

ENERGY ANALYSIS

GROUP 7

LOS EXOTICOS {



PAULINA
CATTAU



PAULINO
HERRERA



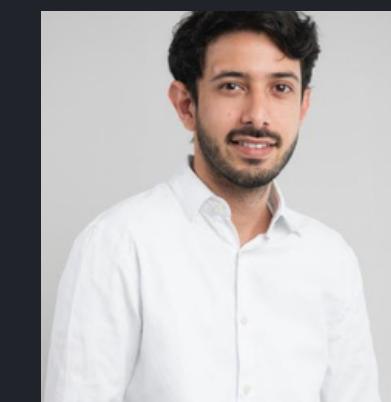
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ALI
CHEBARO



PAUL
VAN DEN
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}

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Weekdays transformation {

weekday

0
0
1
1
2
3
4



weekday

Monday
Monday
Tuesday
Tuesday
Wednesday
Thursday
Friday

}

Months transformation {

month

1

2

3

3

4

5

6



month

January

February

March

March

April

May

June

}

```
Days below 10€ {
```

date

```
-----
```

2019-01-01

Unique days

2019-01-01

Unique days<10€?

2019-01-01

2019-01-01

2019-12-30

2019-12-30

2019-12-30

```
}
```

Days below 10€ {

Result

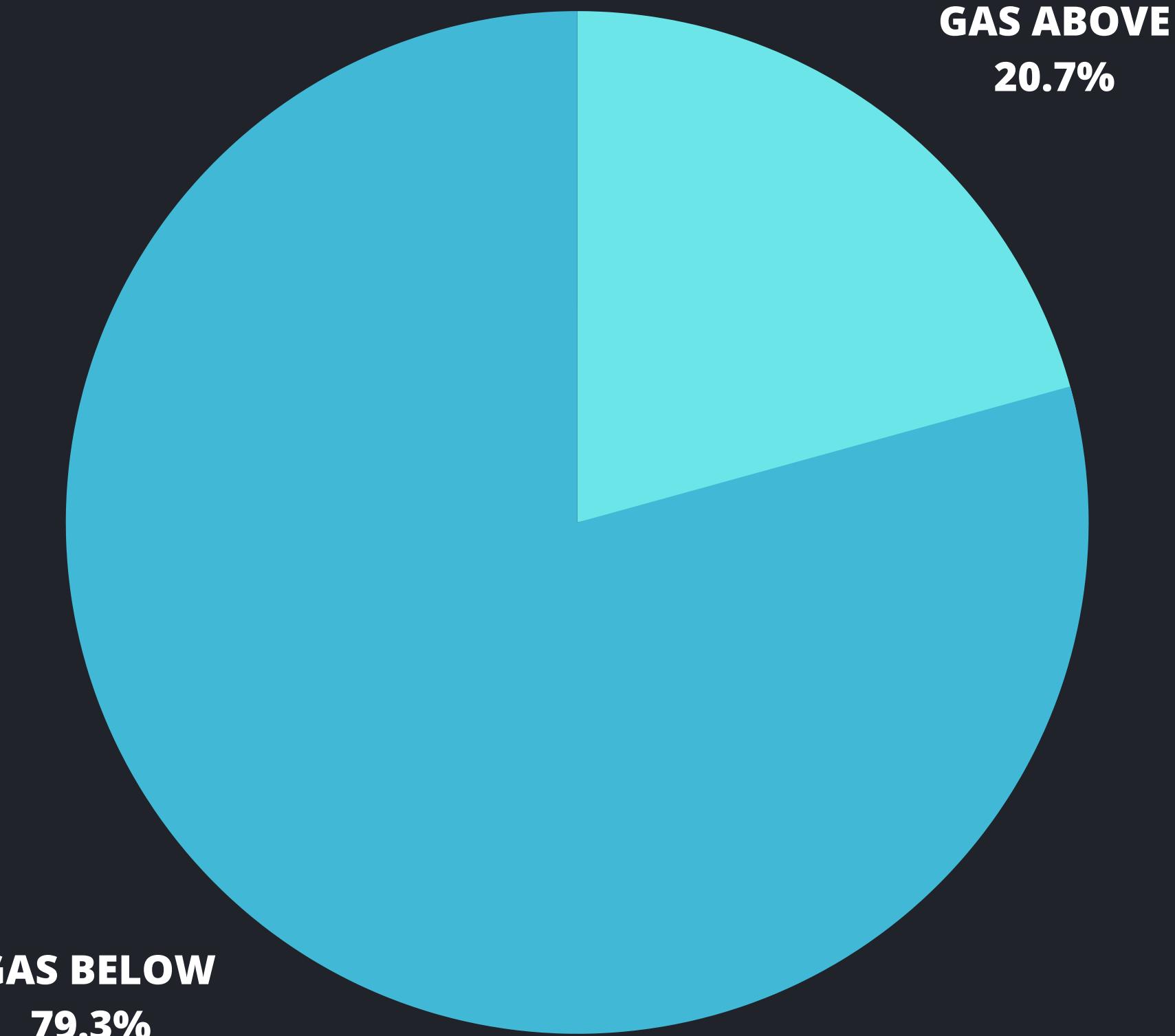
The percentage of unique days in the total period in which we had at least one hour with a price below 10 euros is **4.4%**.

