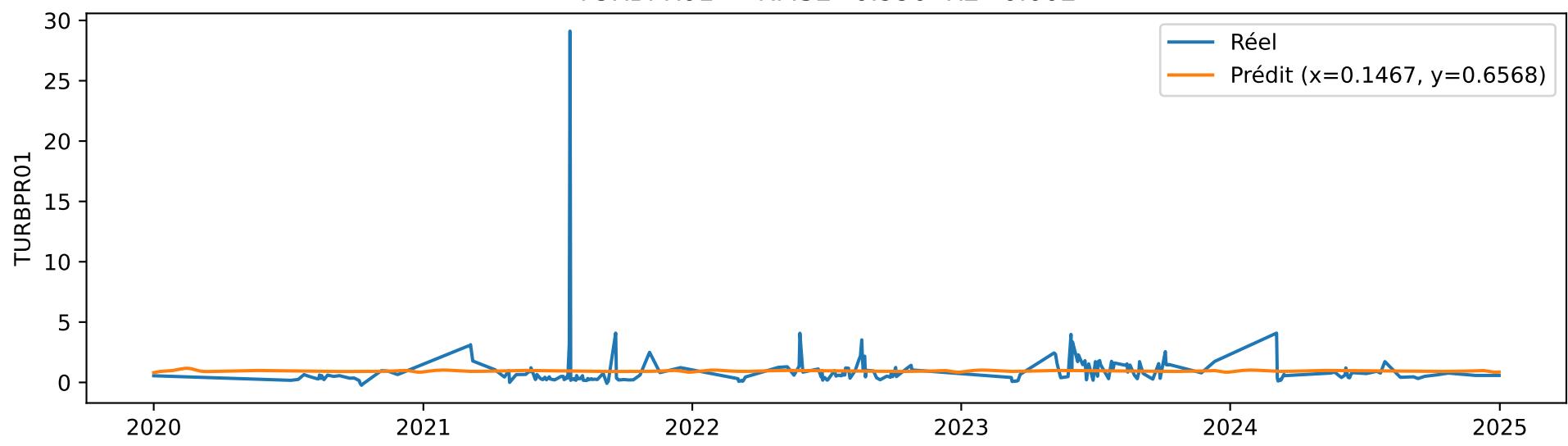
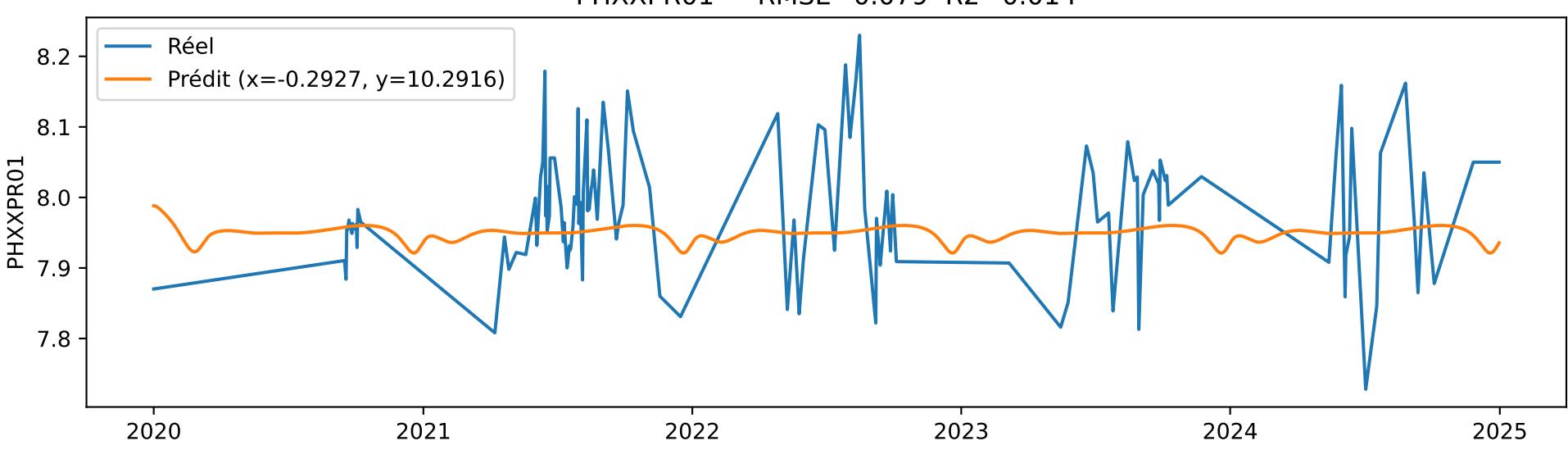


