

# Things to Fix

---

Ongoing list of... well... things to fix and some other open questions.

## Apparent Problems stemming from old LEELO

---

Problems or inconsistencies found in old, GAMS -implemented LEELO version. Problems ported to new code and therefore possible errors still existent!

⚠ **TODO:** Inform Jannik and work these through!

1. Excel File: Inputs!I46:I48 the penalties are declared as given in Euros, whereas all other monetary values are denoted in Dollars. Location in Code: struct of ModelData .
2. Excel File: Inputs!I6:I11 references cell I4 to calculate transmission losses. I4 is empty  $\Rightarrow$  all losses are zero??
3. According to GAMS comments CostOperationVar , CostOperationFix for G are in \$ but for R they are in k\$?? Apparently the both are in k\$ since in the equations there are always  $\cdot 1000$  .
4. According to GAMS comments CostCapCT and friends are in k€ instead of Dollars.
5. According to GAMS comments CostOperationConvCT depends on installed capacity, but should be dependent on amount of converted energy. Seems to be calculated correctly in eq ocs .
6. GAMS comments unsure if CostReserveCT is reserve of capacity, power or energy (MW or MWh)
7. Gams does not specify what etaconv(ct) is, or what unit its in.
8. CostOperation[...]ST again has the problem of € in GAMS comment, but should be in k\$
9. Conversion technologies mix around in between being installed in MWh or MW... which one is it?

## Open questions

---

Questions related to the understanding.

1. What is the storage technologies Energy2PowerRatio for? and what energy is compared to what power? stored Energy or overall energy that has been stored? What is it important?