

HESS-2020-617R1

The authors have made very good efforts in clarifying my concerns. This work aims to accomplish tasks in dealing with a real-world problem, which should be encouraged. The manuscript, however, is not well organized and well written, making it very difficult to catch the logical relationship among quite many models and methods.

Specific Comments:

- (1) It is very important that the Figure 1, in which the MOEAs and NSGA-II should appear, must be logically and carefully explained.
- (2) It should be clearly explained on how the hydrological variables are related to the mathematical variables in LSTM, RGU and GWO-LSSVM. By the way, the model forecast (f) in (18) cannot be found in the model RGU, why?
- (3) Why you need generate a realization of observation (y_t), rather than using the historically observed (Line 177)? Also, it is not clear where this “ y_t ” has been used in the following models.
- (4) Based on the procedure in Lines 175-179, why you need simulate a large number ($M = 1000$) of forecasts since there are only three optional forecasts to be repeatedly chosen from?
- (5) From Line 214 to 225: this is where you should make very good efforts to logically clarify how the MORDM is coupled with the deterministic and stochastic forecasts, the DPS, the optimization problem of up to 7 days ahead with the MOEAs /NSGA-II, especially, how the performances /objectives are evaluated when optimizing the operating policy (p_o)?
- (6) Please check on Line 281, why it is the release from a reservoir that is refined to make a pumping flow feasible?
- (7) Please improve on the optimization problem formulation in a more professionally mathematical way. The relationship between variables is incomplete. The hydraulic relationship / connections, for instance, between reservoirs, pumps, channels and water demanders, are not logically presented.

Technical Corrections:

- (1) The “g” in (21) is left unexplained.
- (2) In Line 208, “ Γ_t is the i^{th} policy inputs”, should it be “ t^{th} ”?
- (3) In (33), $(\Gamma_t)_j$ is left not denoted;
- (4) The equation in Line 282 should be indexed.
- (5) Please replace the typo “fjor” in Line 520 with “for”.
- (6) The typos in (19) and (20) still remain unchanged. The sum operator should be over subscript “k” instead of “i”.