoration Reserves, amount and prices in Western Denmark.	1 hour resolution

Attributter (Felter)		
aFRR Downward regulation activated	MWh per hour	The purchase of automatic power reserves available to restore system frequency to the nominal frequency (formerly LFC)
aFRR Downward regulation Price (DKK)	DKK per MWh/h	The price of automatic power reserves available to restore system frequency to the nominal frequency (LFC)
aFRR Downward regulation Price (EUR)	EUR per MWh/h	The price of automatic power reserves available to restore system frequency to the nominal frequency (LFC)
aFRR Upward regulation activated	MWh per hour	The purchase of automatic power reserves available to restore system frequency to the nominal frequency (formerly LFC)
aFRR Upward regulation Price (DKK)	DKK per MWh/h	The price of automatic power reserves available to restore system frequency to the nominal frequency (LFC)
aFRR Upward regulation Price (EUR)	EUR per MWh/h	The price of automatic power reserves available to restore system frequency to the nominal frequency (LFC)
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day and so on. note: The naming is based on the length of the interval of the finest grain of the resolution.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so on. note: The naming is based on the length of the interval of the finest grain of the resolution.

TSO Electricity

Auction of Capacities, PTR DK1-Germany

DatasetName	capacityauctiondk1	UpdateFrequency	P1W
Comment	Data represents the overall balance of consumption, production, import and export of electricity in an area. Production is divided into main production types. Data is based on online power measurements for SCADA, and therefore with some delay.	Resolution	1 hour resolution
Notes	PTR is explicit auction of transfer capacity on a connection between two price areas		

Attributter (Felter)			
Hour DK	A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day and so forth.		
Hour UTC	A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.		
Monthly Auction Congestion Rent (DKK)	DKK per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity in DKK per hour	
Monthly Auction Congestion Rent (EUR)	EUR per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity in EUR per hour	
Export Capacity sold DK1 to Germany	MWh per hour	Capacity sold from Eastern Denmark to Germany in MWh per hour - sum of annual and monthly. Generally, within the month the amount will be fixed unless periods of constraints occur.	
Import Capacity sold Germany to DK1	MWh per hour	Capacity sold from Germany to Eastern Denmark in MWh per hour - sum of annual and monthly. Generally, within the month the amount will be fixed unless periods of constraints occur.	
Utilized Capacity DK1 to Germany	MWh per hour	Utilized capacity from Eastern Denmark to Germany in MWh per hour - sum of annual and monthly.	
Utilized Capacity Germany to DK1	MWh per hour	Utilized capacity from Germany to Western Denmark in MWh per hour - sum of annual and monthly.	
Yearly Auction Congestion Rent (DKK)	DKK per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity	
Yearly Auction Congestion Rent (EUR)	EUR per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity	

TSO Electricity

Auction of Capacities, PTR DK2-Germany

DatasetName	capacityauctiondk2	UpdateFrequency	P1W
Comment	The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)	Resolution	1 hour resolution
Notes	PTR is explicit auction of transfer capacity on a connection between two price areas		

Attributter (Felter)			
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.	
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.	
Monthly Auction Congestion Rent (DKK)	DKK per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity in DKK per hour	
Monthly Auction Congestion Rent (EUR)	EUR per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity in EUR per hour	
Export Capacity sold DK1 to Germany	MWh per hour	Capacity sold from Eastern Denmark to Germany in MWh per hour - sum of annual and monthly. Generally, within the month the amount will be fixed unless periods of constraints occur.	
Import Capacity sold Germany to DK1	MWh per hour	Capacity sold from Germany to Eastern Denmark in MWh per hour - sum of annual and monthly. Generally, within the month the amount will be fixed unless periods of constraints occur.	
Utilized Capacity DK1 to Germany	MWh per hour	Utilized capacity from Eastern Denmark to Germany in MWh per hour - sum of annual and monthly.	
Utilized Capacity Germany to DK1	MWh per hour	Utilized capacity from Germany to Western Denmark in MWh per hour - sum of annual and monthly.	
Yearly Auction Congestion Rent (DKK)	DKK per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity	
Yearly Auction Congestion Rent (EUR)	EUR per MWh/h	Total amount of congestion rent at the interconnection to Germany based on the monthly auction transmission capacity	



TSO Electricity

CO2 Emission

DatasetName	co2emis	UpdateFrequency	P1H
Comment	Please note that the values are based on a number of assumption (if needed more information can be found on www.energinet.dk). Please also note that the resolution of the data is 5 minutes but the up-date frequency is a bit slower, viz. 15 minutes.	Resolution	5 min resolution
Notes	This dataset provides an updated near up-to-date history for the CO2 emission from electricity consumed in Denmark measured in g/kWh.	Price area resolution	

Attributter (Felter)		
CO2 Emission	g/kWh	The estimated value for the emission in g/kWh for the relevant 5 minutes period.
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
5 minutes DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes p the day and so forth.
5 minutes UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes p the day and so forth.
Please note: The naming is based on the length of the interval of the finest grain of the resolution		