}

Hours above/below average price {

month	Hours above average	Total average above	Hours below average	Total average below	}
April	469		251		
August	401		343		
December	415		305		
February	384		288		
January	464		280		
July	420		324		
June	367		353		
March	490		254		
May	438		306		
November	382		338		
October	393		351		
September	358		362		
TOTAL SUM	4981	415.000000	3755	312.000000	}

Wind and gas generation{



WIND ABOVE
HOURLY AVERAGE

3611(100%)

}

Solar generation and spot price{

**SPOT PRICE BELOW
51%**



**SPOT PRICE ABOVE
49%**

SOLAR ABOVE
HOURLY AVERAGE

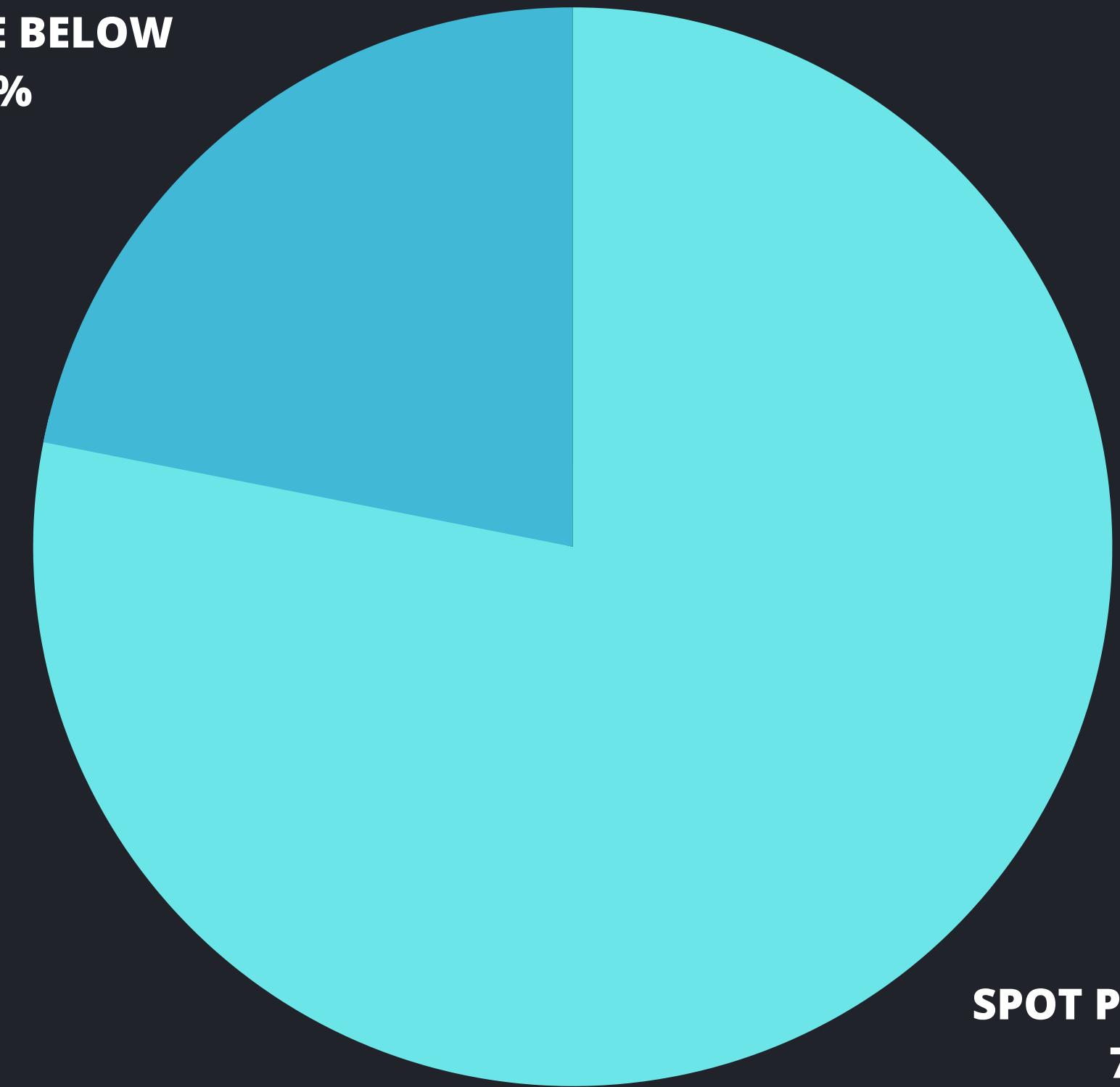
3246 (100%)

