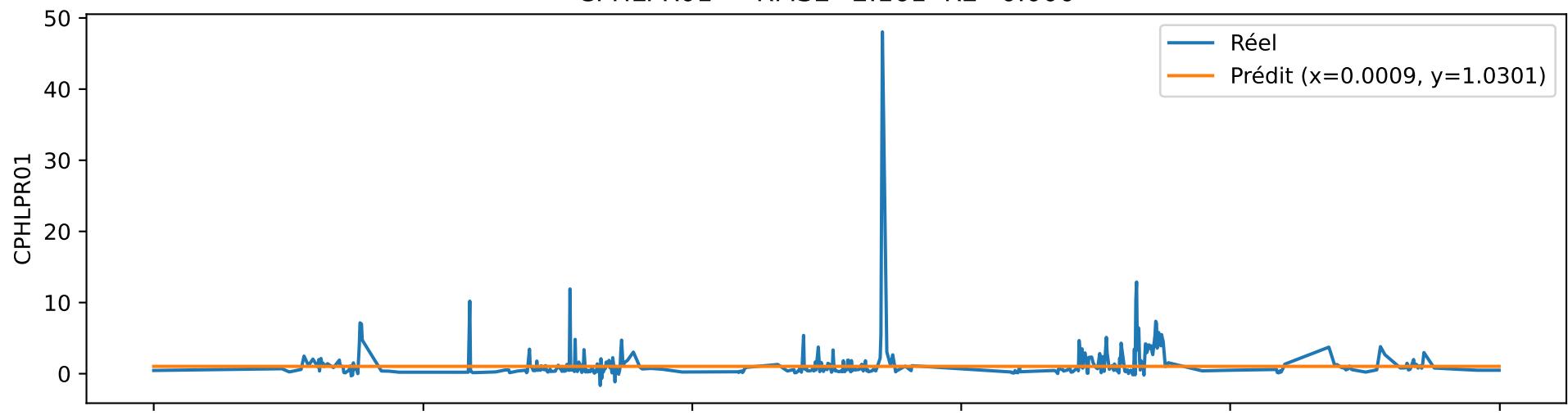
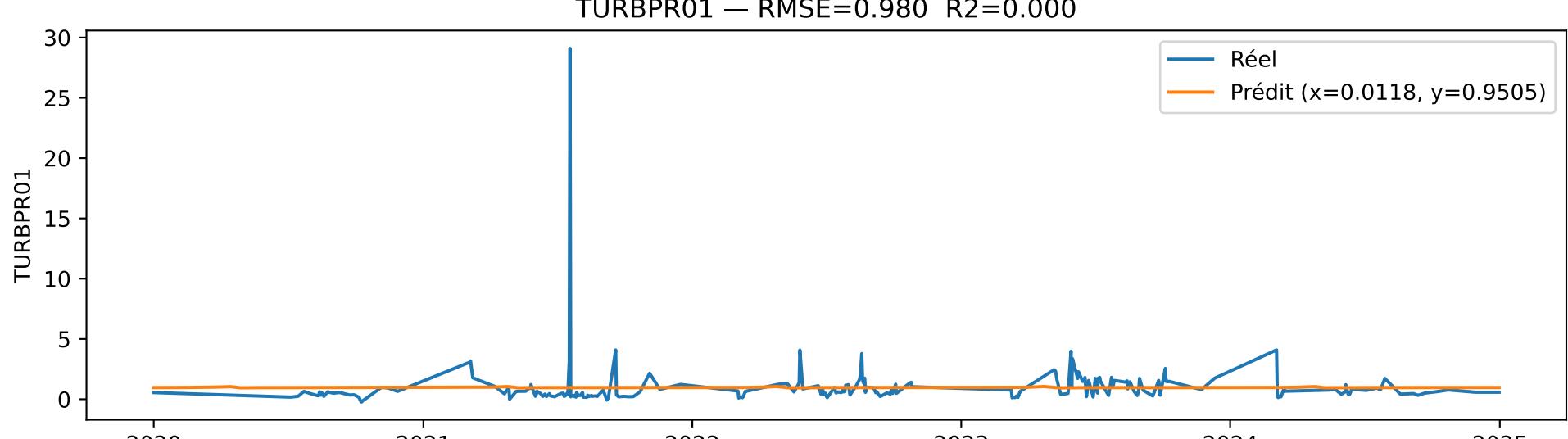