TSO Electricity

CO2 Emission Prognosis

DatasetName	co2emisprog	UpdateFrequency
		PT15M
Comment	Please note that the values are based on a number of assumption. Depending on the time within the day an update may include estimates for more than 9 hours but every update will at least have 9 hours into the future (if needed more information can be found on www.energinet.dk). Please also note that the resolution of the data is 5 minutes but the update frequency is a bit slower, viz. 15 minutes.	Resolution 5 min resolution
Notes	This dataset provides an estimate for at least the next 9 hours for the CO2 emission from the estimated electricity consumption in Denmark per kWh	Price area resolution

Attributter (Felter)		
CO2 Emission	g/kWh	The estimated value for the emission in g/kWh for the relevant 5 minutes period.
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
5 minutes DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes of the day and so forth.
5 minutes UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes of the day and so forth.
Please note: The naming is based on the length of the interval of the finest grain of the resolution		

TSO Electricity

Consumption per Municipality

DatasetName	communityconsumption	UpdateFrequency
		P6M
Comment		Resolution
Notes	Contains the electricity consumption per municipality per month, divided on consumption of the Profiled Settlement customers and the Hourly Settlement customers.	1 hour resolution

Attributter (Felter)		
Hourly Settlement Consumption	kWh	Electricity consumption from hourly settlement customers
Hourly Settlement Measurement points	Number	Number of hourly settlement measuring points
Month	Months	Year and month
Municipality Number	Number	Each of the 98 municipalities has a unique number, ranging from 101 Copenhagen to 860 Hjoerr
Profiled Settlement Consumption	kWh	Electricity consumption of the profiled settlement customers
Profiled Settlement Measuring Points	Number	Number of profiled settlement measuring points
Total Consumption	kWh	Total electricity consumption
Total Measuring Points	Number	Total number of measuring Points

TSO Electricity

Production per Municipality

DatasetName	communityproduction	UpdateFrequency
		P1M
Comment		Resolution
Notes	Contains the electricity production per municipality per month, divided on production from wind power, solar power, decentral and central power plants.	1 month resolution

Attributter (Felter)		
Central Power plants	MWh	Electricity production from central power plants
Decentral Power plants	MWh	Electricity production from decentral power plants
Month	Months	Year and month
Municipality Number	Number	Each of the 98 municipaliytes has a unique number, ranging from 101 Copenhagen to 860 Hjoerr
Offshore WindPower	MWh	Electricity production from offshore wind power
Onshore WindPower	MWh	Electricity production from onshore wind power
Solar power	MWh per hour	Electricity production from Solar power

TSO Electricity

Electricity Balance

DatasetName	electricitybalance	UpdateFrequency
		P1W
Comment	Gross consumption = sum of production + sum of exchange to connected areas. A positive exchange is import of electricity, while a negative is export. The total production is the sum of all production types. Transmission losses is Gross consumption - net consumption. Electric boilers consumption is included in gross and net consumption.	Resolution 1 hour resolution
Notes	Data represents the overall balance of consumption, production, import and export of electricity in an area. Production is divided into main production types.	Price area resolution

Attributter (Felter)		
Central production	MWh per hour	Sum of production from central power Plants
Electric boiler consumption	MWh per hour	Consumption of electric boilers in the district heating systems
Exchange Continent	MWh per hour	Exchange of electricity towards continental Europe
Exchange GreatBelt	MWh per hour	Exchange of electricity over the Great Belt connection between DK1 and DK2
Exchange Nordic Countries	MWh per hour	Exchange of electricity towards Norway and Sweden.
Gross Consumption	MWh per hour	Sum of the consumption incl. transmission loss
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
Local Production	MWh per hour	Sum of production from local Combined Heat and Power units (CHP)
Net consumption	MWh per hour	Sum of the consumption excl. transmission loss
Offshore WindPower	MWh	Electricity production from offshore wind power
Onshore WindPower	MWh	Electricity production from onshore wind power
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Solar power production	MWh per hour	Production of electricity from solar cells.



TSO Electricity

Electricity Balance Non-Validated

DatasetName	electricitybalancenonv	UpdateFrequency	P1H
Comment	Gross consumption = sum of production + sum of exchange to connected areas. A positive exchange is import of electricity, while a negative is export. The total production is the sum of all production types.	Resolution	1 hour resolution
Notes	Data represents the overall balance of consumption, production, import and export of electricity in an area. Production is divided into main production types. Data is based on online power measurements for SCADA, and therefore with some delay.	Price area resolution	

Attributter (Felter)		
Biomass	MWh per hour	Sum of production from power plants with Biomass as main fuel
Exchange Continent	MWh per hour	Exchange of electricity towards continental Europe
Exchange GreatBelt	MWh per hour	Exchange of electricity over the Great Belt connection between DK1 and DK2
Exchange Nordic Countries	MWh per hour	Exchange of electricity towards Norway and Sweden.
Fossil Gas	MWh per hour	Sum of production from power plants with fossil gas as main fuel
Fossil Hard Coal	MWh per hour	Sum of production from power plants with Fossil Hard Coal as main fuel
Fossil Oil	MWh per hour	Sum of production from power plants with fossil oil as main fuel
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
Hydro power	MWh per hour	Sum of production from hydro power plants
Offshore WindPower	MWh	Electricity production from offshore wind power
Onshore WindPower	MWh	Electricity production from onshore wind power
Other renewable	MWh per hour	Sum of production from power plant with other fuels as main fuel
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Solar power	MWh per hour	Electricity production from Solar power
Total load	MWh per hour	Sum of the consumption incl. transmission loss
Waste	MWh per hour	Sum of production from power plant with waste as main fuel

