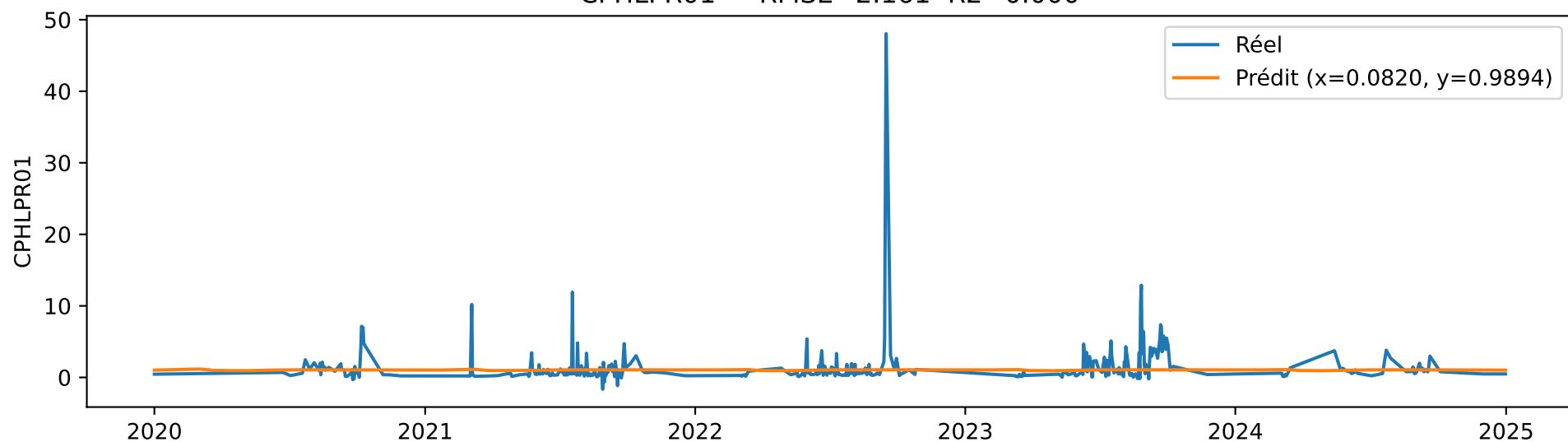
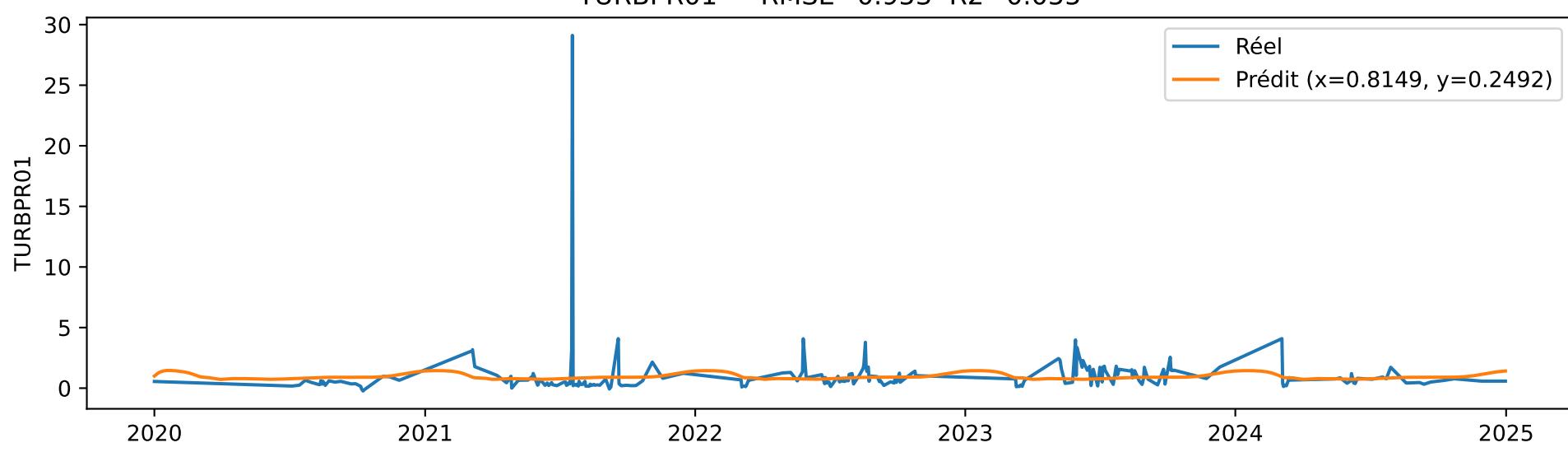