}

Power demand and spot price{

SPOT PRICE BELOW

21.9%



SPOT PRICE ABOVE

78.1%

POWER DEMAND
ABOVE MONTHLY
AVERAGE

4508 (100%)

}

Behaviour of power generation types {

Total generation type

	nuclear	hydro	wind	solar	gas	coal
Percentage	27.23%	11.96%	25.91%	4.34%	25.28%	5.30%

Spot price

47.70€

Total generation

204778042.80

}

Behaviour of power generation types {

Most Expensive Month- 'January'

	nuclear	hydro	wind	solar	gas	coal
Percentage	25.31%	10.93%	29.62%	2.31%	16.28%	15.55%

Spot price

Total generation

61.95€

19929512.20

}

Behaviour of power generation types {

Cheapest Month- 'December'

	nuclear	hydro	wind	solar	gas	coal
Percentage	23.79%	25.37%	30.88%	2.74%	14.98%	2.24%

Spot price

Total generation

33.65€

17611988.30

}

Weekends vs. weekdays {

weekday

Monday

Monday

Saturday

Sunday

Wednesday

Sunday

Saturday



weekends

0

0

1

1

0

1

1

}

Weekends vs. weekdays {

weekends

44.04€

weekdays

49.17€

Result

Weekends are 5.13€ cheaper than weekdays in average.

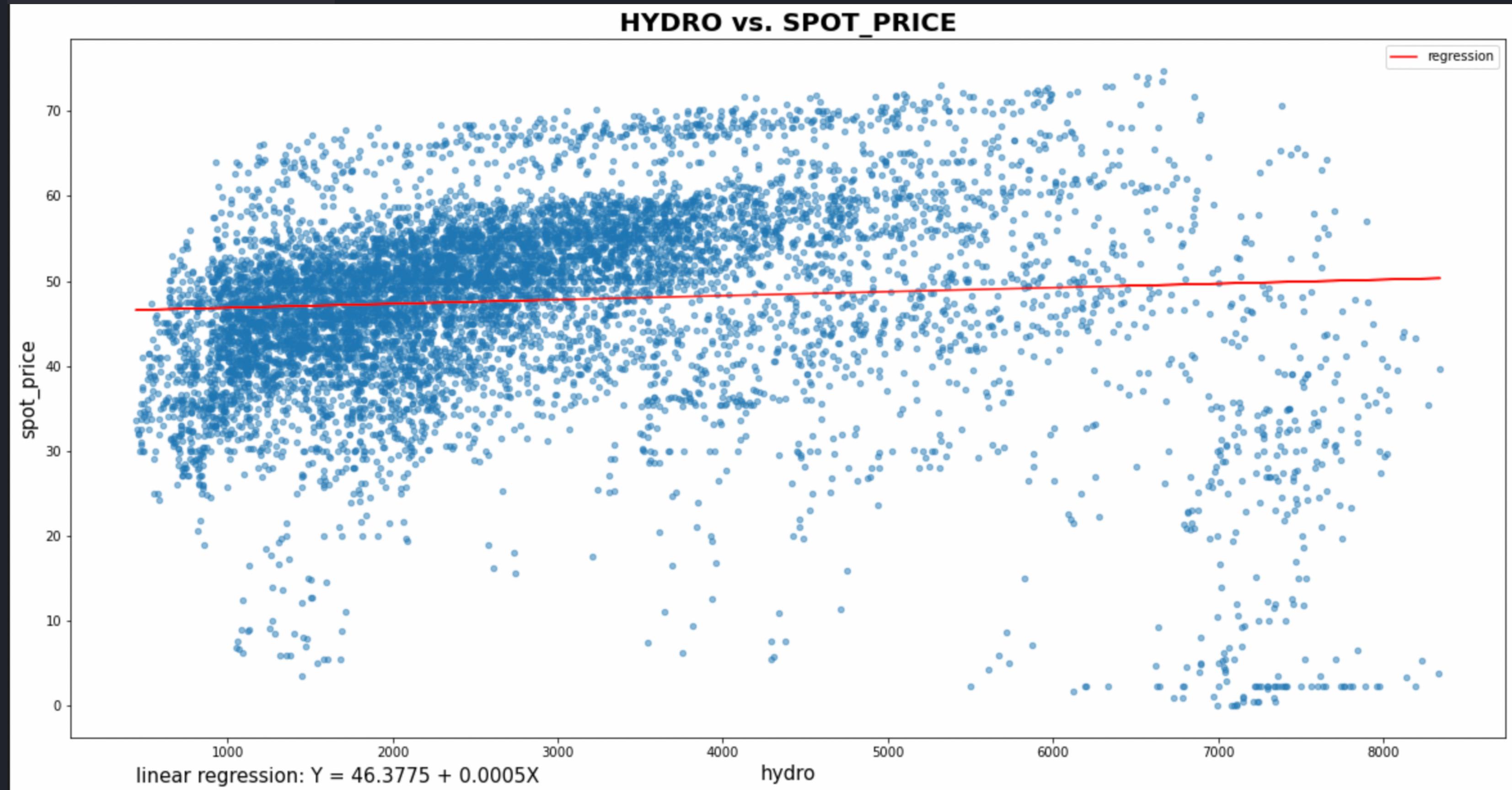
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Correlation between price and types{

