How the Water Bill Split Works - Hirvensarvi 16 B

This document explains how we fairly split the water bill between Ameen (AS-1) and Jussi (AS-2).

THE BASIC IDEA

- Basic fees (perusmaksu): Split 50/50 because they're fixed charges for the property
- Consumption fees (kayttomaksut): Split by actual water usage from sub-meters

THE MATH (with example)

Let's say the HSY bill shows:
  - Basic fees total: 84,00 EUR
  - Consumption total: 222,00 EUR

And the sub-meter readings show:
  - Ameen used: 12 m3
  - Jussi used: 18 m3
  - Total sub-meter: 30 m3

Step 1: Calculate each person's share of consumption

  Ameen's fraction = 12 / 30 = 0.40 (40%)
  Jussi's fraction = 18 / 30 = 0.60 (60%)

Step 2: Apply fractions to consumption fees

  Ameen's consumption cost = 222,00 EUR x 0.40 = 88,80 EUR
  Jussi's consumption cost = 222,00 EUR x 0.60 = 133,20 EUR

Step 3: Split basic fees 50/50

  Ameen's basic fee = 84,00 EUR / 2 = 42,00 EUR
  Jussi's basic fee = 84,00 EUR / 2 = 42,00 EUR

Step 4: Add them up

  Ameen's total = 42,00 + 88,80 = 130,80 EUR
  Jussi's total = 42,00 + 133,20 = 175,20 EUR

  Combined = 130,80 + 175,20 = 306,00 EUR (matches the bill!)

THE FORMULAS

If you want the exact formulas:

  A = Ameen's water usage (m3)
  J = Jussi's water usage (m3)
  B = Basic fees total (EUR)
  T = Consumption fees total (EUR)

  Ameen pays = $B/2 + T \times (A / (A + J))$
  Jussi pays = $B/2 + T \times (J / (A + J))$

SETTLEMENT

Since Jussi pays the HSY bill directly, the settlement is simple:

- Ameen pays Jussi his share

In the example above: Ameen pays Jussi 130,80 EUR

WHEN IS THE MAIN METER CONSIDERED?

The app can optionally use the main meter reading to detect mismatch.

  Mismatch (D) = Main meter - (Ameen's sub-meter + Jussi's sub-meter)
  $D = M - (A + J)$

Why mismatch happens:
  - Small measurement differences between meters
  - Meter reading timing differences (a few hours apart)
  - Meter calibration variations

DEFAULT: "Ignore mismatch"
  Mismatch is shown for information only.
  Costs are split using sub-meter readings as-is.

OPTION A: "Split mismatch 50/50" (if both agree)
  Each person gets half the mismatch added to their usage:

  Adjusted Ameen = $A + D/2$
  Adjusted Jussi = $J + D/2$

  Then split costs using the adjusted values.

OPTION B: "Split mismatch proportional" (if both agree)
  Mismatch is added based on each person's usage ratio:

  Adjusted Ameen = $A + D \times (A / (A + J))$
  Adjusted Jussi = $J + D \times (J / (A + J))$

  Then split costs using the adjusted values.

Example (proportional):
  Main meter (M): 32 m3
  Ameen (A): 12 m3, Jussi (J): 18 m3
  Mismatch (D): 32 - 30 = 2 m3

  Ameen's fraction = 12/30 = 0.40
  Jussi's fraction = 18/30 = 0.60

  Adjusted Ameen = 12 + (2 x 0.40) = 12.8 m3
  Adjusted Jussi = 18 + (2 x 0.60) = 19.2 m3

  Costs are then split using 12.8 and 19.2 instead of 12 and 18.

WHY THIS IS FAIR

- You pay for what you use
- Basic fees are shared equally (both apartments benefit)
- The math is transparent and verifiable
- History is saved for reference

Questions? Check the app or ask Ameen.