TSO Electricity

Espot Prices

DatasetName	elspotprices	UpdateFrequency
		P1W
Comment	In Nord Pool Spot market players can buy and sell electricity for delivery the following day in their own area - Norway, Sweden, Finland, Denmark or Germany. The day-ahead prices indicate the balance between supply and demand.	Resolution 1 hour resolution
Notes	Day ahead spotprices in DK and neighboring countries	Price area resolution

Attributter (Felter)		
Price area		System price is the unlimited balancing price at the Nordic electricity market irrespective of capacity constraints. It is set by the individual interconnections between the areas. The system price therefore serves as a reference point for the area prices to be compared.
Spot price (DKK)	DKK per MWh	Day ahead Spot Price in the price area
Spot price (EUR)	EUR per MWh	Day ahead Spot Price in the price area
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is the start of a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is the start of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day and so forth.

TSO Electricity

FCR, Frequency Containment Reserves, DK1

DatasetName	fcrreservesdk1	UpdateFrequency
		P0.5D
Comment		Resolution
Notes	Amount and prices of FCR regulation in Western Denmark.	1 hour resolution

Attributter (Felter)		
FCR expected Purchase of Downward regulation	MWh per hour	Total expected purchase of primary downward regulation reserves (FCR) in MW per hour
FCR Downward regulation Price (DKK)	DKK per MWh/h	Payment to the market players offering primary (FCR) downward regulation
FCR Downward regulation Price (EUR)	EUR per MWh/h	Payment to the market players offering primary (FCR) downward regulation
FCR Downward regulation Purchased	MWh per hour	Total purchased volume of primary downward regulation reserves (FCR) in MW per hour
FCR expected Purchase of Upward regulation	MWh per hour	Total expected purchase volume of primary upward regulation reserves (FCR) in MW per hour
FCR Upward regulation Price (DKK)	DKK per MWh/h	Payment to the market players offering primary (FCR) downward regulation
FCR Upward regulation Price (EUR)	EUR per MWh/h	Payment to the market players offering primary (FCR) downward regulation
FCR Upward regulation Purchased	MWh per hour	Total purchased volume of primary upward regulation reserves (FCR) in MW per hour
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day and so forth.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. note: The naming is based on the length of the interval of the finest grain of the resolution.

TSO Electricity

FCR, Frequency Containment Reserves, DK2

DatasetName	fcrreservesdk2	UpdateFrequency
		P0.5D
Comment	The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)	Resolution 1 hour resolution
Notes	Amount and prices of FCR regulation in Eastern Denmark.	

Attributter (Felter)		
FCR-D Upward regulation Price (DKK)	DKK per MWh/h	Payment to the market players offering primary (FCR) Upward regulation (Frequency Containment Reserves operation)
FCR-D Upward regulation Price (EUR)	EUR per MWh/h	Payment to the market players offering primary (FCR) Upward regulation (Frequency Containment Reserves operation)
FCR-N regulation Price (DKK)	DKK per MWh/h	Payment to the market players offering primary (FCR-N) regulation (Frequency Containment Reserves operation)
FCR-N regulation Price (EUR)	EUR per MWh/h	Payment to the market players offering primary (FCR-N) regulation (Frequency Containment Reserves operation)
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day so forth.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. note: The naming is based on the length of the interval of the finest grain of the resolution.



TSO Electricity

Fixed Residual Consumption

DatasetName	fixedresidualconsumption	UpdateFrequency	P1W
Comment		Resolution	
Notes	The residual consumption is calculated hour by hour and consists of the total consumption of the individual grid area deducted the consumption of all remote meter reading customers.		1 hour resolution

Attributter (Felter)		
Grid company	text	Grid Company number according Danish Energy Association
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. note: The naming is based on the length of the interval of the finest grain of the resolution.
Residual consumption	MWh per hour	The residual consumption is calculated hour by hour and consists of the total consumption of the individual grid area deducted the consumption of all remote meter reading customers.



TSO Electricity

mFRR, Frequency Restoration Reserves manual, DK1

DatasetName	mfrrreservesdk1	UpdateFrequency
Comment		P0.5D
Notes	Amount and prices of manual Frequency Restoration Reserves (mFRR), also called manual reserves, in Western Denmark.	Resolution 1 hour resolution

Attributter (Felter)	
Hour DK	A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC	A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
mFRR Downward regulation Expected	MWh per hour The expected purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Expected, Extra	MWh per hour The expected purchase of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (DKK)	DKK per MWh The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (EUR)	EUR per MWh The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (DKK), Extra	DKK per MWh/h The price of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (EUR), Extra	EUR per MWh/h The price of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Purchased	MWh per hour The purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Purchased, Extra	MWh per hour The actual purchase of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Expected	MWh per hour The expected purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Expected, Extra	MWh per hour The expected purchase of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (DKK)	DKK per MWh The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (EUR)	EUR per MWh The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (DKK), Extra	DKK per MWh/h The price of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (EUR), Extra	EUR per MWh/h The price of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Purchased	MWh per hour The purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Purchased, Extra	MWh per hour The actual purchase of extra manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)