	spot_price	nuclear	gas	solar	wind	hydro	coal
spot_price	1.000000	0.191293	0.359741	0.053850	-0.354808	0.069981	0.591442
nuclear	0.191293	1.000000	0.043552	0.047416	-0.292292	-0.203769	0.252115
gas	0.359741	0.043552	1.000000	0.247019	-0.540039	-0.114515	-0.089338
solar	0.053850	0.047416	0.247019	1.000000	-0.179737	-0.040022	-0.056689
wind	-0.354808	-0.292292	-0.540039	-0.179737	1.000000	0.085687	-0.032908
hydro	0.069981	-0.203769	-0.114515	-0.040022	0.085687	1.000000	0.177148
coal	0.591442	0.252115	-0.089338	-0.056689	-0.032908	0.177148	1.000000

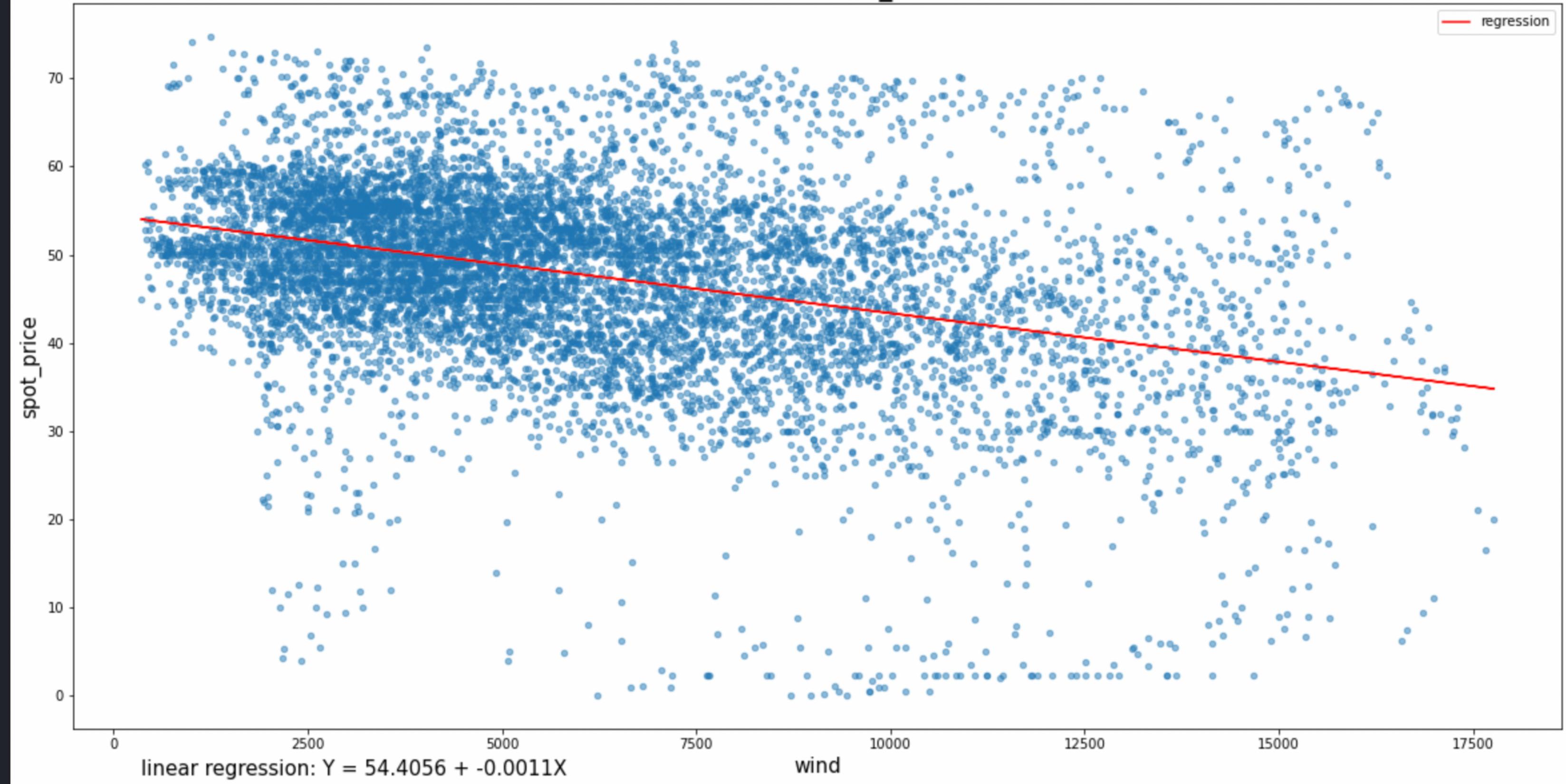
{}