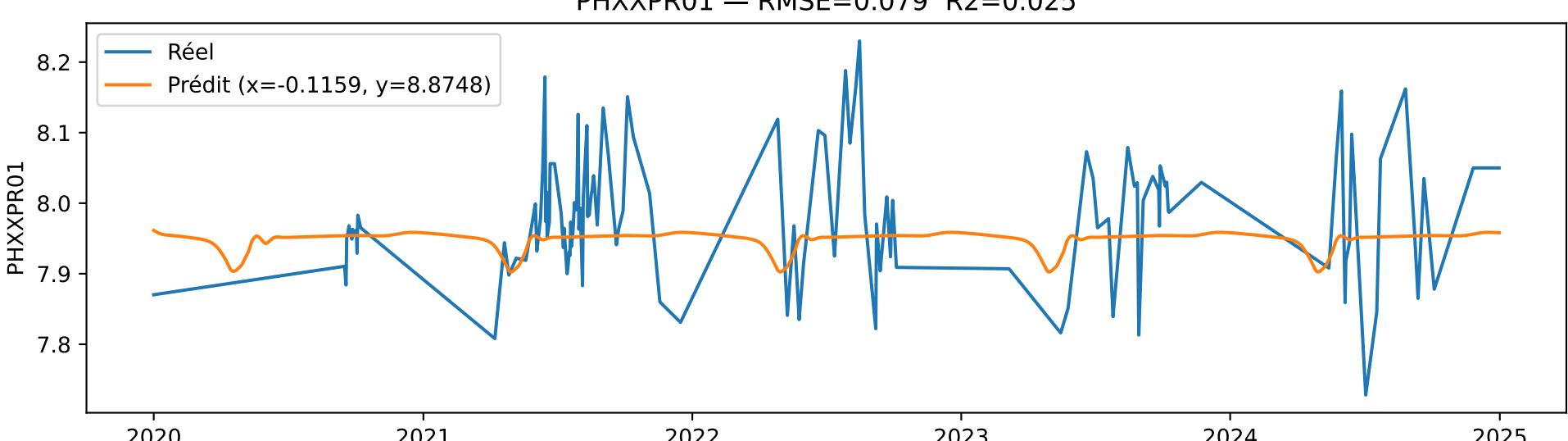
CPHLPR01 — RMSE=2.161 R2=0.000



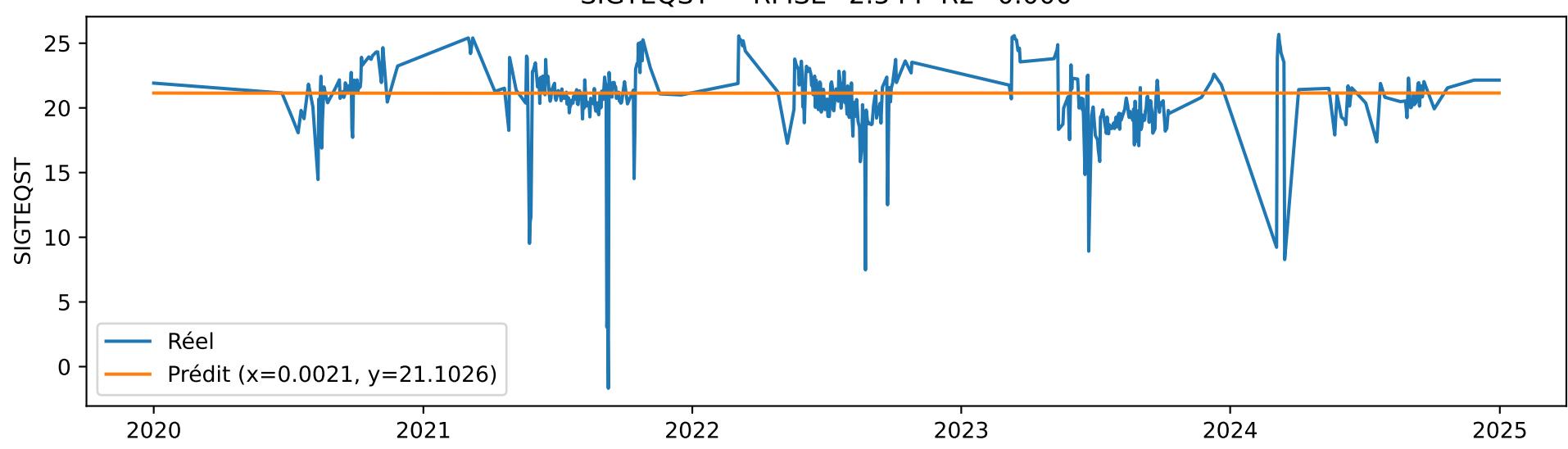
TURBPR01 — RMSE=0.980 R2=0.000



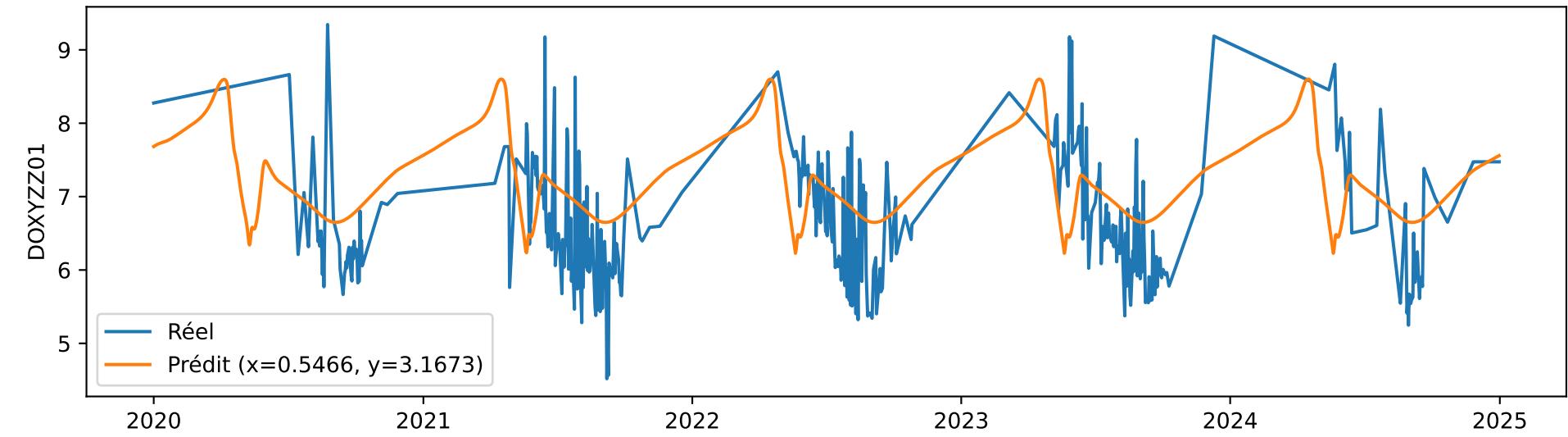
PHXXPR01 — RMSE=0.079 R2=0.025



SIGTEQST — RMSE=2.544 R2=0.000



DOXYZZ01 — RMSE=0.765 R2=0.338



## Résultats LSTM multivarié (après OLS)

Période entraînement : 2000-03-01 -> 2019-12-31

Période test : 2020-01-01 -> 2024-12-31

Metrics par variable (après transformation optimale) :

- CPHLPR01: RMSE=2.1613, R2=0.0000 ( $x=0.000872$ ,  $y=1.030106$ ,  $R2_{opt}=0.000012$ )
- TURBPR01: RMSE=0.9805, R2=0.0004 ( $x=0.011797$ ,  $y=0.950528$ ,  $R2_{opt}=0.000357$ )
- PHXXPR01: RMSE=0.0789, R2=0.0248 ( $x=-0.115931$ ,  $y=8.874768$ ,  $R2_{opt}=0.024789$ )
- SIGTEQST: RMSE=2.5439, R2=0.0000 ( $x=0.002067$ ,  $y=21.102591$ ,  $R2_{opt}=0.000004$ )
- DOXYZZ01: RMSE=0.7646, R2=0.3383 ( $x=0.546555$ ,  $y=3.167254$ ,  $R2_{opt}=0.338305$ )