Attributter (Felter)	
Hour DK	A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC	A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
mFRR Downward regulation Expected	MWh per hour
mFRR Downward regulation Expected, Extra	MWh per hour
mFRR Downward regulation Price (DKK)	DKK per MWh
mFRR Downward regulation Price (EUR)	EUR per MWh
mFRR Downward regulation Price (DKK), Extra	DKK per MWh/h
mFRR Downward regulation Price (EUR), Extra	EUR per MWh/h
mFRR Downward regulation Purchased	MWh per hour
mFRR Downward regulation Purchased, Extra	MWh per hour
mFRR Upward regulation Expected	MWh per hour
mFRR Upward regulation Expected, Extra	MWh per hour
mFRR Upward regulation Price (DKK)	DKK per MWh
mFRR Upward regulation Price (EUR)	EUR per MWh
mFRR Upward regulation Price (DKK), Extra	DKK per MWh/h
mFRR Upward regulation Price (EUR), Extra	EUR per MWh/h
mFRR Upward regulation Purchased	MWh per hour
mFRR Upward regulation Purchased, Extra	MWh per hour

TSO Electricity

mFRR, Frequency Restoration Reserves manual, DK2

DatasetName	mfrreservesdk2	UpdateFrequency
		P0.5D
Comment	The delivery of the vast majority of system benefits is ensured by various types of reserves. The reserves are purchased through agreements between Energinet.dk and a production or consumption-responsible player. The agreements contain provisions to provide capacity for a fixed period. In DK2 types of reserves are FCR-N and FCR-D (Frequency Containment Reserves for Normal operation and disturbances), and mFRR (Manual Frequency Restoration Reserves)	Resolution 1 hour resolution
Notes	Amount and prices of manual Frequency Restoration Reserves (mFRR), also called manual reserves, in Eastern Denmark.	

Attributter (Felter)		
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day and so forth.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
mFRR Downward regulation Expected	MWh per hour	The expected purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (DKK)	DKK per MWh	The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Price (EUR)	EUR per MWh	The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Downward regulation Purchased	MWh per hour	The purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Expected	MWh per hour	The expected purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (DKK)	DKK per MWh	The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Price (EUR)	EUR per MWh	The price of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)
mFRR Upward regulation Purchased	MWh per hour	The purchase of manual power reserves available to restore system frequency to the nominal frequency (formerly manual reserves)



TSO Electricity

Nordpool Market

DatasetName	nordpoolmarket	UpdateFrequency
Comment	In NordPool Spot market players can buy and sell electricity for delivery the following day in their own area - Norway, Sweden, Finland, Denmark or Germany. The day-ahead prices indicate the balance between supply and demand. NordPool Elbas is the Nordic trading center for trading electricity up to one hour before delivery hour. At the Elspot market it may take up to 36 hours from a contract has changed hands until the actual delivery hour. During this time the consumption and production situation may easily have changed. Elbas makes it therefore easier for the market players to reach balance through trading.	P1W
Notes	Prices and turnover at the Nordpool spot market for electricity for DK1 (West Denmark) and DK2 (East Denmark)	Resolution 1 hour resolution
		Price area resolution

Attributter (Felter)		
Elbas average price (DKK)	DKK	Nord Pool Elbas is the Nordic trading centre for trading electricity up to one hour before delivery Elspot market it may take up to 36 hours from a contract has changed hands until the actual delivery this time the consumption and production situation may easily have changed. Elbas makes it the market players to reach balance through trading.
Elbas average price (EUR)	EUR	Nord Pool Elbas is the Nordic trading centre for trading electricity up to one hour before delivery Elspot market it may take up to 36 hours from a contract has changed hands until the actual delivery this time the consumption and production situation may easily have changed. Elbas makes it the market players to reach balance through trading.
Elbas max. price (DKK)	DKK	Maximum Elbas price in the area in DKK
Elbas max. price (EUR)	EUR	Maximum Elbas price in the area in EUR
Elbas min. price (DKK)	DKK	Minimum Elbas price in the area in DKK
Elbas min. price (EUR)	EUR	Minimum Elbas price in the area in EUR
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so on note: The naming is based on the length of the interval of the finest grain of the resolution.
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Spot price (DKK)	DKK per MWh	Day ahead Spot Price in the price area
Spot price (EUR)	EUR per MWh	Day ahead Spot Price in the price area
Spot purchase	MWh per hour	The purchase of electricity from the nordpool spot
Spot sale	MWh per hour	The sale of electricity to the nordpool spot



TSO Electricity

Operational capacity

DatasetName	operationalcapacity	UpdateFrequency
		P1D
Comment	comment	Resolution
Notes	notes	

TSO Electricity

Realtime Marked Volumes and System Balance

DatasetName	Realtime Marked Volumes and System Balance	UpdateFrequency
		P1H
Comment	The market balance is based on the difference between actual production, consumption, export and import compared to the scheduled after intraday. The balancing actors rarely comply with their plans fully during the operating hours. For example, wind turbines can produce less than expected, or consumers can use unforeseen much electricity. During operation, it is therefore necessary for the system operator to constantly balance production and consumption. A large part of this balancing is through purchase of up and down regulation with regulating power, and some manage through "Netting" (IGCC)."	Resolution
Notes	Imbalances, regulating power, netting (IGCC) and balancing power prices	