Corr. = 0.069981



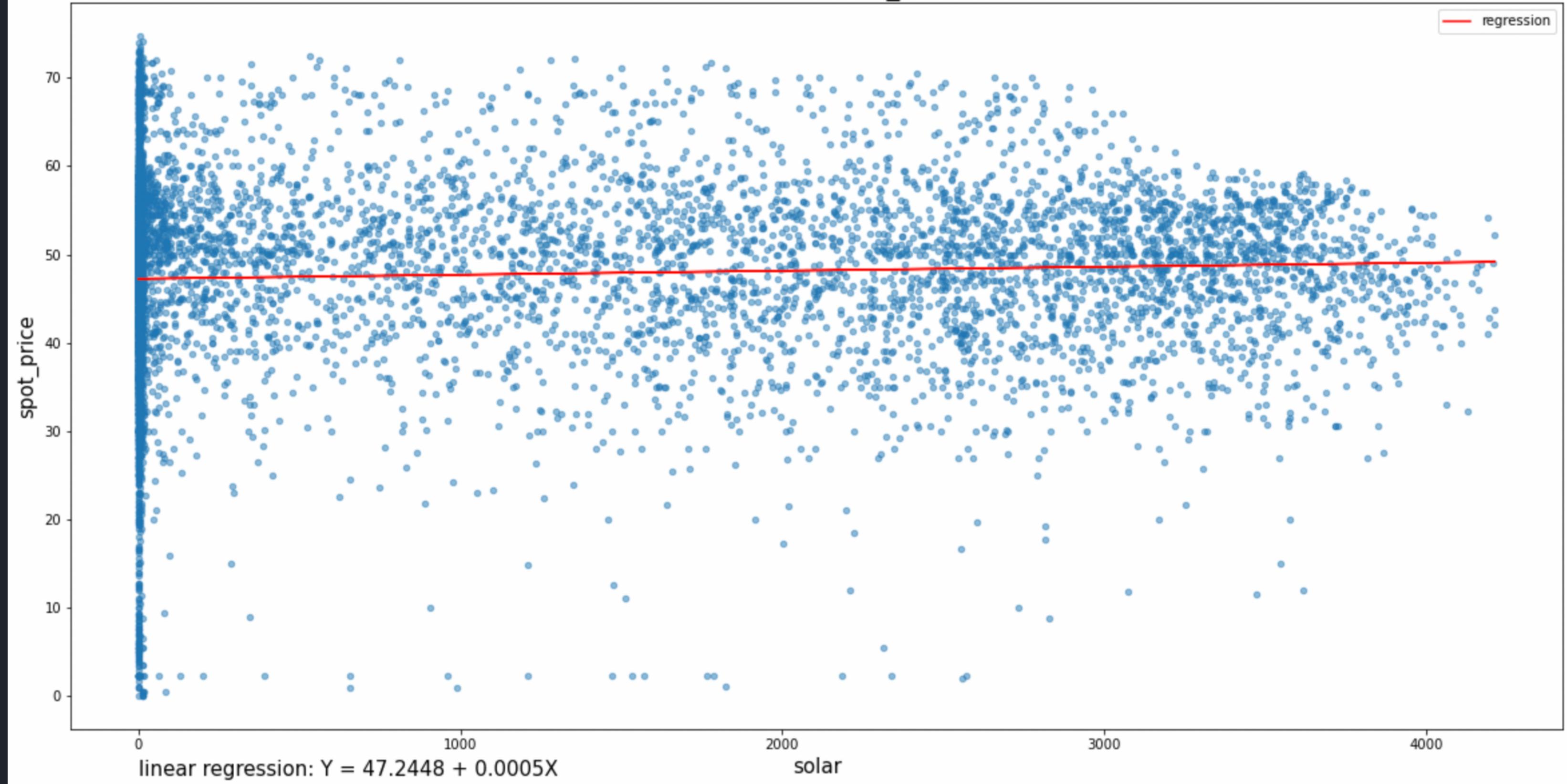
Corr. = -0.354808

WIND vs. SPOT_PRICE

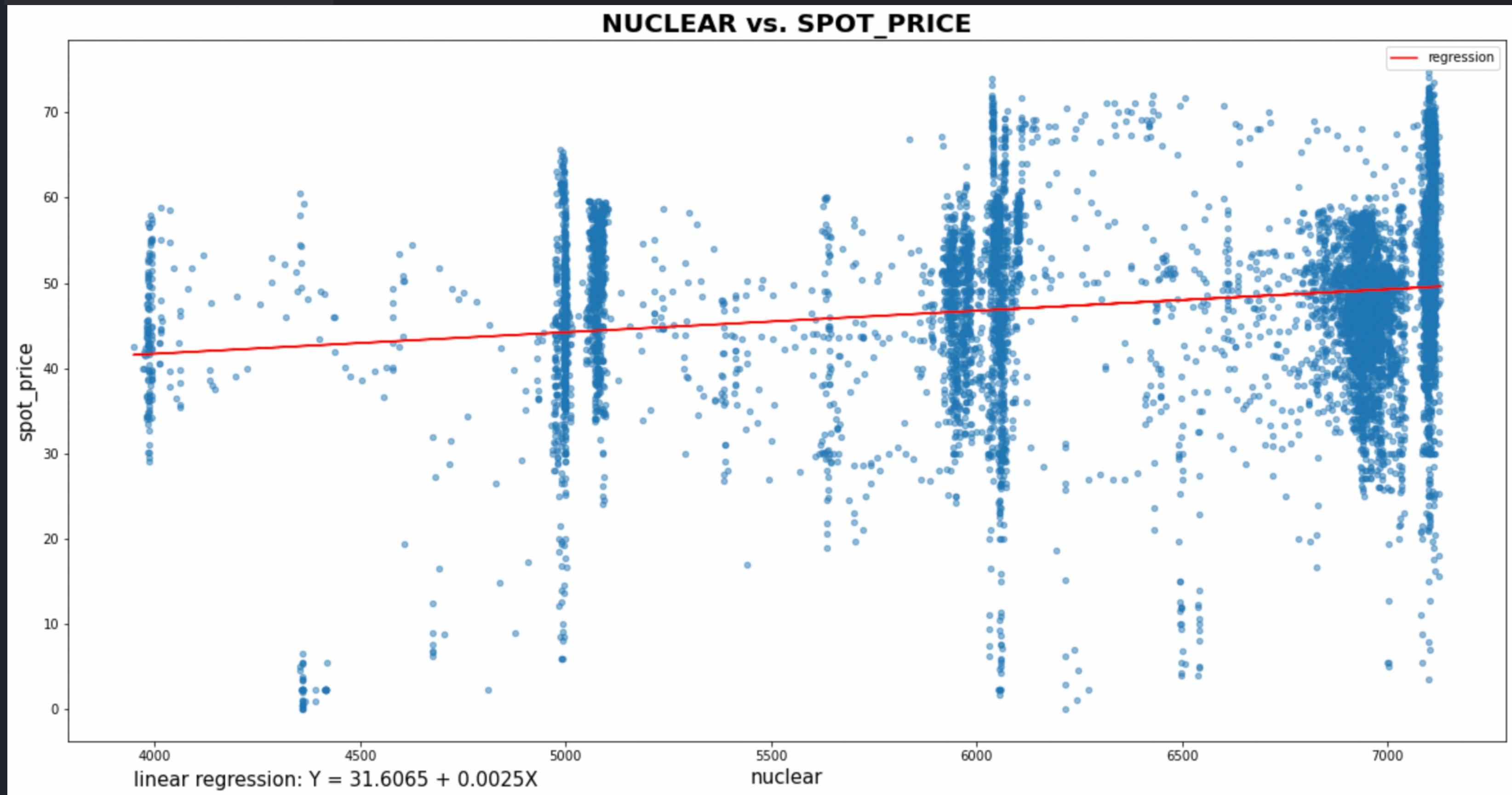


Corr. = 0.053850

SOLAR vs. SPOT_PRICE

