Release note EUPHEMIA 9.4
PCR Market Coupling Algorithm

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A new Euphemia release E9.4 is scheduled for go-live on 19th April 2016. Compared to the current E9.3 release the changes are:

- **Curtailment mitigation**
  - Available since E9.3, but initially implemented as a quadratic penalty to the objective function, and adversely impacting performance. In E9.4 the "infinite norm" has been introduced, to mitigate the adverse performance impact, and allowing curtailment mitigation to be activated by default (under E9.3 this functionality was deactivated, and would only be activated in case of second auction).

- **Local Search**
  - The PRB reinsertion module has been improved and generalized. The module starts with the same reinsertions that were considered by E9.3; thus, in this step only the activation of a single PRB changes at each successful reinsertion. Afterwards, a local search is started which performs simultaneous changes in the activation of multiple block orders. We consider the insertion of linked block orders together with inactive ancestors, the swap between active and inactive block orders, and the simultaneous reinsertion of complementary supply and demand orders. The selection of swaps and reinsertions of complementary orders depends on the geographical distance of the blocks and the inner product of the block volumes.

- **Tie breaks**
  - Improved management of tie breaks (identical block orders).

- **Load gradient**
  - Simplified more robust implementation related to Load Gradient orders consideration in price problem;

- **MIC treatment**
  - Mechanism for early deactivation of MIC orders improved;

- **Miscellaneous**
  - Several small improvements.