Attributter (Felter)		
aFRR Downward regulation activated	MWh per hour	The purchase of automatic power reserves available to restore system frequency to the nominal level (formerly LFC)
aFRR Upward regulation activated	MWh per hour	The purchase of automatic power reserves available to restore system frequency to the nominal level (formerly LFC)
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth: The naming is based on the length of the interval of the finest grain of the resolution.
IGCC Down Regulation	MWh per hour	Down Regulation through netting with TSO's in the IGCC corporation
IGCC Up Regulation	MWh per hour	Up Regulation through netting with TSO's in the IGCC corporation
System imbalance - deficit of power	MWh per hour	Deficit of power in the power system. (need for up-regulation) in MWh per hour
System imbalance - surplus of power	MWh per hour	Surplus of power at the East Danish system (need for down-regulation) in MWh per hour
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Regulating power - downward regulation	MWh per hour	The actual amount of energy down-regulated
Regulating power - upward regulation	MWh per hour	The actual amount of energy up-regulated



TSO Electricity

Realtime Market

DatasetName	realtimemarket	UpdateFrequency
Comment		P1W
Notes	Maintaining balance between consumption and production in the electricity system and fulfilling contracts with e.g. Sweden or Norway may require an up or down regulation of production and consumption in the Danish electricity system (east or west). For this purpose a so-called regulating power market is established as a common market for the Nordic countries. The principle of the regulating power market is the market players forwarding their bids on how much capacity they can offer for up or down regulations and which prices they require.	Resolution 1 hour resolution Price area resolution

Attributter (Felter)		
Price for balancing power for consumption (DKK)	DKK per MWh	Price for balancing power for consumption, equals either the price of down regulation or up-regulation (DKK)
Price for balancing power for consumption (EUR)	EUR per MWh	Price for balancing power for consumption, equals either the price of down regulation or up-regulation (EUR)
Balancing power price - down regulation (DKK)	DKK per MWh	Comma (,) is used as decimal sign and 1000 separator isn't allowed
Balancing power price - down regulation (EUR)	EUR per MWh	Comma (,) is used as decimal sign and 1000 separator isn't allowed
Balancing power price - up regulation (DKK)	DKK per MWh	Comma (,) is used as decimal sign and 1000 separator isn't allowed
Balancing power price - up regulation (EUR)	EUR per MWh	Comma (,) is used as decimal sign and 1000 separator isn't allowed
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. note: The naming is based on the length of the interval of the finest grain of the resolution.
IGCC Price Down Regulation (DKK)	DKK per MWh/h	Down Regulation through netting with TSO's in the IGCC corporatoin
IGCC Price Down Regulation (EUR)	EUR per MWh/h	Down Regulation through netting with TSO's in the IGCC corporatoin
IGCC Price Up Regulation (DKK)	DKK per MWh/h	Up Regulation through netting with TSO's in the IGCC corporatoin
IGCC Price Up Regulation (EUR)	EUR per MWh/h	Up Regulation through netting with TSO's in the IGCC corporatoin
System imbalance - deficit of power	MWh per hour	Deficit of power in the power system. (need for up-regulation) in MWh per hour
System imbalance - surplus of power	MWh per hour	Surplus of power at the East Danish system (need for down-regulation) in MWh per hour
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Regulating power - downward regulation	MWh per hour	The actual amount of energy down-regulated
Regulating power - upward regulation	MWh per hour	The actual amount of energy up-regulated

TSO Electricity

Scheduled operation, Intraday

DatasetName	scheduledoperationintraday	UpdateFrequency
		P1H
Comment	comment	Resolution
Notes	notes	

Attributter (Felter)		
5 minutes DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes past the day and so forth.
5 minutes UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00:00 o'clock minutes of a given day, interval 00:00:00 - 00:04:59, and 00:05:00 covers the second 5 minutes past the day and so forth.
		Please note: The naming is based on the length of the interval of the finest grain of the resolution.
Scheduled production < 10 MW Intraday	MWh	Schedule productions from powerplants with an installed capacity up to 10 MW.
Scheduled production >=v10 MW Intraday	MWh	Scheduled production from powerplants with an installed capacity from 100 MW or more.
Scheduled Production solar power	MWh	Schedule production form solar power (Photo voltage PV)
Scheduled production Wind Power	MWh	Scheduled production from Wind Power
Scheduled exchange Germany	MWh	Scheduled exchange to Germany
Scheduled exchange Great Belt	MWh	Scheduled exchange between DK1 and DK2.
Scheduled exchange Norway	MWh	Scheduled exchange to Norway
Scheduled exchange Sweden	MWh	Scheduled exchange to Sweden
Scheduled exchange Nederland	MWh	Schedule exchange to the Nederlands (Holland)
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands



TSO Electricity

Transmission Lines

DatasetName	transmissionlines	UpdateFrequency	P1W
Comment	<p>The TSOs decide how much capacity is to be transferred, and the capacity for the coming day is published at Nord Pool Spot every day before 10:00.</p> <p>Scheduled trade on the transmission lines is the flow of electricity from areas of surplus to areas of deficit resulting from the Nord Pool Spots price calculation. The physical exchange is the actual measured exchange of electricity. Negative values indicate export of electricity out of the area to the connected area, and positive values indicate import.</p> <p>Congestion rent is calculated as the difference in spot prices between the two price areas multiplied by the estimated exchange between the two areas concerned. The international connections to Norway and Sweden are completely at the disposal of NordPool Spot and in return the TSOs receive the congestion rent. In NORDEL (Denmark, Norway, Sweden, Finland, Iceland) the congestion rent is distributed according to a scale agreed upon. With regard to the KONTEK interconnection the congestion rent is paid to Energinet.dk, Vattenfall Europe Transmission and Vattenfall AB (Vattenfall's trading company in Sweden) according to a scale agreed upon.</p> <p>The interconnection between Western Denmark and Germany is at the disposal of the market at annual, monthly and daily auctions at which payment for utilization of the interconnection - and thereby the congestion rent - is calculated on the basis of demand and supply. The congestion rent is equally divided between Energinet.dk and E.ON Netz.</p>	Resolution	1 hour resolution
Notes	Data on capacity, scheduled trade, actual exchange and congestion income.		