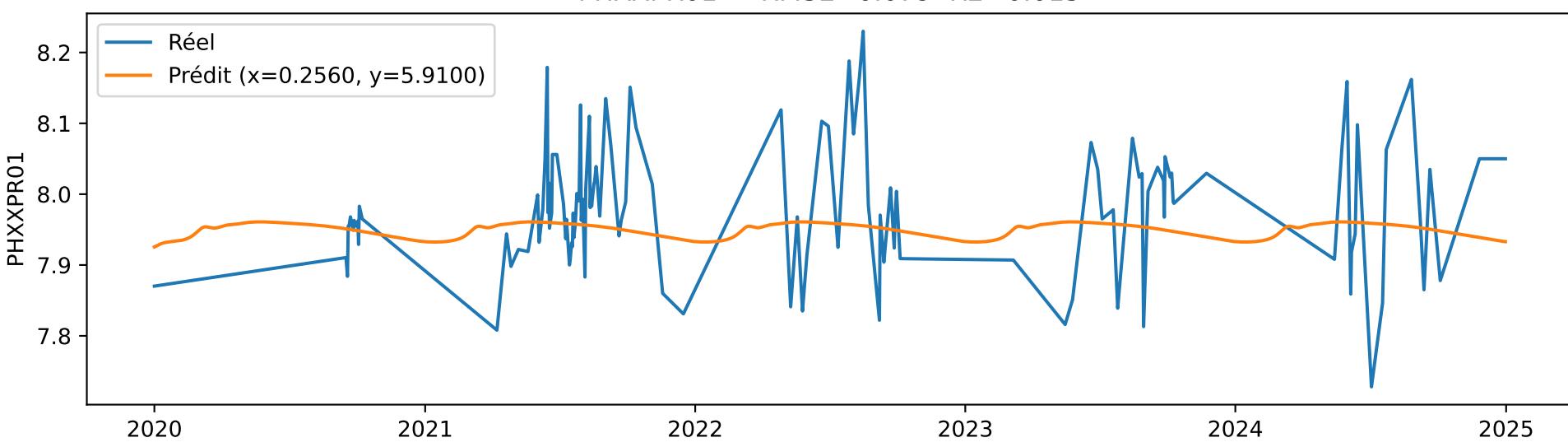
CPHLPR01 — RMSE=2.161 R2=0.000



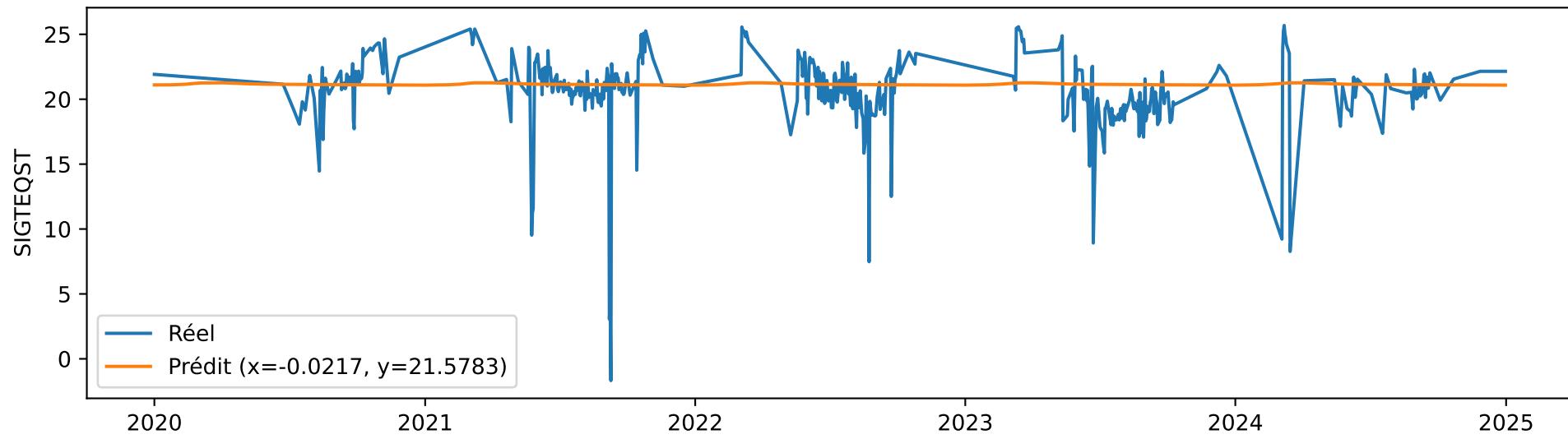
TURBPR01 — RMSE=0.953 R2=0.055



PHXXPR01 — RMSE=0.079 R2=0.015



SIGTEQST — RMSE=2.543 R2=0.000



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=2.1608, R2=0.0004 ($x=0.081994$, $y=0.989415$, $R^2_{opt}=0.000431$)
- TURBPR01: RMSE=0.9533, R2=0.0551 ($x=0.814897$, $y=0.249242$, $R^2_{opt}=0.055119$)
- PHXXPR01: RMSE=0.0793, R2=0.0152 ($x=0.255963$, $y=5.910029$, $R^2_{opt}=0.015176$)
- SIGTEQST: RMSE=2.5433, R2=0.0005 ($x=-0.021694$, $y=21.578343$, $R^2_{opt}=0.000459$)