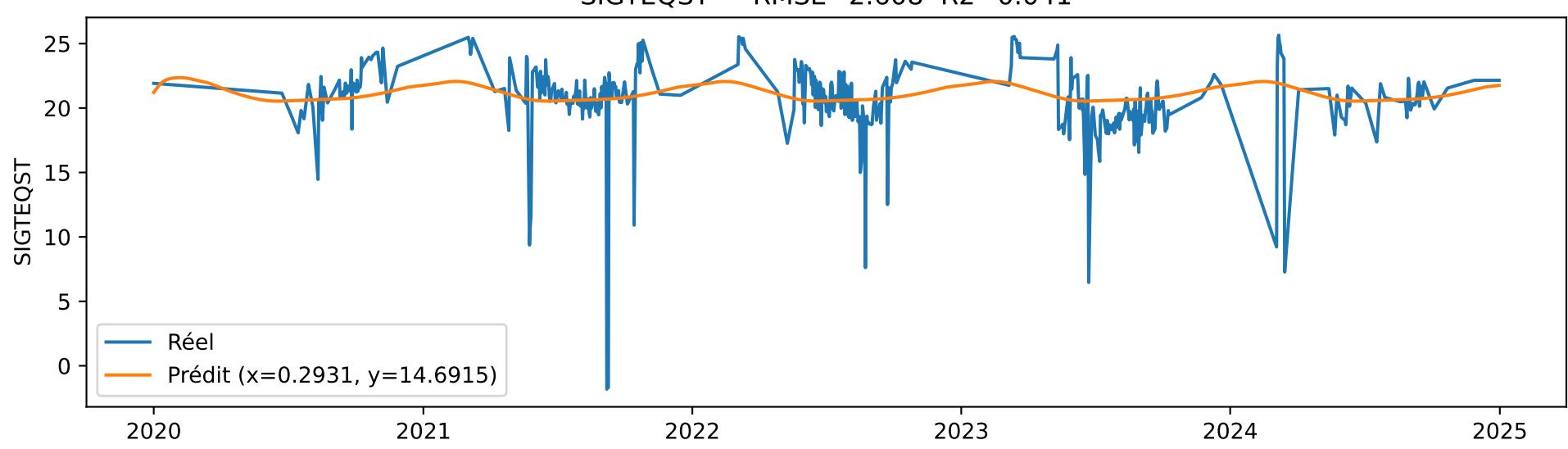
TURBPR01 — RMSE=0.990 R2=0.002



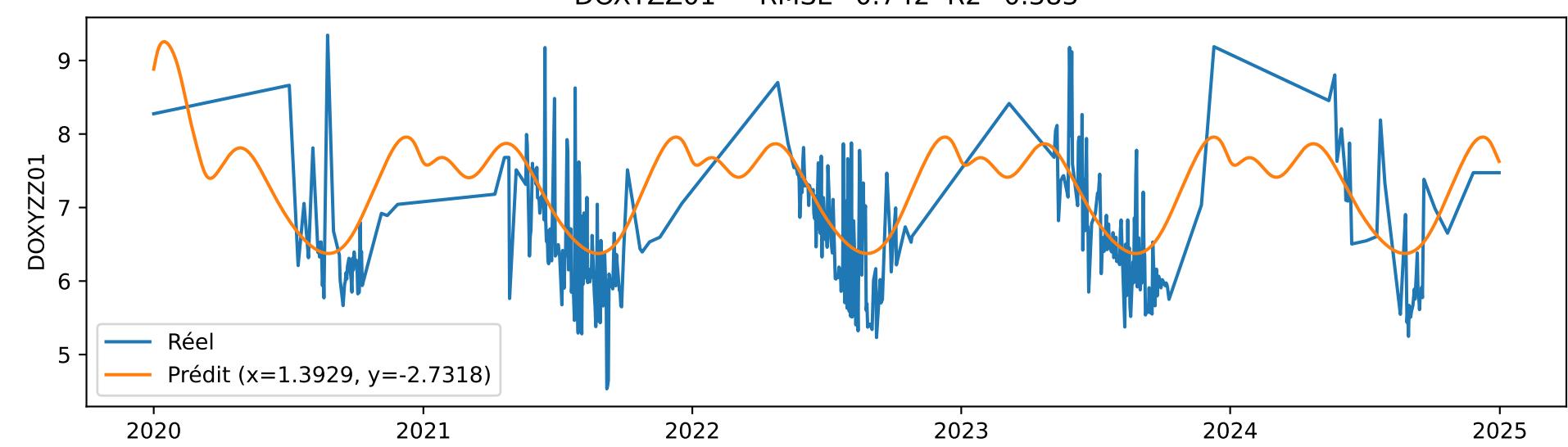
PHXXPR01 — RMSE=0.079 R2=0.014



SIGTEQST — RMSE=2.608 R2=0.041



DOXYZZ01 — RMSE=0.742 R2=0.383



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) :

- TURBPR01: RMSE=0.9896, R2=0.0019 ($x=0.146658$, $y=0.656763$, $R2_{opt}=0.001940$)
- PHXXPR01: RMSE=0.0794, R2=0.0144 ($x=-0.292691$, $y=10.291608$, $R2_{opt}=0.014386$)
- SIGTEQST: RMSE=2.6081, R2=0.0415 ($x=0.293094$, $y=14.691489$, $R2_{opt}=0.041450$)
- DOXYZZ01: RMSE=0.7416, R2=0.3831 ($x=1.392922$, $y=-2.731787$, $R2_{opt}=0.383135$)