Attributter (Felter)		
Congestion income (DKK)	DKK per hour	Congestion income from connection between price areas.
Congestion income (EUR)	EUR per hour	Congestion income from connection between price areas.
Connected area	text	The destination area of the connection.
Connected price (DKK)	DKK per hour	Price in the connected area
Connected price (EUR)	EUR per hour	Price in the connected area
Export capacity	MWh per hour	Export capacity from area to the connected area. The TSOs decide how much export capacity is to be published at Nord Pool Spot every day before 10:00.
Home price (DKK)	DKK per hour	Price in the home price area
Home price (EUR)	EUR per hour	Price in the home price area
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so forth. Note: The naming is based on the length of the interval of the finest grain of the resolution.
Import capacity	MWh per hour	Import capacity from connected area to the area. The TSOs decide how much import capacity is to be published at Nord Pool Spot every day before 10:00.
Physical Exchange Non-validated	MWh per hour	Scheduled exchange on the transmission lines is the flow of electricity from areas of surplus to areas of shortage resulting from the Nord Pool Spots price calculation
Physical Exchange Settlement	MWh per hour	Scheduled exchange on the transmission lines is the flow of electricity from areas of surplus to areas of shortage resulting from the Nord Pool Spots price calculation
Price area		DK1 is the Jutland and Fyen and DK2 is Zealand and islands
Scheduled Exchange DayAhead	MWh per hour	Scheduled exchange on the transmission lines is the flow of electricity from areas of surplus to areas of shortage resulting from the Nord Pool Spots price calculation
Scheduled Exchange Intraday	MWh per hour	Scheduled exchange on the transmission lines is the flow of electricity from areas of surplus to areas of shortage resulting from the Nord Pool Spots price calculation

TSO Gas

Monthly allocated calorific values

DatasetName	calorificvalues	UpdateFrequency
		P1H
Comment	The dataset contains allocated gross calorific values and allocated normal densities for the meter and regulation stations in the transmission grid.	Resolution
Notes	For each meter and regulator stations connected to the transmission grid a validation gives an allocated calorific value and normal density each month for the purpose of settlement. The values represent the gas delivered from the meter and regulator station each month.	1 month resolution

Attributter (Felter)		
Gross Calorific Value	kWh/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Gross Calorific Value	MJ/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Month	Months	Year and month
MR Station		Meter and regulator stations that deliver gas from transmission to distribution grids.
Normal Density	kg/Nm ³	Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal cubic metres are 0°C and 1 atm.



TSO Gas

Entry/Exit gas quality

DatasetName	entryexitgasquality	UpdateFrequency
		P1H
Comment	The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information.	Resolution
The information can be auto validated by the user with the validation rules written for each factor in Meta Data.		
Notes	Gas quality naturally varies depending on the origin of the gas. Here is given the hourly unvalidated data for the entry/exit and central points: Nybro (Danish North Sea), Dragør Border (Sweden), Ellund (Germany), Bevtoft (Biogas plant), Ll. Torup (Storage), Stenlille (Storage), and Egtved (Gas cross). Natural gas delivered to Danish consumers may originate from more than one supply area.	

Attributter (Felter)		
Entry/exit point		Entry, exit and central points for the Danish gas transmission system.
Gross Calorific Value	kWh/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Gross Calorific Value	MJ/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is the start of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day and so on.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is the start of a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so on. Note: The naming is based on the length of the interval of the finest grain of the resolution.
Methane Number	Number	A methane number characterises the gas's knock tendency as a fuel for gas engines. It can be compared to octane number for petrol.
Net Calorific Value	kWh/Nm ³	A term describing the amount of heat generated, when the temperature of the combustion air and the gas prior to combustion is 25°C, when the combustion products (flue gas) are cooled to 25°C, and the water produced during combustion is present in the form of steam. The reference conditions for normal cubic metres are 0°C and 1 atm.
Net Calorific Value	MJ/Nm ³	A term describing the amount of heat generated, when the temperature of the combustion air and the gas prior to combustion is 25°C, when the combustion products (flue gas) are cooled to 25°C, and the water produced during combustion is present in the form of steam. The reference conditions for normal cubic metres are 0°C and 1 atm.
Normal Density	kg/Nm ³	Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal cubic metres are 0°C and 1 atm.
Wobbe Index	kWh/Nm ³	The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner is thus directly proportional to the Wobbe index. Different gases with the same Wobbe index impose the same load on the burner.
Wobbe Index	MJ/Nm ³	The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner is thus directly proportional to the Wobbe index. Different gases with the same Wobbe index impose the same load on the burner.