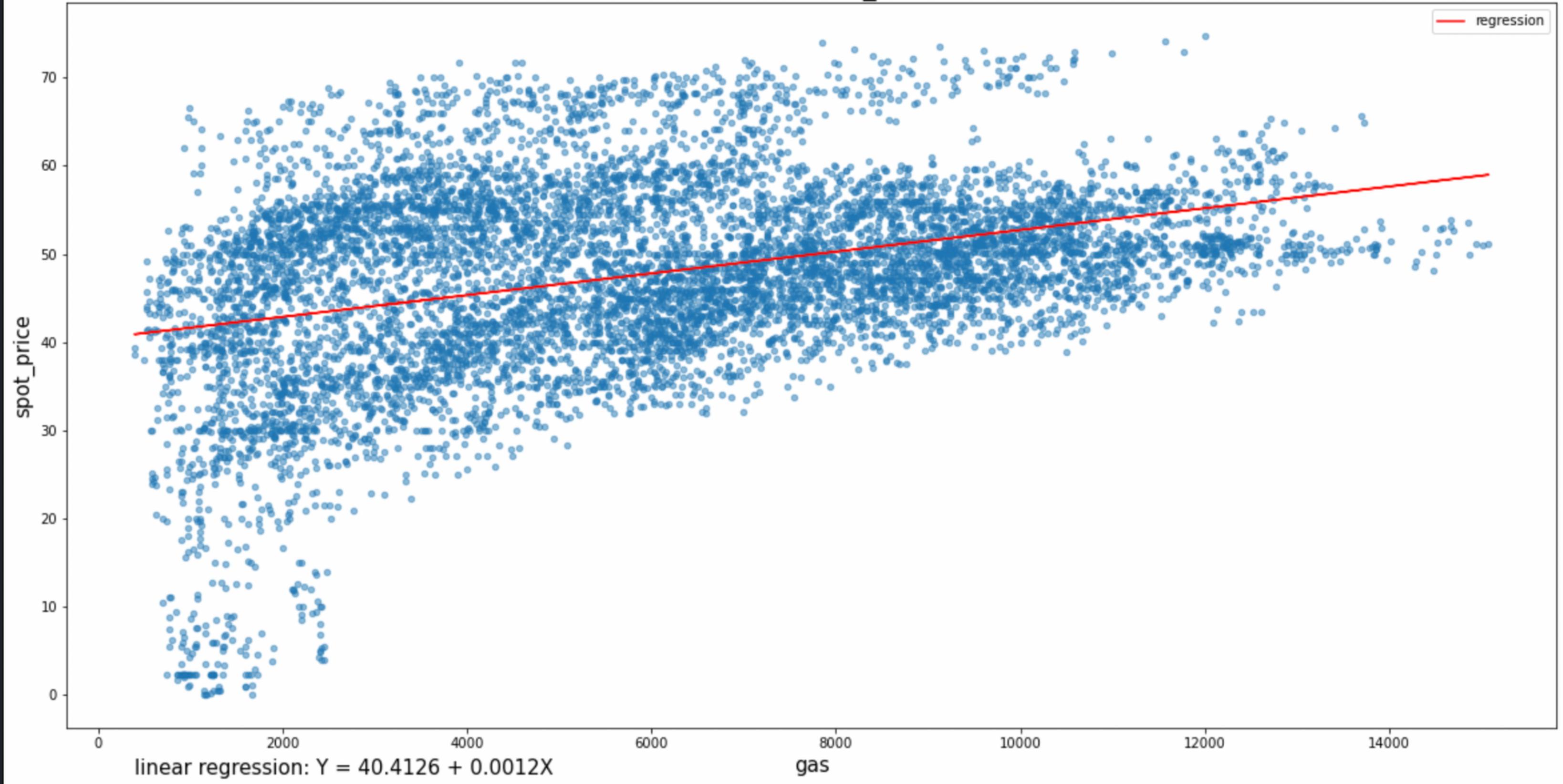


Corr. = 0.191293



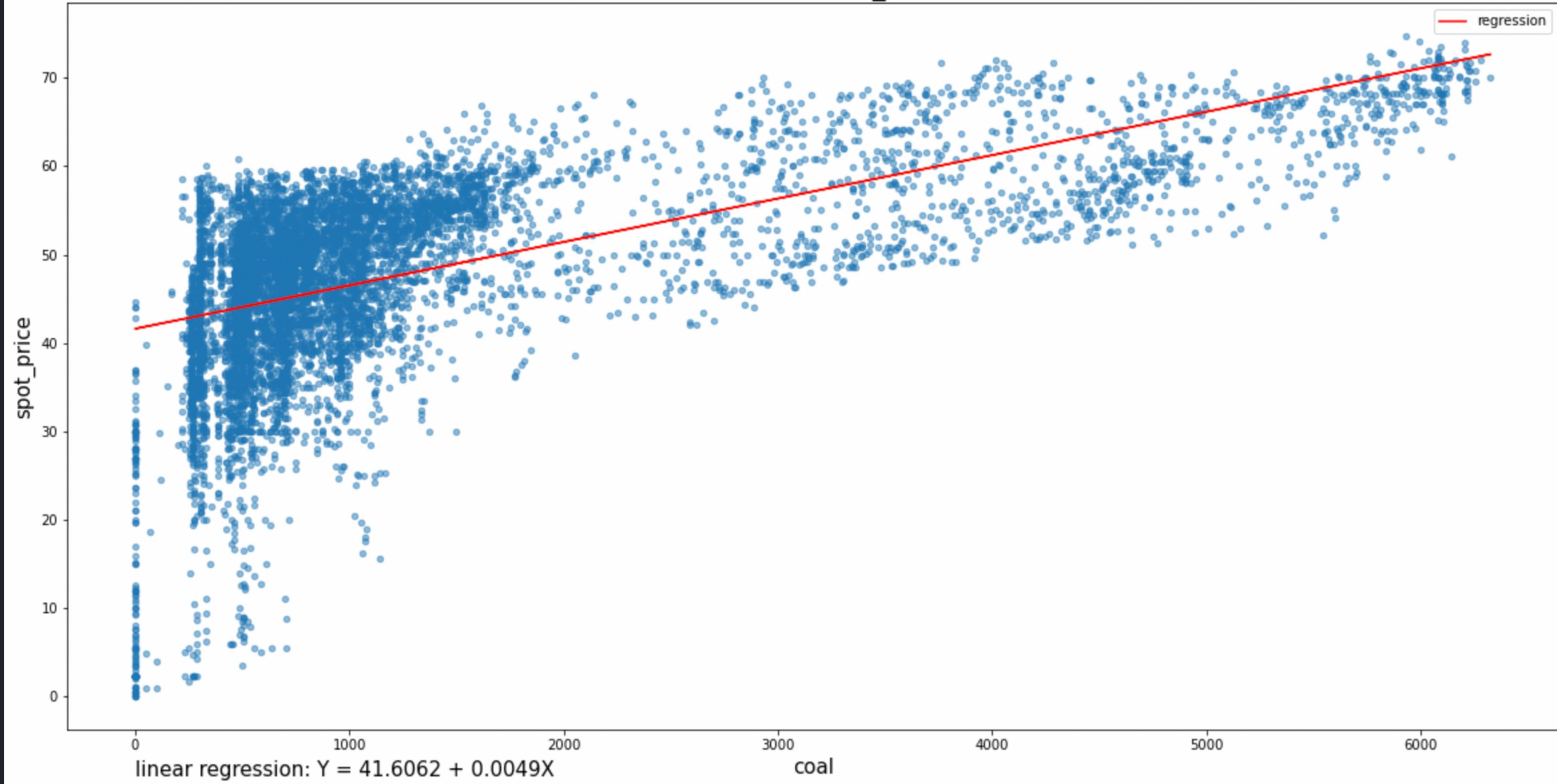
Corr. = 0.359741

GAS vs. SPOT_PRICE



Corr. = 0.591442

COAL vs. SPOT_PRICE



Thank you {

<By="LOS EXOTICOS"/>

}