TSO Gas

Gas composition and quality for transmission

DatasetName	gascomposition	UpdateFrequency
		P1H
Comment	The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information. The information can be auto validated by the user with the validation rules written for each factor in Meta Data.	Resolution
Notes	The dataset contains the hourly unvalidated gas composition and other gas quality parameters for the Danish Transmission as measured at Energinet's gas quality measuring station in Egtved.	

Attributter (Felter)		
Carbon dioxide	mole - %	Carbon dioxide content of the natural gas
Ethane	mole - %	Ethane content of the natural gas
Gross Calorific Value	MJ/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Hexane+	mole - %	Hexane and higher hydrocarbons content of the natural gas
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is the start of a given day, interval 00:00 - 00:59, and 01:00 covers the second hour (interval) of the day and so on.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is the start of a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so on. note: The naming is based on the length of the interval of the finest grain of the resolution.
Hydrocarbon dew point	°C	The temperature for precipitation of liquid hydro carbons measured at the pressure with the highest dew point.
Hydrogen sulphide	mg/Nm ³	Hydrogen Sulphide content of the natural gas
I-Butane	mole - %	I-butane/isobutane content of the natural gas
I-Pentane	mole - %	I-pentane/isopentane content of the natural gas
Methane	mole - %	Methane content of the natural gas
Methane Number	Number	A methane number characterises the gas's knock tendency as a fuel for gas engines. It can be compared to octane number for petrol.
N-Butane	mole - %	N-butane content of the natural gas
Net Calorific Value	MJ/Nm ³	A term describing the amount of heat generated, when the temperature of the combustion air and the gas prior to combustion is 25°C, when the combustion products (flue gas) are cooled to 25°C, and the steam produced during combustion is present in the form of steam. The reference conditions for normal cubic metres are 0°C and 1 atm.
Nitrogen	mole - %	Nitrogen content of the natural gas
Normal Density	kg/Nm ³	Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal cubic metres are 0°C and 1 atm.
N-Pentane	mole - %	N-pentane content of the natural gas
Oxygen	mole - %	Oxygen content of the natural gas
Propane	mole - %	Propane content of the natural gas

Relative Density	kg/Nm ³	The relative density aka the specific gravity is the density of natural gas divided by the density of air at standard conditions (15°C and 101.3 kPa). It is an expression of the amount of heavier hydrocarbons that are present in the gas.
Total sulphur	mg/Nm ³	Total Sulphur content of the un-odorized natural gas.
Water dew point	°C	Water content of gas described as dew point at the absolute pressure of 70 bar.
Wobbe Index	MJ/Nm ³	The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner is thus directly proportional to the Wobbe index. Different gases with the same Wobbe index impose the same load on the burner.



TSO Gas

Gas composition and quality for transmission, monthly

DatasetName	gascompositionmonthly	UpdateFrequency
		P1M
Comment	The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values.	Resolution
Notes	Gas quality data for the Danish transmission grid that is representative for gas delivered from the transmission grid. The data are validated but the data cannot be used for billing purposes. The basis of the dataset is hourly values and the maximal and minimal value is therefore respective the maximal and minimal hourly value.	

Attributter (Felter)		
Month	Months	Year and month
Gas quality parameter	text	Methane, Ethane, Propane, I-butane, N-butane, I-pentane, N-pentane, Hexane+, Carbon dioxide, Oxygen are components of the natural gas and are given in mole %. <u>Gross Calorific Value:</u> A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm. <u>Net Calorific Value:</u> A term describing the amount of heat generated, when the temperature of the combustion air and the water produced during combustion is present in the form of steam. The reference conditions for normal cubic metres are 0°C and 1 atm. <u>Wobbe Index:</u> The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner. The Wobbe index can be calculated as the gross calorific value divided by the square root of the ratio of the density of the gas to its viscosity. <u>Normal Density:</u> Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal cubic metres are 0°C and 1 atm. <u>Relative Density:</u> The relative density aka the specific gravity is the density of natural gas divided by the density of air at the same pressure and temperature, and is an expression of the amount of heavier hydrocarbons in the natural gas. <u>Methane Number:</u> A methane number characterises the gas's knock tendency as a fuel for gas engines. It can be compared with the octane number for petrol. <u>Water Dew Point:</u> Water content of gas described as dew point at the absolute pressure of 70 bar. <u>Hydro Carbon Dew Point:</u> The temperature for precipitation of liquid hydro carbons measured at the pressure with the highest dew point. <u>H2S:</u> Hydrogen Sulphide content of the natural gas <u>Total Sulphur:</u> Total Sulphur content of the un-odorized natural gas. H2S and total sulphur are given as the measurement in Nybro until 2016. From 2017 and forward the measurement included here is from the compressor station in Egtved.
Unit	text	Unit for the gas quality values.
Average	Number	Monthly average value for the gas quality parameters.
Min	Number	Monthly minimum value for the gas quality parameters.
Max	Number	Monthly maximum value for the gas quality parameters.



TSO Gas

Gas composition and quality for transmission, yearly

DatasetName	gascompositionyearly	UpdateFrequency
		P1Y
Comment	The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values.	Resolution
Notes	Gas quality data for the Danish transmission grid that is representative for gas delivered from the transmission grid. The data are validated but the data cannot be used for billing purposes. The basis of the dataset is hourly values and the maximal and minimal value is therefore respective the maximal and minimal hourly value.	

Attributter (Felter)		
Average	Number	Yearly average value for the gas quality parameters.
Max	Number	Yearly maximum value for the gas quality parameters.
Min	Number	Yearly minimum value for the gas quality parameters.
Gas quality parameter	text	<p>Methane, Ethane, Propane, I-butane, N-butane, I-pentane, N-pentane, Hexane+, Carbon dioxide, Oxygen are components of the natural gas and are given in mole %.</p> <p><u>Gross Calorific Value:</u> A term describing the amount of heat developed by combustion of one gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the products being brought to that temperature and the water formed by the combustion being present as steam. The reference conditions for normal cubic metres are 0°C and 1 atm.</p> <p><u>Net Calorific Value:</u> A term describing the amount of heat generated, when the temperature of the combustion air and the natural gas prior to combustion is 25°C, when the combustion products (flame) are cooled to 25°C, and when the water produced during combustion is present in the form of steam. The reference conditions for normal cubic metres are 0°C and 1 atm.</p> <p><u>Wobbe Index:</u> The Wobbe index offers information about the heating effect a burner is exposed to during combustion of a fuel. The greater the Wobbe index, the greater the heating effect and thereby the load on the burner. The load on a burner is thus directly proportional to the Wobbe index. Different fuels with the same Wobbe index will impose the same load on the burner. The Wobbe index can be calculated by dividing the gross calorific value divided by the square root of the relative density.</p> <p><u>Normal Density:</u> Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal cubic metres are 0°C and 1 atm.</p> <p><u>Relative Density:</u> The relative density aka the specific gravity is the density of natural gas divided by the density of air at the same pressure and temperature, and is an expression of the amount of heavier components that are in the natural gas.</p> <p><u>Methane Number:</u> A methane number characterizes the gas's knock tendency as a fuel for gasoline engines. It can be compared to the octane number for petrol.</p> <p><u>Water Dew Point:</u> Water content of gas described as dew point at the absolute pressure of 760 millibars.</p> <p><u>Hydro Carbon Dew Point:</u> The temperature for precipitation of liquid hydro carbons measured at the dew point with the highest hydrocarbon dew point.</p> <p><u>H2S:</u> Hydrogen Sulphide content of the natural gas</p> <p><u>Total Sulphur:</u> Total Sulphur content of the un-odorized natural gas.</p> <p>H2S and total sulphur are given as the measurement in Nybro until 2016. From 2017 and forward the measurement included here is from the compressor station in Egtved.</p> <p><u>CO2 emission factor:</u> The mass of formed Carbon Dioxide from combustion of gas per energy unit of the gas based on net calorific value of the gas. The amount of energy is based on the net calorific value and the assumption of 100 % combustion.</p>
Year	Years	Year
Unit	text	Unit for the gas quality values.

TSO Gas

Gas quality for MR stations

DatasetName	mrstationsgasquality	UpdateFrequency
		P1H
Comment	The values listed are for informational purposes only and are not suited for settlement purposes. Though Energinet consider the numbers to be true, we cannot guarantee the accuracy of the values. Energinet has neither verified nor approved the information.	Resolution
	The information can be auto validated by the user with the validation rules written for each factor in Meta Data.	
	The described gas quality is not necessarily the gas quality that will be delivered to the consumers, since upgraded biogas can enter at the distribution level.	
Notes	The dataset consists of the gas quality values: Gross Calorific Values, Wobbe Index, Normal Density, and Methane Number for the delivered natural gas from the transmission grid to each meter and regulator stations in Denmark.	

Attributter (Felter)		
Gross Calorific Value	kWh/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Gross Calorific Value	MJ/Nm ³	A term describing the amount of heat developed by combustion of one cubic metre of gas at constant pressure when the gas and air for the combustion have a temperature of 25°C, the combustion products being at that temperature and the water formed by the combustion being present in liquid state. The reference conditions for normal cubic metres are 0°C and 1 atm.
Hour DK		A date and time (interval), shown in _Danish time zone_, where the values are valid. 00:00 o'clock is a given day, interval 00:00 - 00:59, and 01:00 covers the second hour period (interval) of the day.
Hour UTC		A date and time (interval), shown in _UTC time zone_, where the values are valid. 00:00 o'clock is a given day interval 00:00 - 00:59 and 01:00 covers the second hour (interval) of the day and so on. note: The naming is based on the length of the interval of the finest grain of the resolution.
Methane Number	Number	A methane number characterises the gas's knock tendency as a fuel for gas engines. It can be compared to the octane number for petrol.
MR Station		Meter and regulator stations that deliver gas from transmission to distribution grids.
Normal Density	kg/Nm ³	Normal density is the mass of a normal cubic meter of gas. The reference conditions for normal density are 0°C and 1 atm.
Wobbe Index	kWh/Nm ³	The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner. The load on a burner is thus directly proportional to the Wobbe index. Different gases with the same Wobbe index will impose the same load on the burner.
Wobbe Index	MJ/Nm ³	The Wobbe index offers information about the heating effect a burner is exposed to during combustion. The greater the Wobbe index, the greater the heating effect and thereby the greater the load on a burner. The load on a burner is thus directly proportional to the Wobbe index. Different gases with the same Wobbe index will impose the same load on the burner.

